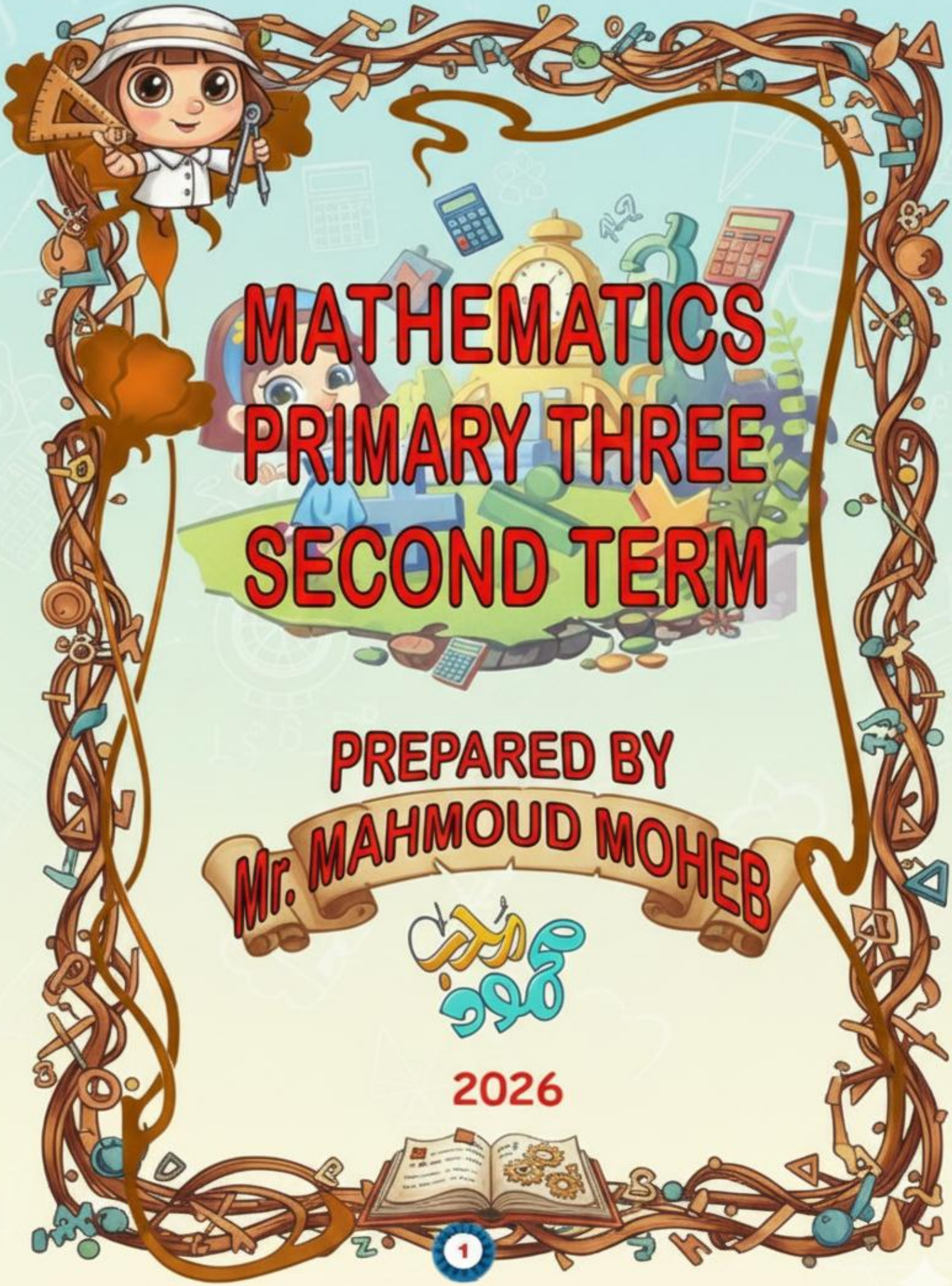


MATHEMATICS
PRIMARY THREE
SECOND TERM

PREPARED BY
Mr. MAHMOUD MOHEB

2026

Chapter (7)

Chapter (8)

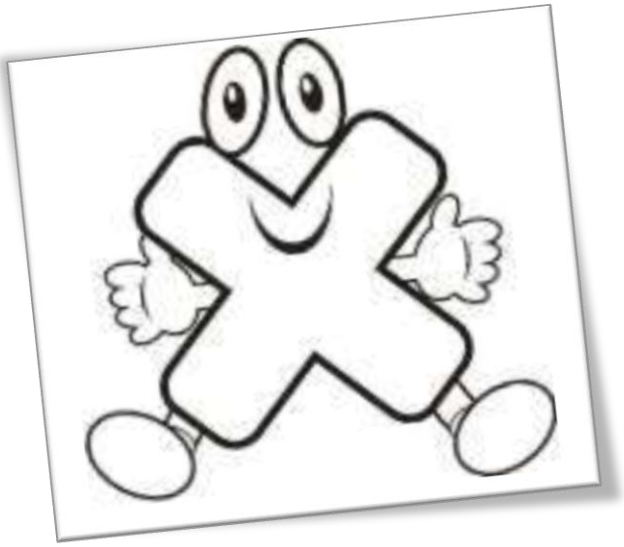
Chapter (9)

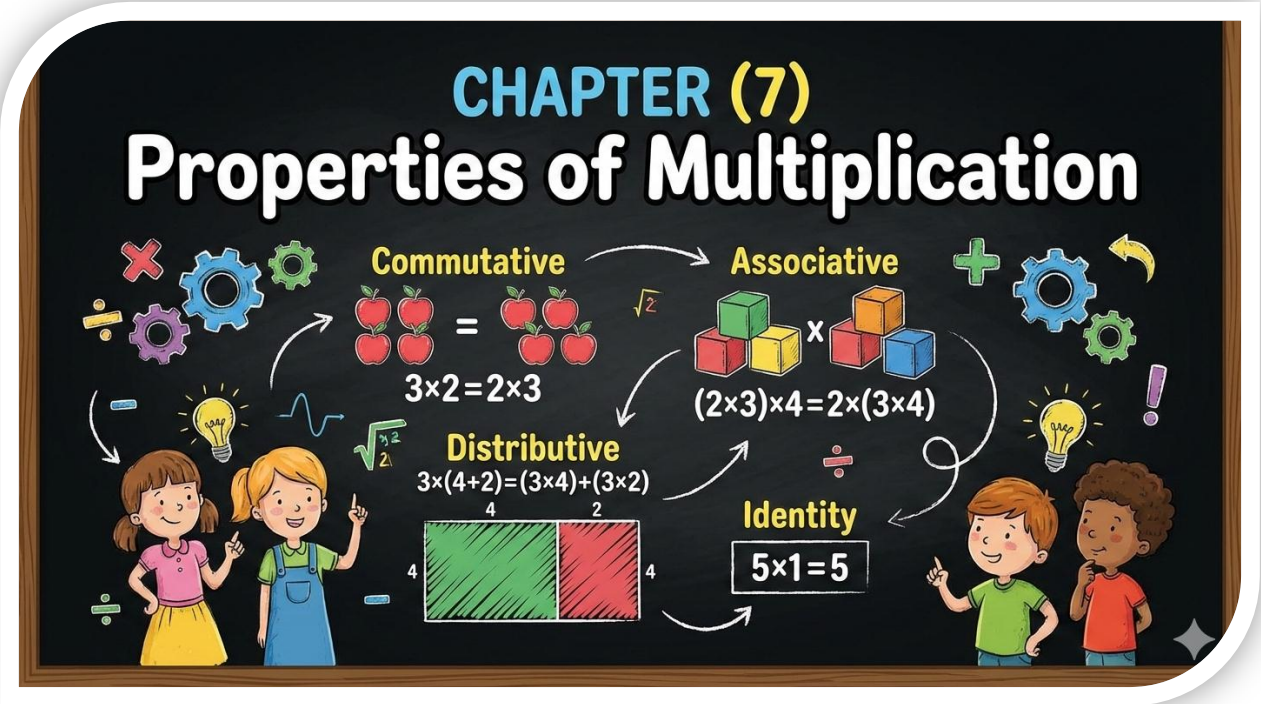
Chapter (10)

Chapter (11)

Chapter (12)

1 × 1 = 1	1 × 2 = 2	1 × 3 = 3	1 × 4 = 4	1 × 5 = 5	1 × 6 = 6	1 × 7 = 7	1 × 8 = 8	1 × 9 = 9	1 × 10 = 10	1 × 11 = 11	1 × 12 = 12
	2 × 2 = 4	2 × 3 = 6	2 × 4 = 8	2 × 5 = 10	2 × 6 = 12	2 × 7 = 14	2 × 8 = 16	2 × 9 = 18	2 × 10 = 20	2 × 11 = 22	2 × 12 = 24
		3 × 3 = 9	3 × 4 = 12	3 × 5 = 15	3 × 6 = 18	3 × 7 = 21	3 × 8 = 24	3 × 9 = 27	3 × 10 = 30	3 × 11 = 33	3 × 12 = 36
			4 × 4 = 16	4 × 5 = 20	4 × 6 = 24	4 × 7 = 28	4 × 8 = 32	4 × 9 = 36	4 × 10 = 40	4 × 11 = 44	4 × 12 = 48
				5 × 5 = 25	5 × 6 = 30	5 × 7 = 35	5 × 8 = 40	5 × 9 = 45	5 × 10 = 50	5 × 11 = 55	5 × 12 = 60
					6 × 6 = 36	6 × 7 = 42	6 × 8 = 48	6 × 9 = 54	6 × 10 = 60	6 × 11 = 66	6 × 12 = 72
						7 × 7 = 49	7 × 8 = 56	7 × 9 = 63	7 × 10 = 70	7 × 11 = 77	7 × 12 = 84
							8 × 8 = 64	8 × 9 = 72	8 × 10 = 80	8 × 11 = 88	8 × 12 = 96
								9 × 9 = 81	9 × 10 = 90	9 × 11 = 99	9 × 12 = 108
									10 × 10 = 100	10 × 11 = 110	10 × 12 = 120
										11 × 11 = 121	11 × 12 = 132
											12 × 12 = 144





Lesson (1) Associative Property of Multiplication

Complete:

2 × (5 × 6) = ... × ..... = ...

(2 × 5) × 6 = ... × ..... = ...

2 × (3 × 4) = ... × ..... = ...

(2 × 3) × 4 = ... × ..... = ...

(2 × 5) × 9 = 2 × (5 × .....)

(3 × 4) × 7 = 3 × (4 × .....)

(..... × 7) × 2 = 5 × (7 × 2)

(4 × 6) × 8 = 4 × (..... × 8)

Find the product in two ways:

$2 \times 10 \times 3$		$2 \times 20 \times 3$	
$(2\times10)\times3$ $= 20\times3$ $= 60$	$2\times(10\times3)$ $= 2\times30$ $= 60$	.....	.....
		.....	.....
		.....	.....

$10 \times 3 \times 7$		$5 \times 2 \times 3$	
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Circle the equations that have the same value:

A	$(9\times2)\times5$	$9\times(2\times5)$	11×5	9×10
B	$(4\times10)\times3$	4×30	$4\times(10\times3)$	4×13
C	$9\times(3\times5)$	9×15	9×8	$9\times(3\times5)$

Put the suitable sign (<), (>) or (=):

A	$(6\times5)\times8$	.....	$6\times(5\times8)$
B	18×13	.....	$(2\times6)\times13$
C	$(15\times4)\times11$	.....	$15\times(4\times11)$
D	$(25\times10)\times4$	.....	25×40

HOMEWORK

Complete:

4 × (5 × 2) = ... × ..... = ...

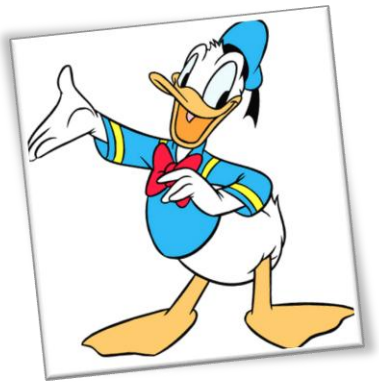
(4 × 5) × 2 = ... × ..... = ...

(9 × .....) × 3 = 9 × (5 × 3)

(4 × .....) × 7 = 4 × (5 × .....)

(2 × 5) × ..... = 2 × (..... × 9)

(3 × .....) × 2 = ... × (8 × 2)



Find the product in two ways:

3 × 10 × 5		3 × 6 × 10	
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

5 × 10 × 7		2 × 7 × 10	
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Circle the equations that have the same value:

A	(10×10)×4	10×14	100×4	40×10
B	36×15	(4×9)×15	(3×8)×15	36×(3×5)
C	(5×2)×8	5×10	5×(2×8)	10×8

Put the suitable sign (<), (>) or (=):

A	(9×2)×5	.....	135
B	(3×5)×6	.....	90
C	(7×3)×5	.....	24×5

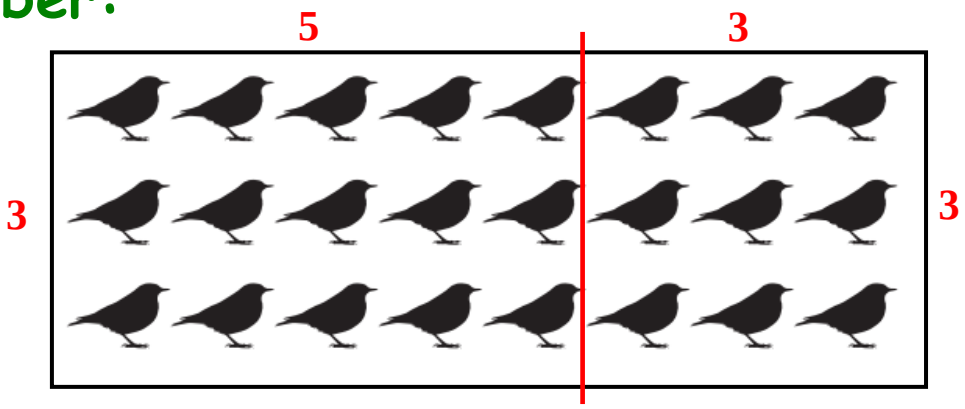
Circle: agree (👍) or disagree (👎)

A	(9×2)×5	<	135	👍	👎
B	(3×5)×6	=	90	👍	👎
C	(7×3)×5	<	24×5	👍	👎

2 X 6 = ☐	2 X 8 = ☐	2 X 5 = ☐
2 X 3 = ☐	2 X 1 = ☐	2 X 0 = ☐
2 X 4 = ☐	2 X 7 = ☐	2 X 2 = ☐

Lesson (2) Distributive Property of Multiplication

Remember:



$8 \times 3 = (3 \times 3) + (5 \times 3)$

Example:

$8 \times 13 = 8 \times (10 + 3)$

$= (8 \times 10) + (8 \times 3)$

$= 80 + 24$

$= 104$

$5 \times 18 = 5 \times (\ldots\ldots\ldots + \ldots\ldots\ldots)$

$= (5 \times \ldots\ldots\ldots) + (5 \times \ldots\ldots\ldots)$

$= \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots$

$6 \times 14 = 6 \times (\ldots\ldots\ldots + \ldots\ldots\ldots)$

$= (6 \times \ldots\ldots\ldots) + (6 \times \ldots\ldots\ldots)$

$= \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots$

$3 \times 15 = 3 \times (10 + \ldots\ldots)$

$= (3 \times \ldots\ldots) + (3 \times \ldots\ldots)$

$= \ldots\ldots + \ldots\ldots$

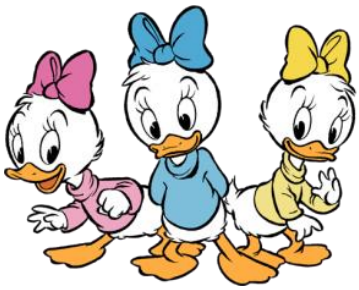
$= \ldots\ldots$

$4 \times 9 = 4 \times (\ldots\ldots + \ldots\ldots)$

$= (4 \times \ldots\ldots) + (4 \times \ldots\ldots)$

$= \ldots\ldots + \ldots\ldots$

$= \ldots\ldots$



Write the distributive property equations of each.

a.

7	7	7	7	7	7	7	7

7 × ____ = ____ × (____ + ____)

= (____ × ____) + (____ × ____)

b.

5	5	5	5	5

____ × ____ = ____ × (____ + ____)

= (____ × ____) + (____ × ____)

Circle the equations that have the same value:

A	5×9	(5×2)+(5×5)	(5×2)+(5×7)	(5×3)+(5×6)
B	7×(4+5)	(7×4)+(7×5)	28+35	7×4×5
C	(5×3)+(5×7)	5×10	5×11	5×(3+7)
D	12×9	9×12	(9×2)+(9×10)	12+9

Circle: agree (👍) or disagree (👎):

A	9×(7+3) = (9×7) + (9×3)	👍	👎
B	(3 × 10) × 4 = 200	👍	👎
C	2×(5+7) = (2×5) + (2×7)	👍	👎
D	(5×2)×7 = 10 × 7	👍	👎

Complete:

6 × 12 = 6 × (10 + ...)

= (6 × .....) + (6 × .....)

= ..... + ...

= .....

9 × 15 = 9 × (..... + ...)

= (9 × .....) + (9 × .....)

= ..... + ...

= .....

$4 \times 17 = 4 \times (10 + \ldots\ldots)$

$= (4 \times \ldots\ldots) + (4 \times \ldots\ldots)$

$= \ldots\ldots + \ldots\ldots$

$= \ldots\ldots$

c.

11	11	11	11	11	11

____ × ____ = ____ × (____ + ____)

= (____ × ____) + (____ × ____)

d.

8	8	8	8	8	8	8	8	8

____ × ____ = ____ × (____ + ____)

= (____ × ____) + (____ × ____)

e.

6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

____ × ____ = ____ × (____ + ____)

= (____ × ____) + (____ × ____)

3 × 7 = ☐	3 × 3 = ☐	3 × 4 = ☐
3 × 8 = ☐	3 × 2 = ☐	3 × 1 = ☐
3 × 5 = ☐	3 × 6 = ☐	3 × 0 = ☐

3 × 8 = ☐	4 × 5 = ☐	3 × 7 = ☐
3 × 4 = ☐	3 × 9 = ☐	3 × 6 = ☐
4 × 3 = ☐	3 × 1 = ☐	4 × 4 = ☐

Lesson (3) Estimating Multiplication

Estimate the product and then find the actual solution:

5 × 19		Acceptable	Not-Acceptable
Estimation	Actual		
			

8 × 12		Acceptable	Not-Acceptable
Estimation	Actual		
			

5 × 11		Acceptable	Not-Acceptable
Estimation	Actual		
			

5 × 18		Acceptable	Not-Acceptable
Estimation	Actual		
			

Dalia had 8 baskets, each basket held 17 eggs. How many eggs did Dalia have in all?

8 × 17		Acceptable	Not-Acceptable
Estimation	Actual		
			

Amir had 4 boxes. In each box there were 2 dolls, and each doll had 3 buttons on its shirt. How many buttons were there?

4 × 2 × 3		Acceptable	Not-Acceptable
Estimation	Actual		
			

HOMEWORK

Estimation	8 × 12	Actual Solution

Estimation	13 × 9	Actual Solution

Estimation	4 × 7 × 5	Actual Solution

Estimation	2 × 6 × 10	Actual Solution

5 × 6 = ☐	5 × 8 = ☐	5 × 5 = ☐
5 × 3 = ☐	5 × 1 = ☐	5 × 0 = ☐
5 × 4 = ☐	5 × 7 = ☐	5 × 2 = ☐

Lesson (4) Lesson (5)

Applications on Multiplication and Division
Strategies for Multiplication and Division

Equation : 15 ÷ 3 = ?

Think :

5	×	3	=	15
↓		↓		↓
factor		factor		product

So,

15	÷	3	=	5
↓		↓		↓
dividend		divisor		quotient

Fill in the missing numbers of the following. Complete the fact family for each.

a. 5 × 8 = 40
—— × 5 = 40
40 ÷ 8 = ——
40 ÷ 5 = ——

b. 3 × 9 = ——
—— × 3 = 27
—— ÷ 9 = 3
—— ÷ 3 = 9

c. 6 × —— = 42
7 × —— = 42
42 ÷ —— = 6
—— ÷ 6 = 7

Complete.

a. 3 × —— = 21
b. —— × 4 = 24
c. 18 ÷ 3 = ——
d. 35 ÷ 7 = ——
e. —— ÷ 6 = 10
f. 56 ÷ —— = 8

Fill in the missing numbers of the following problems. Complete the fact family for each.

a. 4 × 5 = 20
5 × ____ = 20
20 ÷ 5 = ____
____ ÷ 4 = 5

b. 3 × 7 = ____
7 × 3 = ____
____ ÷ 7 = 3
____ ÷ 3 = 7

c. 1 × ____ = 13
____ × 1 = 13
13 ÷ ____ = 1
13 ÷ 1 = ____

Complete the fact family.

a. 3 15 5

____ × ____ = ____

____ × ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

b. 35 7 5

____ × ____ = ____

____ × ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

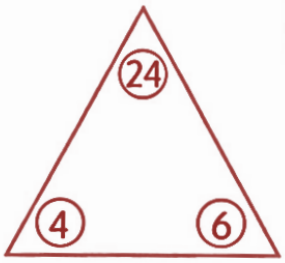
e.

____ × ____ = ____

____ × ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



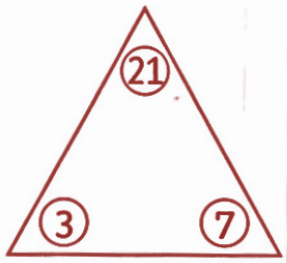
f.

____ × ____ = ____

____ × ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



Find the product of each of the following. Write the other multiplication equation.

a. 2 × 4 = ____

____ × ____ = ____

b. 3 × 8 = ____

____ × ____ = ____

c. 4 × 8 = ____

____ × ____ = ____

d. 5 × 3 = ____

____ × ____ = ____

e. 6 × 2 = ____

____ × ____ = ____

f. 9 × 7 = ____

____ × ____ = ____

HOMEWORK

Complete.

a. $2 \times \_\_\_\_ = 18$	b. $\_\_\_\_ \times 8 = 24$	c. $40 \div 4 = \_\_\_\_$
d. $\_\_\_\_ \div 9 = 6$	e. $45 \div \_\_\_\_ = 5$	f. $36 \div \_\_\_\_ = 6$

Fill in the missing numbers of the following problems. Complete the fact family for each.

a. $9 \times \_\_\_\_ = 18$	b. $\_\_\_\_ \times 6 = 24$	c. $\_\_\_\_ \times 10 = 80$
$\_\_\_\_ \times 9 = 18$	$6 \times \_\_\_\_ = 24$	$10 \times \_\_\_\_ = 80$
$18 \div \_\_\_\_ = 9$	$24 \div 6 = \_\_\_\_$	$80 \div \_\_\_\_ = 10$
$18 \div 9 = \_\_\_\_$	$24 \div \_\_\_\_ = 6$	$80 \div 10 = \_\_\_\_$

Complete the fact family.

a. 4 3 12

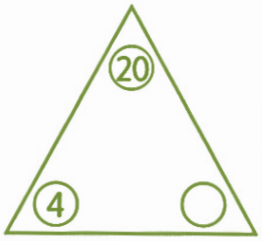
____ × ____ = ____
____ × ____ = ____
____ ÷ ____ = ____
____ ÷ ____ = ____

b. 5 45 9

____ × ____ = ____
____ × ____ = ____
____ ÷ ____ = ____
____ ÷ ____ = ____

g.

____ × ____ = ____
____ × ____ = ____
____ ÷ ____ = ____
____ ÷ ____ = ____



h.

____ × ____ = ____
____ × ____ = ____
____ ÷ ____ = ____
____ ÷ ____ = ____

Find the quotient of each of the following. Write the other division equation.

a. 16 ÷ 2 = ____ ____ ÷ ____ = ____	b. 50 ÷ 5 = ____ ____ ÷ ____ = ____	c. 28 ÷ 4 = ____ ____ ÷ ____ = ____
d. 40 ÷ 8 = ____ ____ ÷ ____ = ____	e. 36 ÷ 9 = ____ ____ ÷ ____ = ____	f. 42 ÷ 7 = ____ ____ ÷ ____ = ____

Complete the missing numbers in each of the following.

a. 5 × ____ = 10 10 ÷ 5 = ____	b. 7 × ____ = 21 21 ÷ 7 = ____	c. 10 × ____ = 80 80 ÷ ____ = 10
d. ____ × 7 = 14 14 ÷ 7 = ____	e. ____ × 6 = 54 54 ÷ 6 = ____	f. ____ × 7 = 49 49 ÷ ____ = 7

Complete the missing numbers in each of the following.

a. 36 ÷ 6 = ____ 6 × ____ = 36	b. 40 ÷ 5 = ____ 5 × ____ = 40	c. 56 ÷ 7 = ____ 7 × ____ = 56
d. 27 ÷ ____ = 3 3 × ____ = 27	e. 16 ÷ ____ = 4 4 × ____ = 16	f. 72 ÷ ____ = 8 8 × ____ = 72

Complete the fact family in each of the following group:

2 , 6 , 12

2 × ..... = 12

6 × ..... = 12

12 ÷ ..... = 6

..... ÷ 6 = 2

5 , 9 , 45

5 × ..... = 45

9 × ..... = 45

45 ÷ ..... = 9

..... ÷ 9 = 5

7 , 8 , 56

7 × ..... = 56

8 × ..... = 56

56 ÷ ..... = 7

..... ÷ 8 = 7

4 , 10 , 40

4 × ..... = 40

10 × ..... = 40

40 ÷ ..... = 4

..... ÷ 4 = 10

3 , 5 , 15

3 × ..... = 15

5 × ..... = 15

15 ÷ ..... = 3

..... ÷ 3 = 5

5 , 7 , 35

7 × ..... = 35

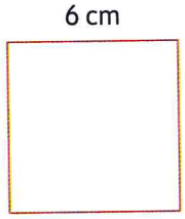
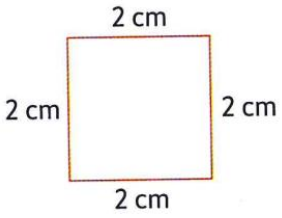
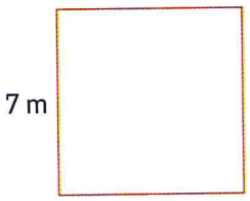
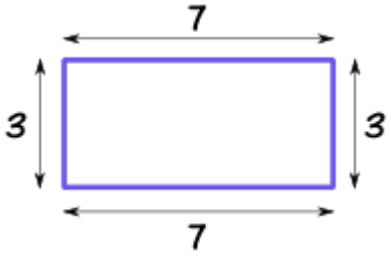
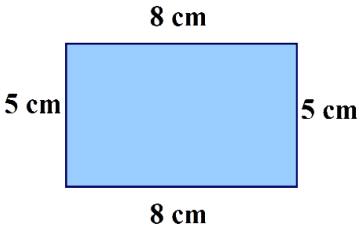
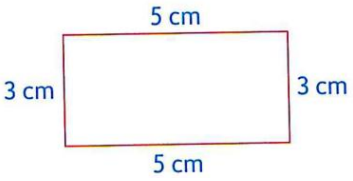
5 × ..... = 35

35 ÷ ..... = 7

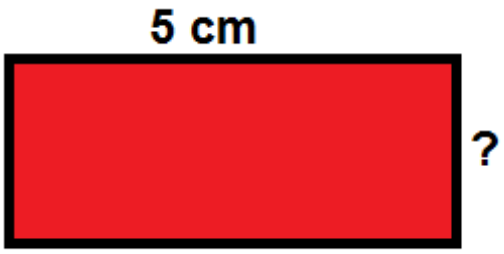
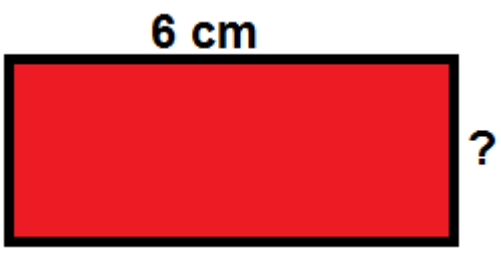
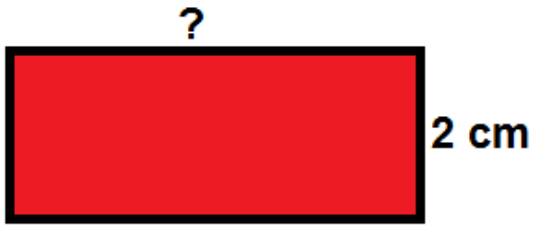
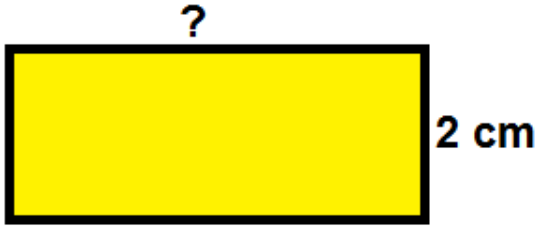
..... ÷ 7 = 5

Lesson (6) Perimeter of Square and Rectangle

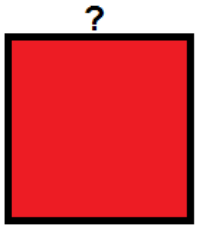
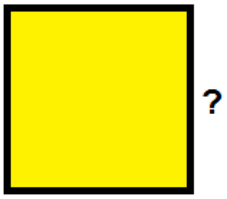
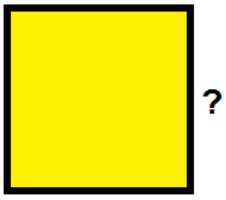
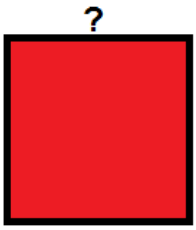
Find the perimeter of the following shapes:

 Perimeter = …… cm	 Perimeter = …… cm	 Perimeter = …… cm
 Perimeter = …… cm	 Perimeter = …… m	 Perimeter = …… cm

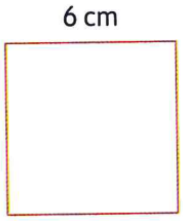
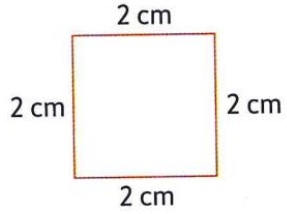
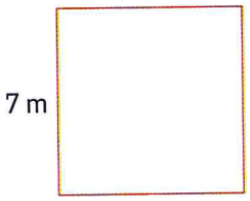
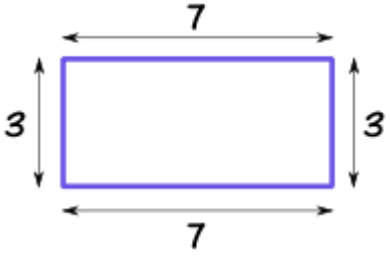
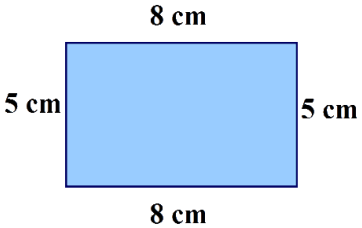
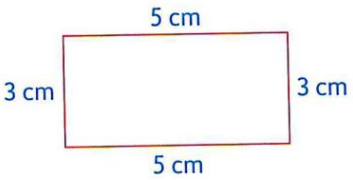
Find the length of the side marked by (?):

Perimeter = 16 cm …… 	Perimeter = 20 cm …… 
Perimeter = 12 cm …… 	Perimeter = 10 cm …… 

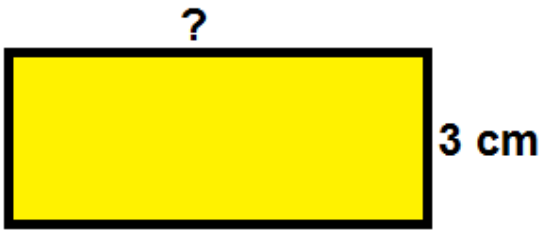
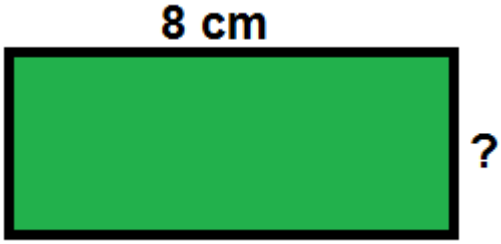
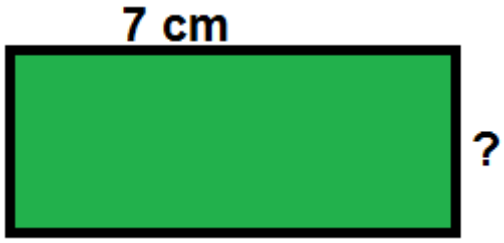
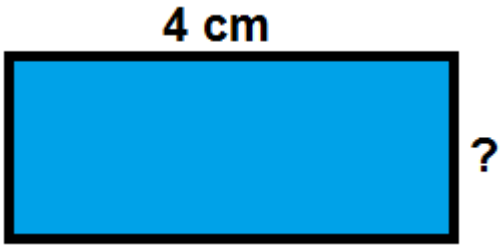
Find the length of the side marked by (?):

Perimeter = 20 cm …… 	Perimeter = 12 cm …… 
Perimeter = 16 cm …… 	Perimeter = 24 cm …… 

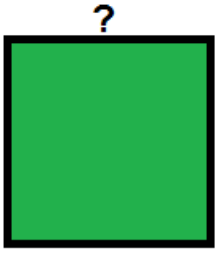
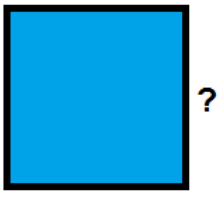
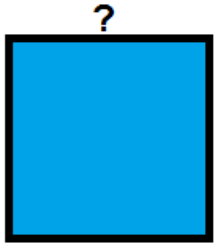
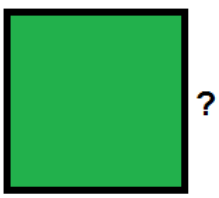
Find the perimeter of the following shapes:

 Perimeter = …… cm	 Perimeter = …… cm	 Perimeter = …… cm
 Perimeter = …… cm	 Perimeter = …… m	 Perimeter = …… cm

Find the length of the side marked by (?):

Perimeter = 20 cm …… 	Perimeter = 24 cm …… 
Perimeter = 18 cm …… 	Perimeter = 14 cm …… 

Find the length of the side marked by (?):

Perimeter = 8 cm …… 	Perimeter = 28 cm …… 
Perimeter = 36 cm …… 	Perimeter = 40 cm …… 

Choose the correct answer.

a. The perimeter of the square whose side length is 6 cm = ——— cm

○ 6 ○ 12 ○ 24 ○ 36

b. The perimeter of the square whose side length is 5 m = ——— m

○ 10 ○ 20 ○ 50 ○ 100

c. The side length of the square whose perimeter is 12 cm = ——— cm

○ 10 ○ 8 ○ 4 ○ 3

d. The side length of the square whose perimeter is 32 units = ——— units

○ 16 ○ 8 ○ 4 ○ 12

e. The perimeter of the rectangle whose length is 5 cm and width is 3 cm equals ——— cm

○ 8 ○ 15 ○ 16 ○ 20

f. The perimeter of the rectangle whose length is 9 cm and width is 7 cm equals ——— cm

○ 2 ○ 16 ○ 63 ○ 32

g. The length of the rectangle whose width is 2 cm and perimeter is 10 cm equals ——— cm

○ 8 ○ 6 ○ 5 ○ 3

h. The width of the rectangle whose length is 5 cm and perimeter is 16 cm equals ——— cm

○ 9 ○ 3 ○ 8 ○ 21

i. The length of the rectangle whose width is 4 m and perimeter is 22 m equals ——— m

○ 18 ○ 14 ○ 7 ○ 9

Lesson (7)
Lesson (8)
Lesson (9)

Two-Step Story Problems
Strategies for solving Two-Step Story Problems
Writing Story Problems

Ali saves L.E. 20 weekly, in the fourth week he saves L.E. 10 only. How much money did he save?

……

……

Miss Salma orders 3 packs. Each pack has 6 markers. She gave 1 marker to each student in her class, she has 2 left. How many students in the class?

……

……

Bassem buys a box containing 18 pieces of fruits. The box includes an equal number of figs, bananas and oranges. He ate all the figs. How many pieces of fruits did he have left?

……

……

HOMEWORK

Laila buys 24 seeds. She has 5 pots. She want to plant 3 seeds in each pot. How many more pots does Laila need to plant all seeds?

.....

.....

Mr. Yassin had 52 pieces of fruit. He took 4 pieces for him and distributed the rest equally among 8 children.

How many pieces of fruit does each child get ?

_____

_____

Each day, Habiba eats 10 crackers for a snack at school. On Friday, she drops 3 crackers and only eats 7.

What is the total number of crackers that Habiba eats during the week?

_____

_____

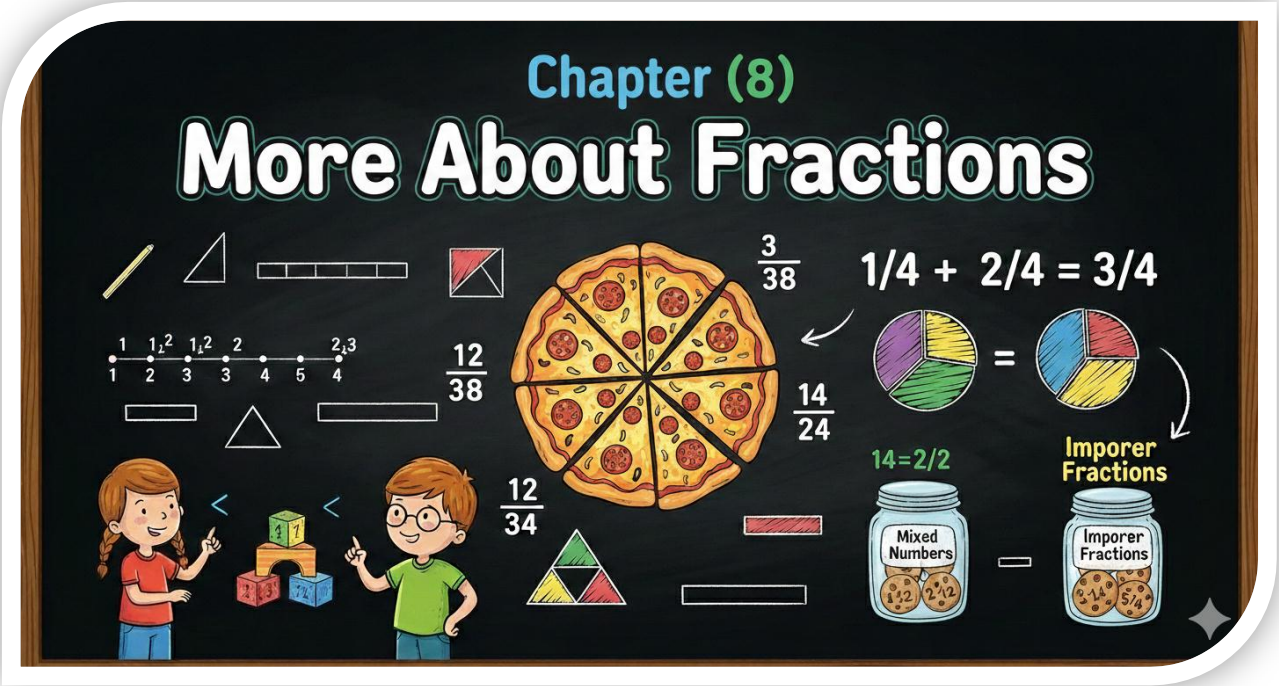
Write and solve a two-step problem in the box and solve it.

_____

_____

_____

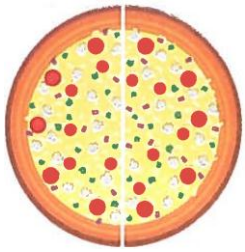
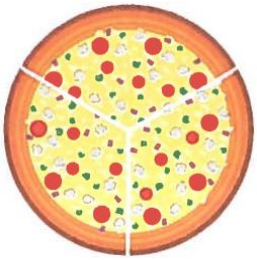
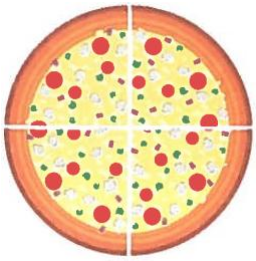
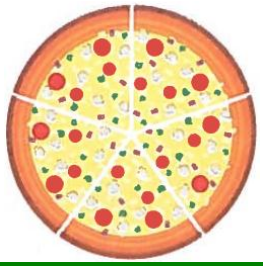
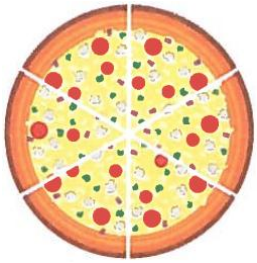
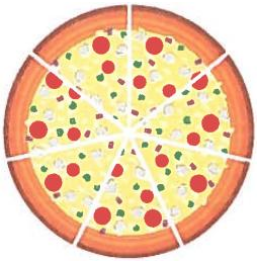
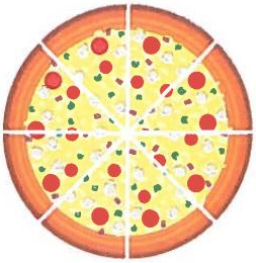
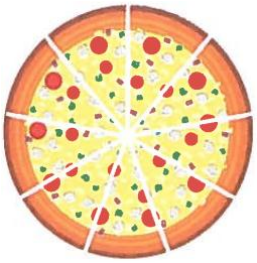
_____



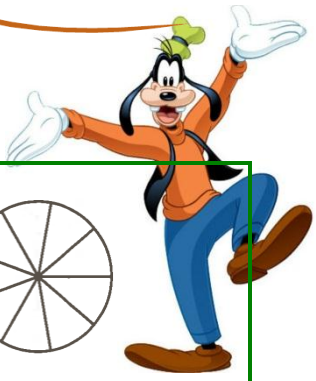
Lesson (1)
Lesson (2)

More Fractions
Exploring Unit Fractions

A	If 2 persons want to share a cookie fairly, circle the right image.	
B	If 3 persons want to share a cookie fairly, circle the right image.	
C	If 4 persons want to share a cookie fairly, circle the right image.	
D	Try to divide this cookie to share it fairly with 8 friends.	

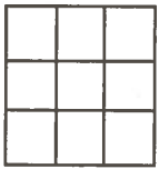
halves	thirds	fourths	fifths
			
sixths	**sevenths**	**eighths**	**ninths**
			

Join:



● Sevenths ●

● Ninths ●



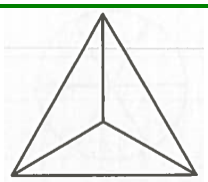
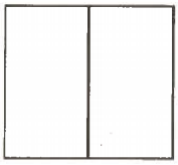
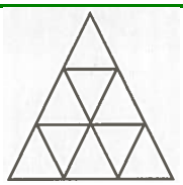
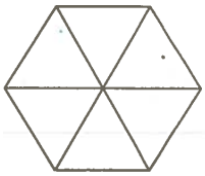
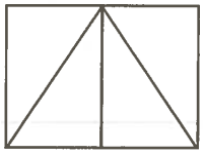
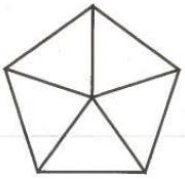
● Eighths ●

● Sixths ●

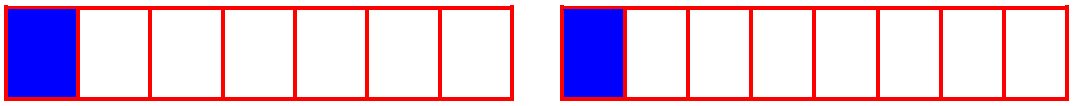
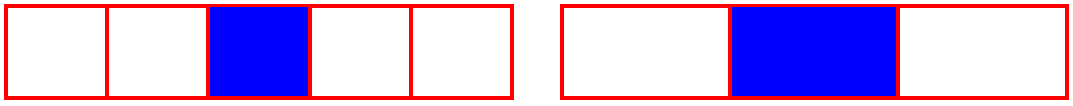
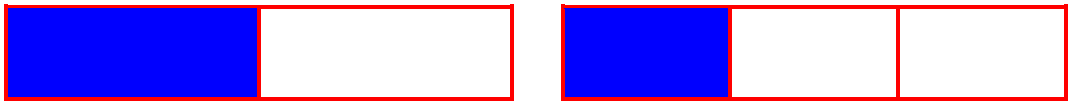
Read, trace then write:

$\frac{1}{2}$ half	$\frac{1}{3}$ third	$\frac{1}{4}$ fourth	$\frac{1}{5}$ fifth
half	third	fourth	fifth
half	third	fourth	fifth
$\frac{1}{6}$ sixth	$\frac{1}{7}$ seventh	$\frac{1}{8}$ eighth	$\frac{1}{9}$ ninth
sixth	seventh	eighth	ninth
sixth	seventh	eighth	ninth

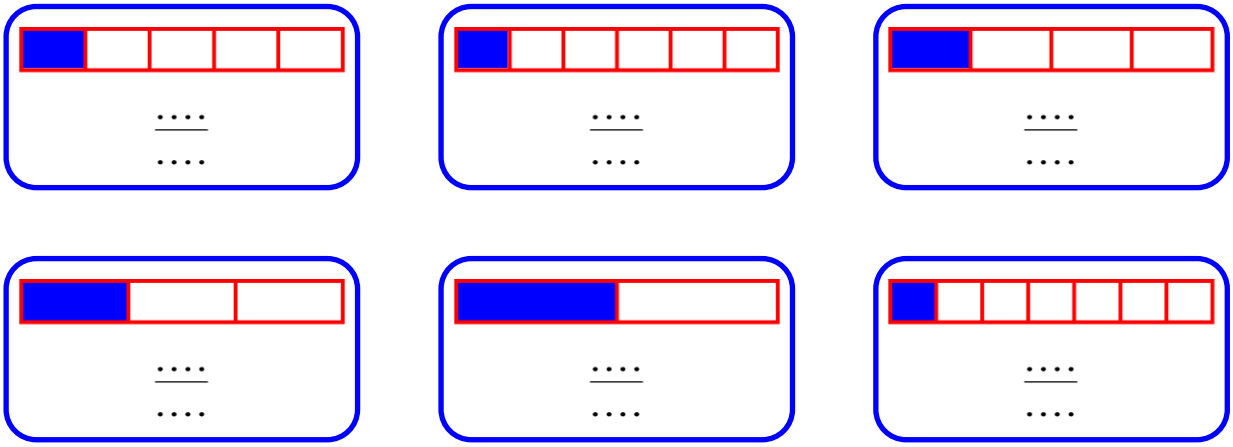
Complete as the example:

 Thirds		 .....
		 .....

Choose the correct answer:

A	$\frac{1}{8}$	
B	$\frac{1}{5}$	
C	$\frac{1}{2}$	

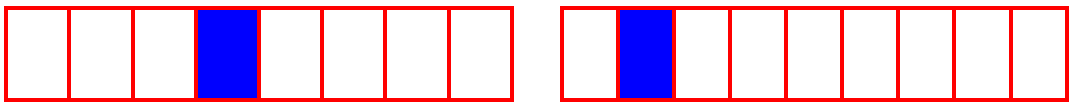
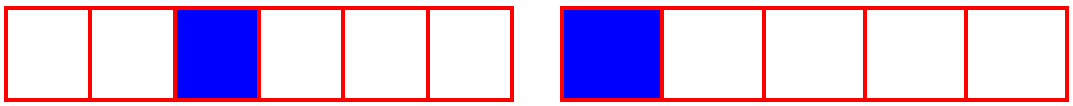
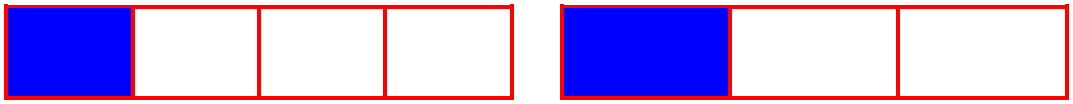
Write the fraction:



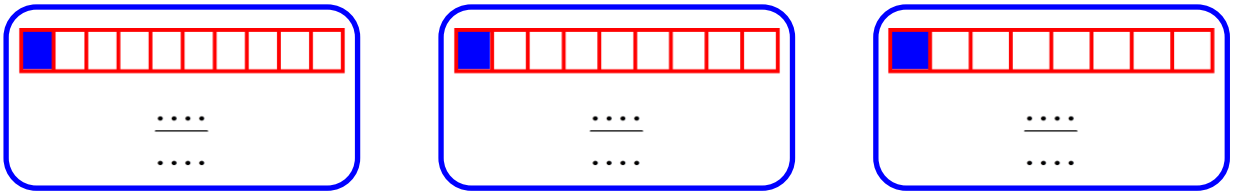
Write the fraction:

Seventh .... /	Eighth .... /	Sixth .... / ....
Third .... /	Fifth .... /	Ninth .... / ....

Choose the correct answer:

A	$\frac{1}{9}$	
B	$\frac{1}{6}$	
C	$\frac{1}{3}$	

Write the fraction:

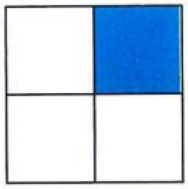


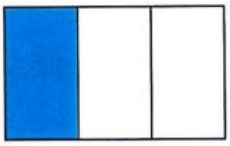
Write the fraction:

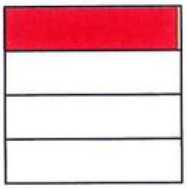
Fourth	Half	Tenth
.... /	.... /	.... / ....

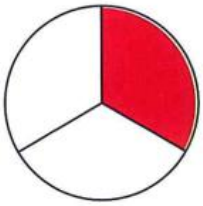
Write the fraction for the colored part of each shape.

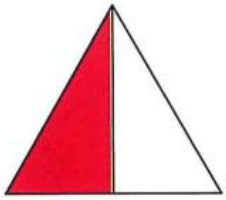
a. 

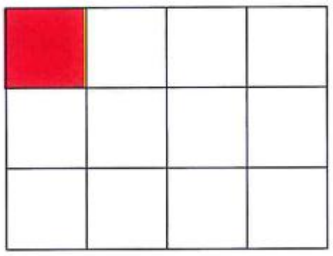
b. 

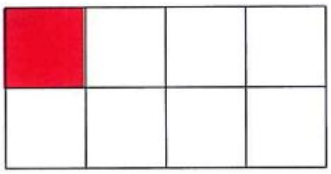
c. 

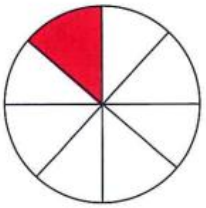
d. 

e. 

f. 

g. 

h. 

i. 

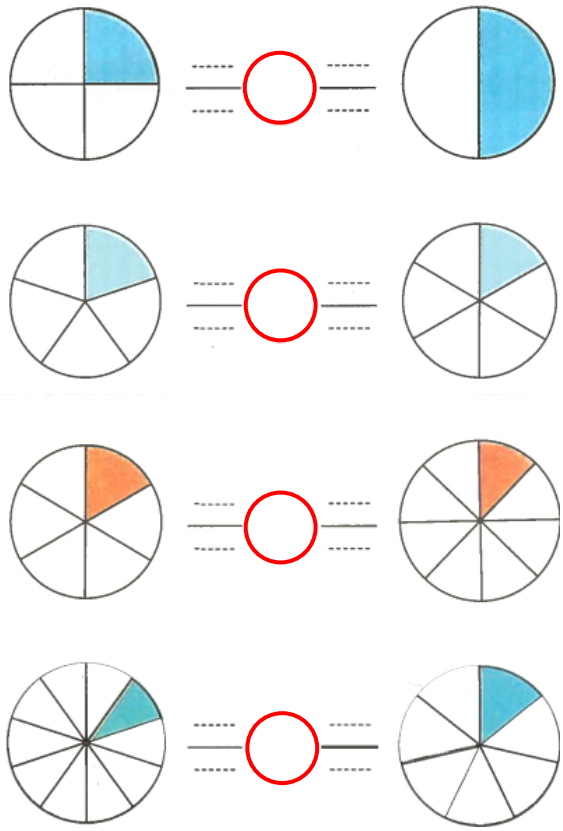
Lesson (3) Applications on Unit Factions Using Models

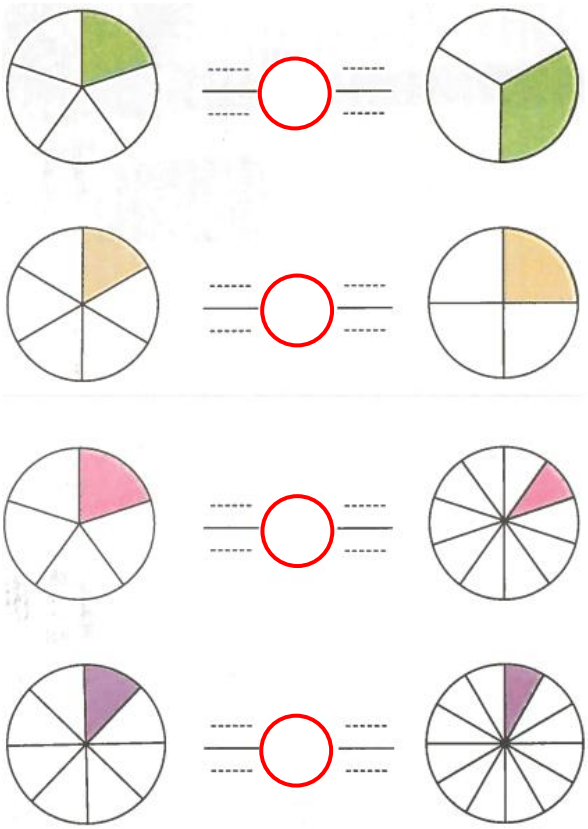
Divide each clock into fractional parts as shown:

		
Halves	Thirds	Fourths

Lesson (4) Comparing Unit Factions Using Models

Write the fraction, then put (>), (<) or (=):





Circle the greater:

$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{3}$	1	$\frac{1}{4}$	$\frac{1}{7}$
$\frac{1}{10}$	$\frac{1}{8}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{1}{2}$	$\frac{1}{6}$

Circle the smaller:

$\frac{1}{7}$	1	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{6}$
$\frac{1}{9}$	$\frac{1}{3}$	$\frac{1}{11}$	$\frac{1}{8}$	$\frac{1}{12}$	$\frac{1}{10}$

Put (>) or (<):

A	$\frac{1}{2}$	...	$\frac{1}{3}$	E	$\frac{1}{10}$	...	$\frac{1}{3}$
B	$\frac{1}{10}$	...	$\frac{1}{7}$	F	$\frac{1}{7}$	...	$\frac{1}{2}$
C	$\frac{1}{2}$	...	$\frac{1}{7}$	G	$\frac{1}{2}$	...	$\frac{1}{4}$

Circle: agree (👍) or disagree (👎):

A	$\frac{1}{2}$	<	$\frac{1}{3}$	👍	👎
B	$\frac{1}{7}$	>	$\frac{1}{10}$	👍	👎
C	$\frac{1}{2}$	<	$\frac{1}{7}$	👍	👎

Circle the greater:

1	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{7}$	$\frac{1}{2}$	1
$\frac{1}{9}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{1}{6}$

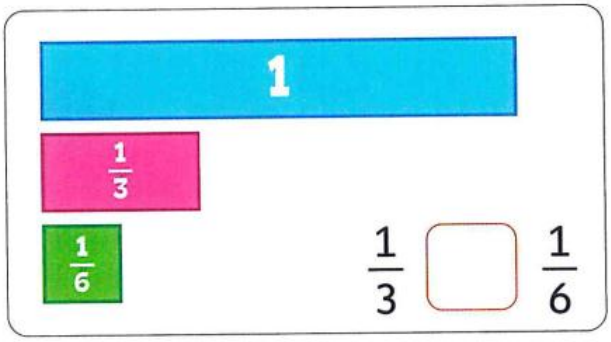
Circle the smaller:

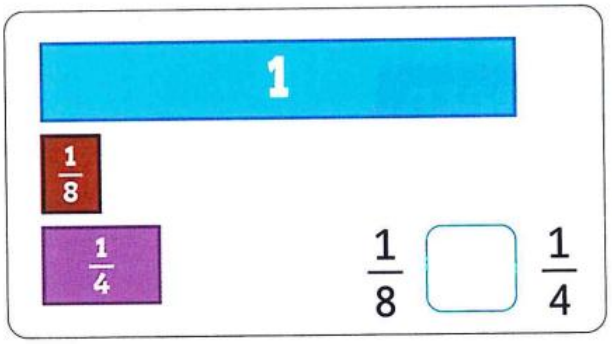
$\frac{1}{4}$	$\frac{1}{5}$	1	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{7}$
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{11}$	$\frac{1}{12}$	$\frac{1}{7}$	$\frac{1}{10}$

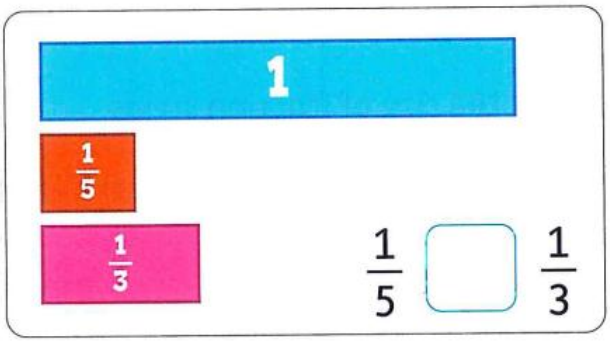
Put (>) or (<):

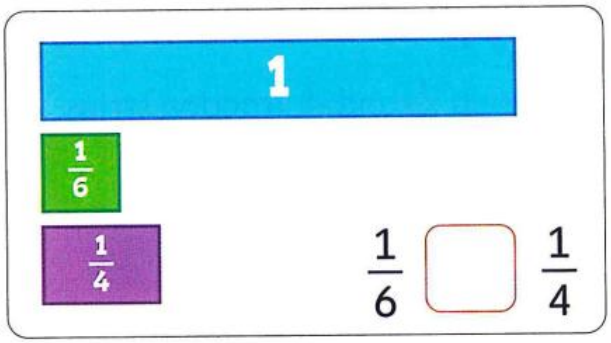
A	$\frac{1}{2}$	...	$\frac{1}{7}$	G	$\frac{1}{2}$	...	$\frac{1}{4}$
B	$\frac{1}{2}$	...	1	H	$\frac{1}{9}$	...	$\frac{1}{4}$

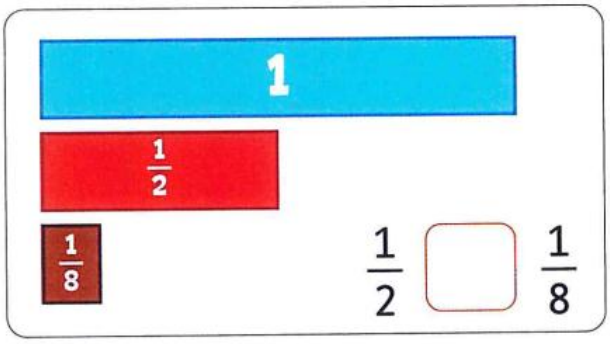
Compare. Write > or <. You may use fraction strips to help.

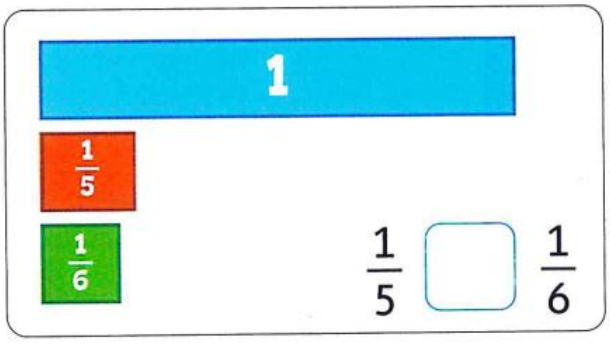












Lesson (5) Which Is Bigger?

A. B.

➲ Kamal likes to eat a lot of pie. His friend told him he could have $\frac{1}{2}$ of a pie (A) or $\frac{1}{2}$ of a pie (B). Which pie should Kamal choose if he wants to eat a lot of pie? .....

➲ Ali has 8 candies and Ahmed has 12 candies. Each of them ate $\frac{1}{2}$ of his candies.
Which of them ate more? .....

➲ Hoda and Mona donated with half of what they had, Hoda had L.E. 100 and Mona had L.E. 50.
Which of them donated less? .....

Circle the correct answer:

1. Which is longer: half of lunch time or half of Saturday?
2. Which is longer: half of a minute or half of an hour?
3. Which is more: half of an orange or half of a watermelon?
4. Which is more: half of a cookie or half of a cake?
5. Which is more: half of glass of water or half of swimming pool?
6. Which is more: half of a liter or half of a milliliter?

Lesson (6) Expressing One Using Unit Fractions

Complete.

a. $1 = \frac{\_\_}{3}$ b. $1 = \frac{7}{\_\_}$ c. $1 = \frac{\_\_}{9}$

d. $1 = \frac{8}{\_\_}$ e. $1 = \frac{\_\_}{6}$ f. $1 = \frac{13}{\_\_}$

g. $1 = \frac{15}{\_\_}$ h. $1 = \frac{10}{\_\_}$ i. $1 = \frac{\_\_}{20}$

j. $1 = \frac{17}{\_\_}$ k. $1 = \frac{25}{\_\_}$ l. $1 = \frac{\_\_}{36}$

Answer the questions:

❶ How many halves in the whole one? .....

❷ How many fourths in the whole one? .....

❸ How many sevenths in the whole one? .....

❹ How many thirds in the whole one? .....

HOMEWORK

Put (✓) for the correct statment or (✗) for the incorrect statment.

a. Half of one piece of a lemon is more than half of one piece of an apple. ( )

b. Half of one piece of a watermelon is more than half of one piece of a mango. ( )

c. Half of a minute is less than a half of a day. ( )

d. Half of a bed is more than a half of chair. ( )

e. Half of one piece of a pizza is less than half of a cookie. ( )

Circle the correct answers.

a. Which is longer , half of a lunchtime or half of Saturday ?

b. Which is longer , half of a minute or half of an hour ?

c. Which is more , half of a cookie or half of a cake ?

d. Which holds more , half of a glass for water or half of a swimming pool ?

e. Which is more , half of a liter or half of a milliliter ?

Answer the questions:

❶ How many ninths in the whole one? .....

❷ How many eighths in the whole one? .....

❸ How many sixths in the whole one? .....

❹ How many fifths in the whole one? .....

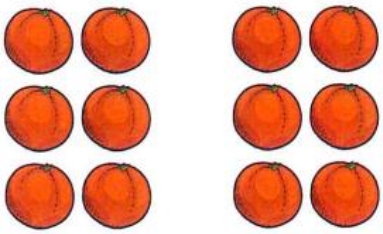
❺ How many tenths in the whole one? .....

Complete:

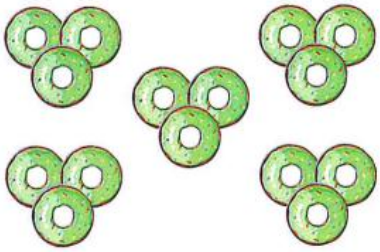
$1 = \frac{....}{2}$	$1 = \frac{....}{7}$	$1 = \frac{8}{....} = \frac{....}{9}$
$\frac{12}{12} = ...$	$\frac{11}{11} = \frac{7}{7} = ...$	$\frac{5}{....} = 1 = \frac{....}{3}$

Lesson (7) Relation between Fractions and Division

Solve. You may use counters or draw a picture to help.



$\frac{1}{2}$ of 12 = _____

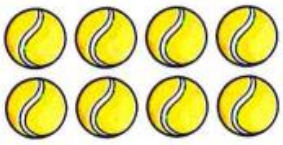


$\frac{1}{5}$ of 15 = _____

$\frac{1}{3}$ of 6 = _____

Use the counters to find $\frac{1}{2}$ of 8.

_____

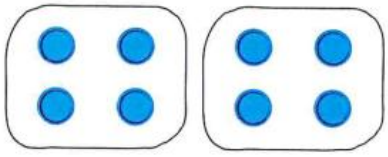


Use the counters to find $\frac{1}{3}$ of 18.

_____

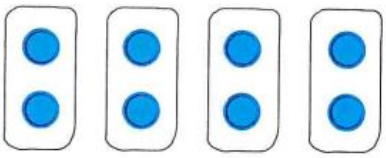
Lesson (8) More of the Relation between Fractions and Division

Eight counters are divided into equal groups, complete.



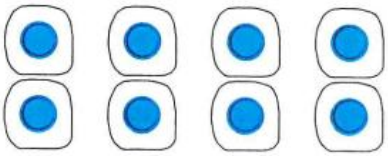
8 ÷ _____ = _____

The fraction that represents each group is _____



8 ÷ _____ = _____

The fraction that represents each group is _____



8 ÷ _____ = _____

The fraction that represents each group is _____

Compare, write < , > or =.

a. $\frac{1}{6}$ of 24 ☐ $\frac{1}{4}$ of 12

b. $\frac{1}{3}$ of 18 ☐ $\frac{1}{5}$ of 25

c. $\frac{1}{2}$ of 8 ☐ $\frac{1}{3}$ of 21

d. $\frac{1}{7}$ of 28 ☐ $\frac{1}{8}$ of 32

e. $\frac{1}{9}$ of 9 ☐ $\frac{1}{5}$ of 10

f. $\frac{1}{6}$ of 12 ☐ $\frac{1}{3}$ of 6

g. $\frac{1}{4}$ of 36 ☐ $\frac{1}{6}$ of 60

h. $\frac{1}{8}$ of 48 ☐ $\frac{1}{2}$ of 16

Lesson (9) Applications on Factions

Four friends bought a pizza to share equally. What fraction of the pizza will each friend get? "Write your answer as a division problem and as a fraction".

Omar bought a 6-pack of soda to give equally to his 6 guests. How many cans of soda will each guest receive ?
"Write your answer as a division problem and as a fraction of the 6-pack".

HOMEWORK

Solve. You may use counters or draw a picture to help.

a. Find $\frac{1}{2}$ of 18 _____	b. Find $\frac{1}{7}$ of 21 _____	c. Find $\frac{1}{4}$ of 8 _____
d. Find $\frac{1}{3}$ of 9 _____	e. Find $\frac{1}{6}$ of 18 _____	f. Find $\frac{1}{4}$ of 16 _____
g. Find $\frac{1}{8}$ of 24 _____	h. Find $\frac{1}{5}$ of 25 _____	i. Find $\frac{1}{3}$ of 27 _____
j. Find $\frac{1}{4}$ of 24 _____	k. Find $\frac{1}{6}$ of 6 _____	l. Find $\frac{1}{4}$ of 36 _____

Read and solve.

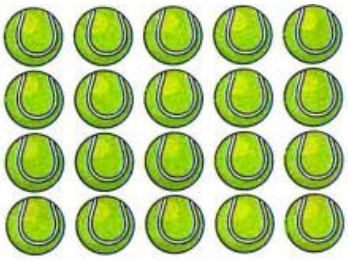
a. Suppose you slept for $\frac{1}{3}$ of a day.
How much hours did you sleep ?

_____

b. Summer lasts for $\frac{1}{4}$ of the year.
How many months does summer last ?

_____

Use the counters to find $\frac{1}{4}$ of 20.



_____

1. What is the third of 18 candies? .....

2. What is the half of 20 balloons? .....

3. What is the fourth of 16 pupils? .....

4. What is the sixth of 30 books? .....

5. What is the ninth of 18 marbles? .....

6. What is the third of 24 fish? .....

7. What is the sixth of 18 eggs? .....

1. What is the $\frac{1}{2}$ of 18? .....

2. What is the $\frac{1}{4}$ of 20? .....

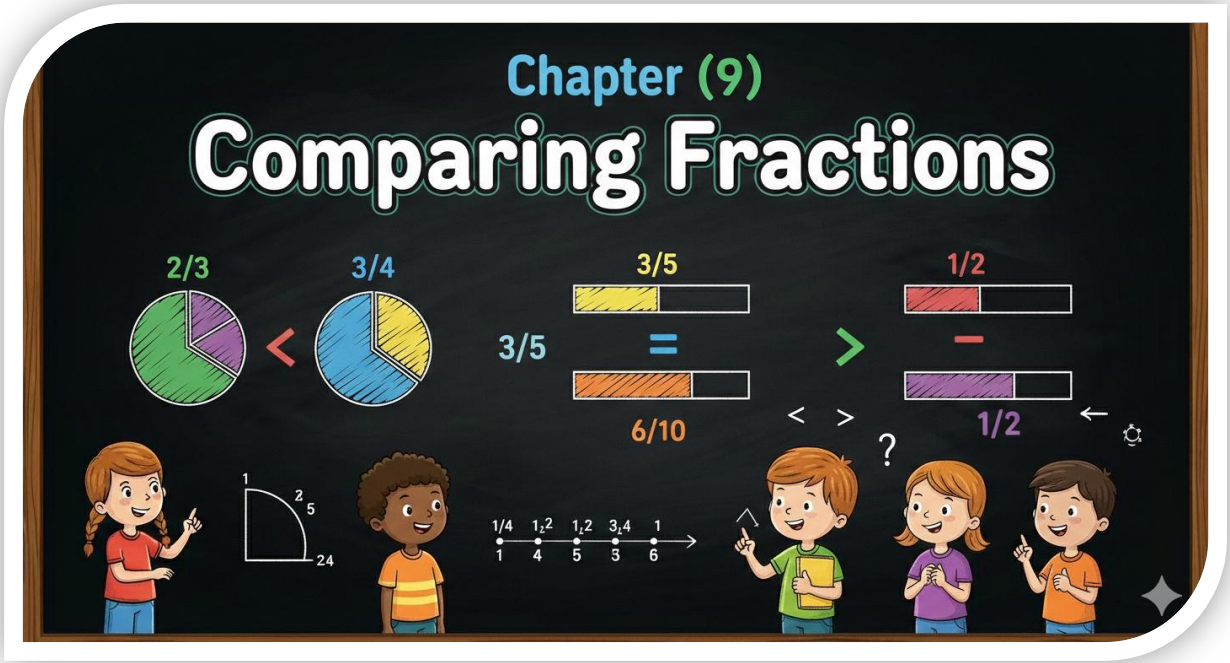
3. What is the $\frac{1}{7}$ of 21? .....

4. What is the $\frac{1}{3}$ of 15? .....

5. What is the $\frac{1}{6}$ of 24? .....

6. What is the $\frac{1}{9}$ of 72? .....

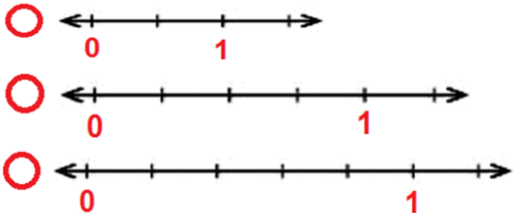
7. What is the $\frac{1}{8}$ of 16? .....



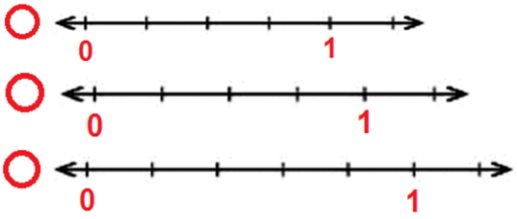
Lesson (1) Representing Fractions on a Number Line

Choose the correct answer:

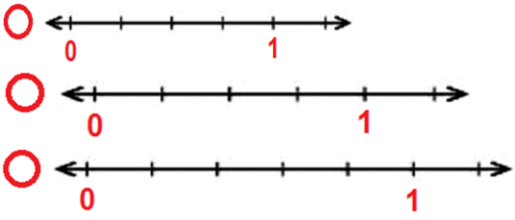
Ali divides the pizza into 5 equal parts and gives her sister one part.



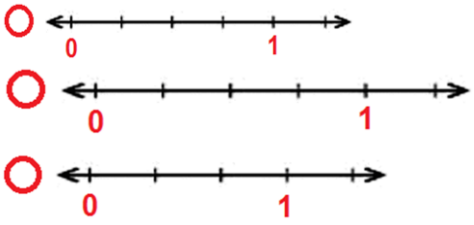
Ahmed drinks half liter of juice after he playing a match.



Rania walks $\frac{1}{4}$ km to the club with her friends.



Hany distributed a pie among his three friends.



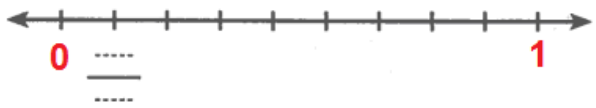
Match:

Mona had a rope. She needed $\frac{1}{2}$ of it for a project.

Omar had a meter of wood. He needed $\frac{1}{3}$ of the meter for a bird house.

Sara was sewing beads onto a meter of ribbon. She wanted to sew a bead on each $\frac{1}{4}$ of the ribbon.

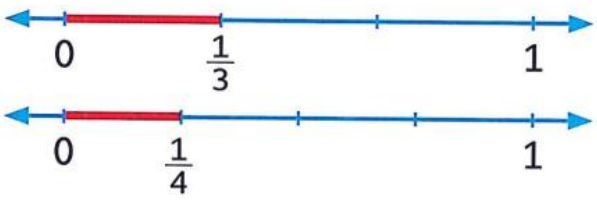
Write the fraction on the number line:



Lesson (2) Comparing Unit Fractions Using a Number Line

Use the number lines to compare the fractions. Write < or >.

$\frac{1}{3}$ ☐ $\frac{1}{4}$



$\frac{1}{8}$ ☐ $\frac{1}{4}$

HOMEWORK

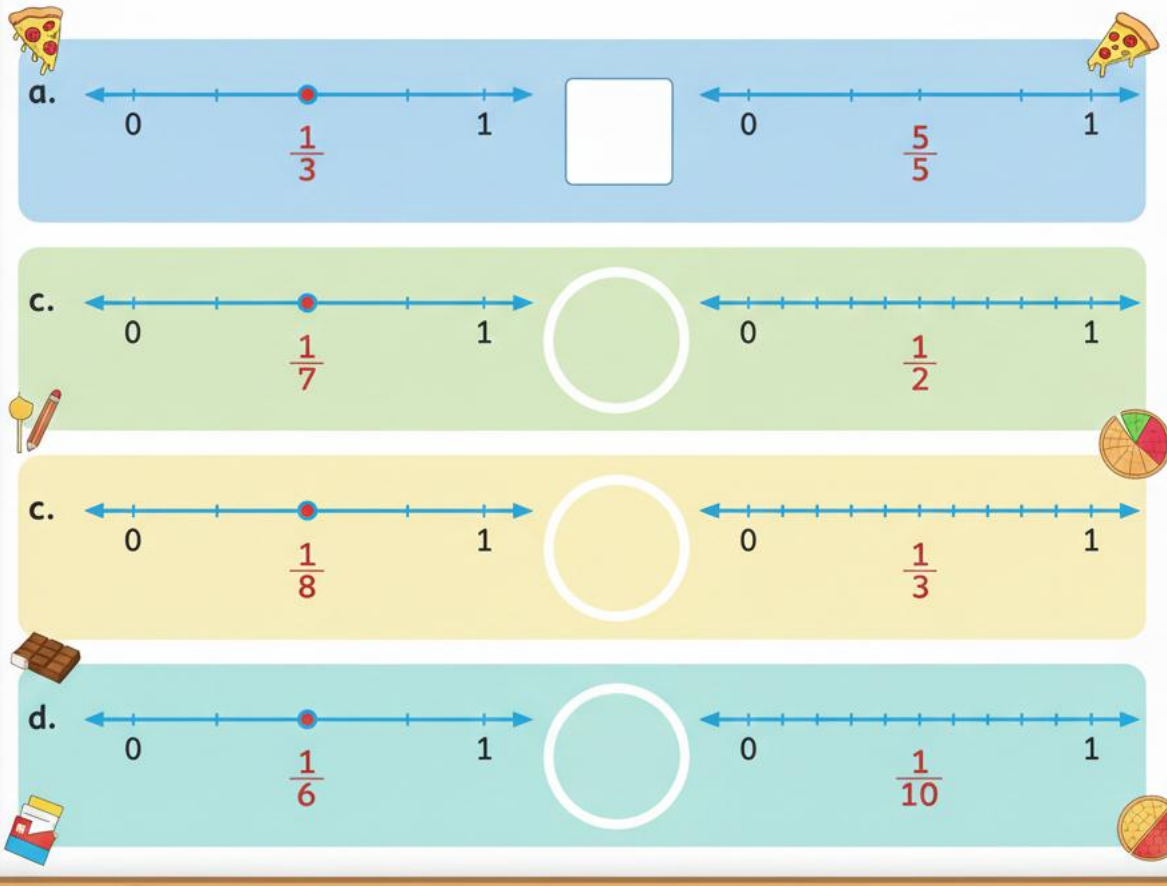
Use the number line to compare between two fractions. Write < or >.

a. $\frac{1}{2}$ ☐ $\frac{1}{4}$

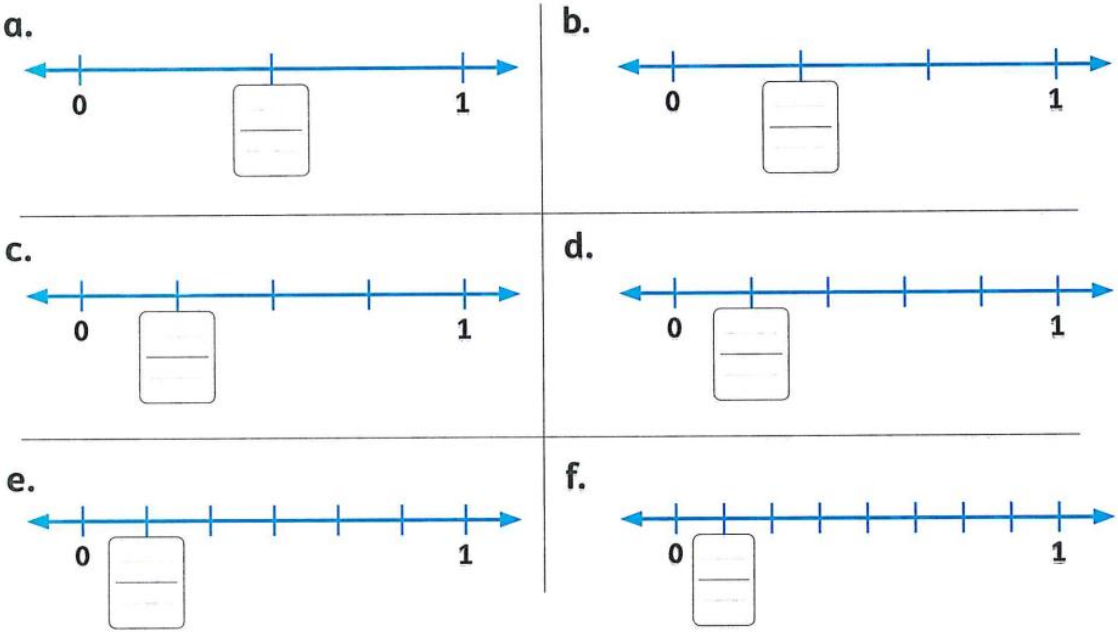
b. $\frac{1}{6}$ ☐ $\frac{1}{3}$

Represent and Compare Fractions

Represent each fraction on the number line, then compare using < , > or =.



Write the fraction on the number line.



Circle the smaller fraction.

a. $\frac{1}{3}$, $\frac{1}{7}$

b. $\frac{1}{5}$, $\frac{1}{2}$

c. $\frac{1}{4}$, $\frac{1}{3}$

d. $\frac{1}{6}$, $\frac{1}{10}$

e. $\frac{1}{7}$, $\frac{1}{8}$

f. $\frac{1}{2}$, $\frac{1}{3}$

Compare using "< or >".

a. $\frac{1}{2}$ ◯ $\frac{1}{3}$

b. $\frac{1}{5}$ ◯ $\frac{1}{4}$

c. $\frac{1}{4}$ ◯ $\frac{1}{7}$

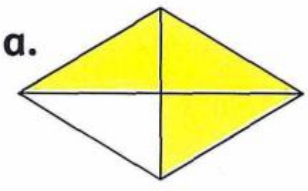
d. $\frac{1}{3}$ ◯ $\frac{1}{6}$

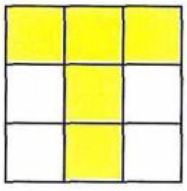
e. $\frac{1}{8}$ ◯ $\frac{1}{5}$

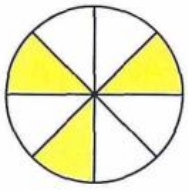
f. $\frac{1}{10}$ ◯ $\frac{1}{2}$

Lesson (3) Comparing Fractions Using Models

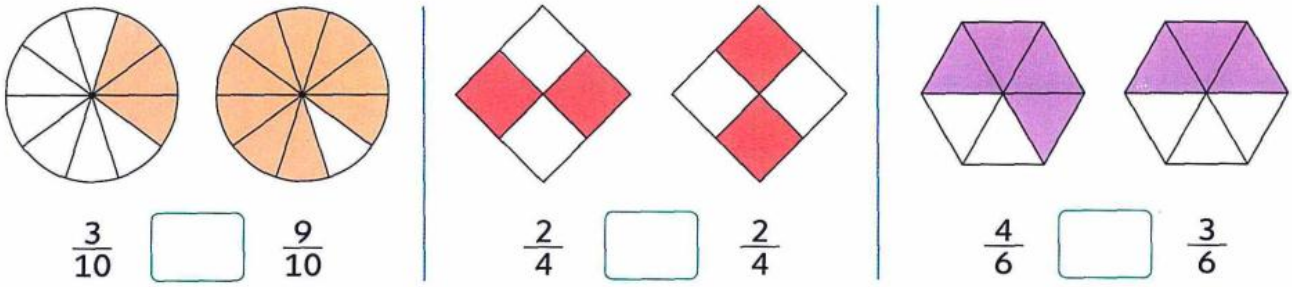
Write the fraction for the colored part of each of the following shapes.

a. 

b. 

c. 

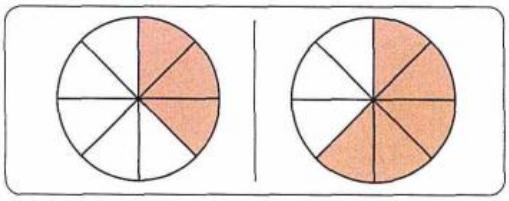
Compare using ">,= or<".



$\frac{3}{10}$ ☐ $\frac{9}{10}$ $\quad$ $\frac{2}{4}$ ☐ $\frac{2}{4}$ $\quad$ $\frac{4}{6}$ ☐ $\frac{3}{6}$

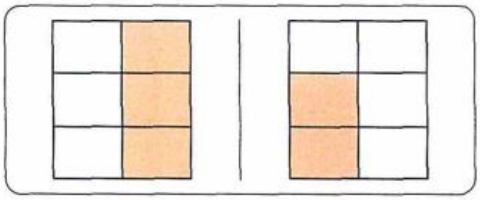
Compare using "< or >".

a.



$\frac{3}{8}$ ○ $\frac{5}{8}$

b.



$\frac{3}{6}$ ○ $\frac{2}{6}$

Lesson (4) Comparing Fractions Using a Number Line

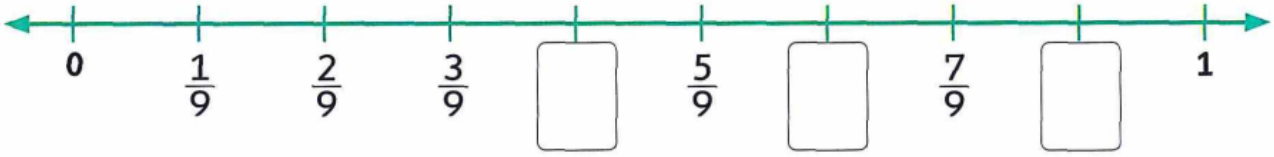
Locate a point to represent each fraction on the number line.
Compare using "> or <".

$\frac{8}{10}$ ☐ $\frac{5}{10}$

$\frac{2}{6}$ ☐ $\frac{5}{6}$

Complete the missing fractions in each number line.

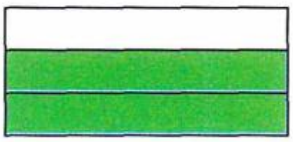
a.

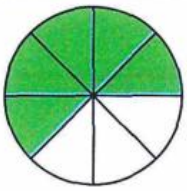


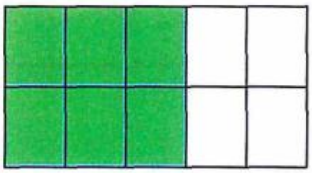
b.

HOMEWORK

Write the fraction for the colored part of each of the following shapes.

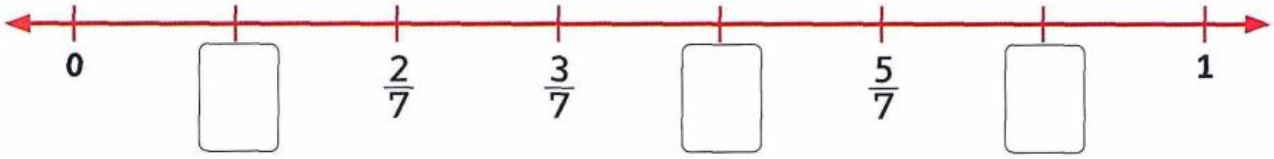
a. 

b. 

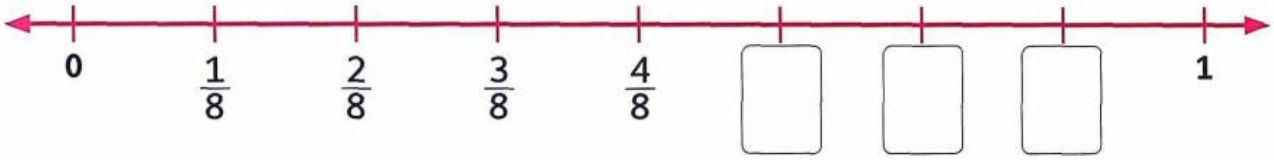
c. 

Complete the missing fractions in each number line.

a.

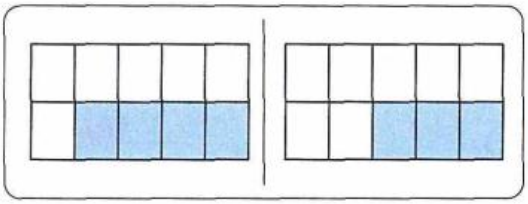


b.

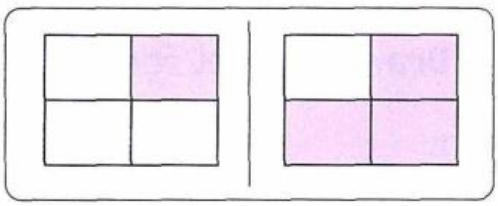


Compare using "< or >".

a.

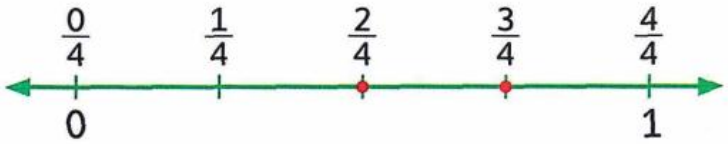


b.

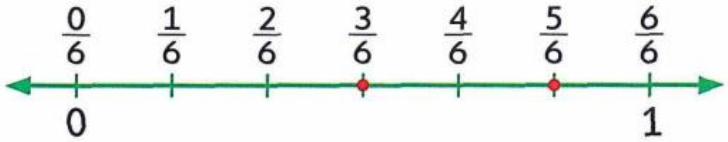


Compare using "< or >".

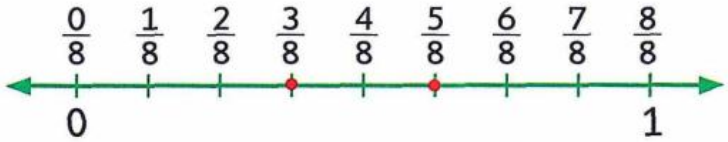
a. $\frac{3}{4}$ ◯ $\frac{2}{4}$



b. $\frac{3}{6}$ ◯ $\frac{5}{6}$



c. $\frac{5}{8}$ ◯ $\frac{3}{8}$



Write the fraction that names the point on each number line.

a.

b.

c.

d.

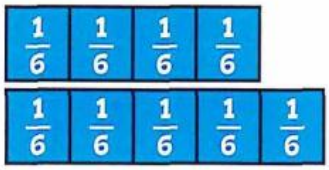
e.

f.

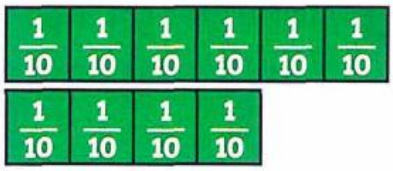
Lesson (5) Comparing Two Fractions with the Same Numerator or Denominator

Compare. Write "< or >".

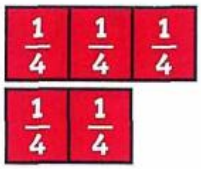
a. $\frac{4}{6}$ ◯ $\frac{5}{6}$



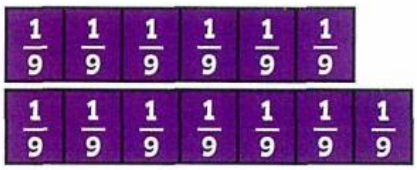
b. $\frac{6}{10}$ ◯ $\frac{4}{10}$



c. $\frac{3}{4}$ ◯ $\frac{2}{4}$



d. $\frac{6}{9}$ ◯ $\frac{7}{9}$



Circle the greater:

$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{7}$	$\frac{3}{7}$	$\frac{4}{5}$	$\frac{3}{5}$
$\frac{2}{10}$	$\frac{1}{10}$	$\frac{4}{9}$	$\frac{5}{9}$	$\frac{3}{11}$	$\frac{5}{11}$

Circle the smaller:

$\frac{2}{5}$	$\frac{3}{5}$	$\frac{4}{5}$	$\frac{3}{5}$	$\frac{4}{7}$	$\frac{3}{7}$
$\frac{2}{10}$	$\frac{1}{10}$	$\frac{3}{11}$	$\frac{5}{11}$	$\frac{4}{9}$	$\frac{5}{9}$

Put (>) or (<):

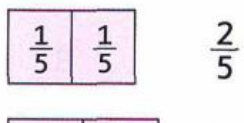
A	$\frac{4}{5}$	…	$\frac{3}{5}$	C	$\frac{2}{5}$	…	$\frac{3}{5}$
B	$\frac{3}{11}$	…	$\frac{5}{11}$	D	$\frac{2}{10}$	…	$\frac{1}{10}$

Circle: agree (👍) or disagree (👎):

A	$\frac{4}{7}$	<	$\frac{3}{7}$	👍	👎
B	$\frac{4}{9}$	>	$\frac{5}{9}$	👍	👎

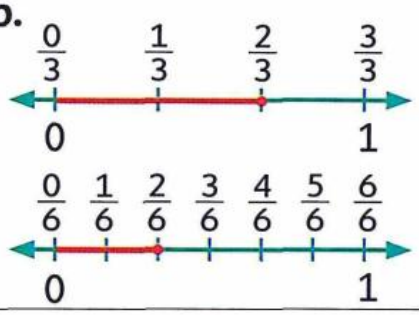
Compare. Write "< or >".

a.



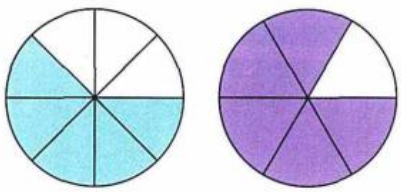
$\frac{2}{5}$ ◯ $\frac{2}{4}$

b.



$\frac{2}{3}$ ◯ $\frac{2}{6}$

c.



$\frac{5}{8}$ ◯ $\frac{5}{6}$

Circle the greater:

$\frac{2}{7}$	$\frac{2}{5}$	$\frac{4}{7}$	$\frac{4}{9}$	$\frac{3}{8}$	$\frac{3}{5}$
$\frac{2}{10}$	$\frac{2}{11}$	$\frac{5}{7}$	$\frac{5}{9}$	$\frac{3}{11}$	$\frac{3}{4}$

Circle the smaller:

$\frac{2}{7}$	$\frac{2}{5}$	$\frac{4}{7}$	$\frac{4}{9}$	$\frac{3}{8}$	$\frac{3}{5}$
$\frac{5}{8}$	$\frac{5}{6}$	$\frac{3}{7}$	$\frac{3}{5}$	$\frac{6}{7}$	$\frac{6}{11}$

Put (>) or (<):

A	$\frac{2}{7}$	...	$\frac{2}{5}$	C	$\frac{3}{8}$	...	$\frac{3}{5}$
B	$\frac{5}{8}$	...	$\frac{5}{6}$	D	$\frac{3}{11}$	...	$\frac{3}{4}$

Circle: agree (👍) or disagree (👎):

A	$\frac{4}{7}$	<	$\frac{4}{9}$	👍	👎
B	$\frac{3}{7}$	>	$\frac{3}{5}$	👍	👎

Circle the greater:

$\frac{3}{8}$	$\frac{5}{8}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{2}{7}$	$\frac{3}{7}$
$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{7}{12}$	$\frac{5}{12}$

Circle the smaller:

$\frac{3}{8}$	$\frac{5}{8}$	$\frac{2}{7}$	$\frac{3}{7}$	$\frac{1}{6}$	$\frac{5}{6}$
$\frac{1}{3}$	$\frac{2}{3}$	$\frac{7}{12}$	$\frac{5}{12}$	$\frac{1}{4}$	$\frac{3}{4}$

Put (>) or (<):

A	$\frac{2}{7}$	...	$\frac{3}{7}$	C	$\frac{3}{8}$	...	$\frac{5}{8}$
B	$\frac{7}{12}$	...	$\frac{5}{12}$	D	$\frac{1}{3}$	...	$\frac{2}{3}$

Circle: agree (👍) or disagree (👎):

A	$\frac{1}{6}$	<	$\frac{5}{6}$	👍	👎
B	$\frac{1}{4}$	>	$\frac{3}{4}$	👍	👎

Circle the greater:

$\frac{5}{8}$	$\frac{5}{6}$	$\frac{3}{7}$	$\frac{3}{5}$	$\frac{6}{7}$	$\frac{6}{11}$
$\frac{1}{3}$	$\frac{1}{8}$	$\frac{7}{9}$	$\frac{7}{10}$	$\frac{8}{9}$	$\frac{8}{11}$

Circle the smaller:

$\frac{1}{3}$	$\frac{1}{8}$	$\frac{7}{9}$	$\frac{7}{10}$	$\frac{8}{9}$	$\frac{8}{11}$
$\frac{2}{10}$	$\frac{2}{11}$	$\frac{5}{7}$	$\frac{5}{9}$	$\frac{3}{11}$	$\frac{3}{4}$

Put (>) or (<):

A	$\frac{1}{3}$	...	$\frac{1}{8}$	B	$\frac{6}{7}$	...	$\frac{6}{11}$
C	$\frac{2}{10}$	...	$\frac{2}{11}$	D	$\frac{8}{9}$	...	$\frac{8}{11}$

Circle: agree (👍) or disagree (👎):

A	$\frac{7}{9}$	<	$\frac{7}{10}$	👍	👎
B	$\frac{5}{7}$	>	$\frac{5}{9}$	👍	👎

Lesson (6) Adding Two Fractions with the Same Denominator

Find each sum.

a. 

$\frac{3}{6} + \frac{2}{6} =$

b. 

$\frac{1}{4} + \frac{2}{4} =$

c. 

$\frac{4}{12} + \frac{3}{12} =$

Find each sum.

a. $\frac{1}{5} + \frac{1}{5} =$

b. $\frac{2}{10} + \frac{3}{10} =$

c. $\frac{1}{3} + \frac{2}{3} =$

d. $\frac{6}{12} + \frac{4}{12} =$

Lesson (7) Subtracting Two Fractions with the Same Denominator

Find each difference.

a. 

$\frac{7}{8} - \frac{4}{8} =$

b. 

$\frac{4}{4} - \frac{1}{4} =$

c. 

$\frac{9}{12} - \frac{2}{12} =$

Find each difference.

a. $\frac{5}{8} - \frac{3}{8} =$

b. $\frac{2}{3} - \frac{1}{3} =$

c. $\frac{10}{12} - \frac{7}{12} =$

d. $\frac{6}{6} - \frac{3}{6} =$

Complete.

a. $\frac{2}{7} + \frac{\quad}{\quad} = \frac{5}{7}$

b. $\frac{7}{10} - \frac{\quad}{\quad} = \frac{2}{10}$

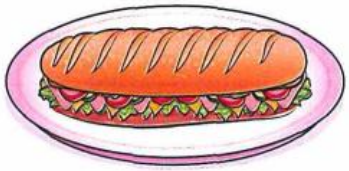
c. $\frac{\quad}{\quad} - \frac{3}{9} = \frac{1}{9}$

d. $\frac{\quad}{\quad} - \frac{2}{5} = \frac{3}{5}$

e. $\frac{6}{11} = \frac{\quad}{\quad} + \frac{5}{11}$

f. $\frac{3}{8} = \frac{\quad}{\quad} - \frac{2}{8}$

Lesson (8) Story Problems on Adding and Subtracting Fractions



Mohamed ate $\frac{1}{6}$ of his sandwich at snack time and $\frac{2}{6}$ of his sandwich at lunch.

How much of his sandwich did he eat in all ?

Omar brought $\frac{2}{4}$ of a candy bar to the playground.

He gave $\frac{1}{4}$ to his friend.

How much does he have left ?

Eman has $\frac{8}{8}$ meter of fabric.

She uses $\frac{6}{8}$ meter to make a pillow.

How much of the meter of fabric is left ?

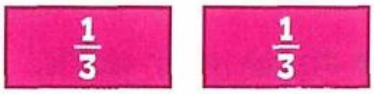
The juice container at Farida's house was $\frac{5}{6}$ full.

Farida drank $\frac{3}{6}$ of the container.

How much juice was left in the container ?

HOMEWORK

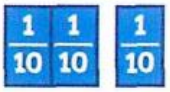
Find each sum.

a. 

$\frac{1}{3} + \frac{1}{3} =$

b. 

$\frac{5}{8} + \frac{2}{8} =$

c. 

$\frac{2}{10} + \frac{1}{10} =$

Find each difference.

a. 

$\frac{3}{6} - \frac{2}{6} =$

b. 

$\frac{4}{5} - \frac{1}{5} =$

c. 

$\frac{9}{10} - \frac{2}{10} =$

Find each sum.

a. $\frac{4}{6} + \frac{1}{6} =$ ____

b. $\frac{1}{4} + \frac{3}{4} =$ ____

c. $\frac{2}{8} + \frac{4}{8} =$ ____

d. $\frac{5}{10} + \frac{2}{10} =$ ____

Find each difference.

e. $\frac{5}{10} - \frac{2}{10} =$ ____

f. $\frac{11}{12} - \frac{9}{12} =$ ____

g. $\frac{7}{8} - \frac{1}{8} =$ ____

h. $\frac{2}{4} - \frac{1}{4} =$ ____

Choose the correct answer.

a. $\frac{3}{5} + \frac{1}{5} =$ ____ ($\frac{2}{5}$ or $\frac{4}{5}$ or $\frac{4}{10}$)

b. $1 - \frac{2}{7} =$ ____ ($\frac{3}{7}$ or $\frac{4}{7}$ or $\frac{5}{7}$)

c. $\frac{2}{12} + \frac{5}{12} =$ ____ ($\frac{7}{12}$ or $\frac{7}{24}$ or $\frac{12}{12}$)

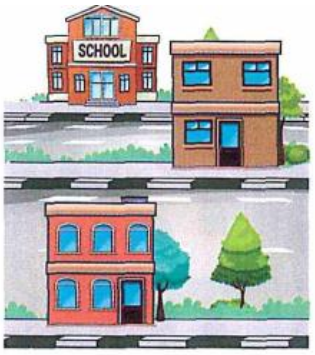
Yesterday, Marawan ran $\frac{2}{8}$ of a kilometer and then stopped to drink some water. After his water break, he ran another $\frac{2}{8}$ of a kilometer.

What fraction of a kilometer did Marawan run yesterday ?

_____

Wagdy's house is $\frac{2}{3}$ of a kilometer from school.

Taha's house is $\frac{1}{3}$ of a kilometer from school.



Who lives closer to school ?

_____

_____

Maha and Nagi baked cakes that were the same size.

Maha gave $\frac{3}{4}$ of her cake to her calss.

Nagi gave $\frac{1}{2}$ of his cake to his class.

Which class received more cake, Maha's class or Nagi's class ?

_____

Samir cut a pie into 8 equal slices.

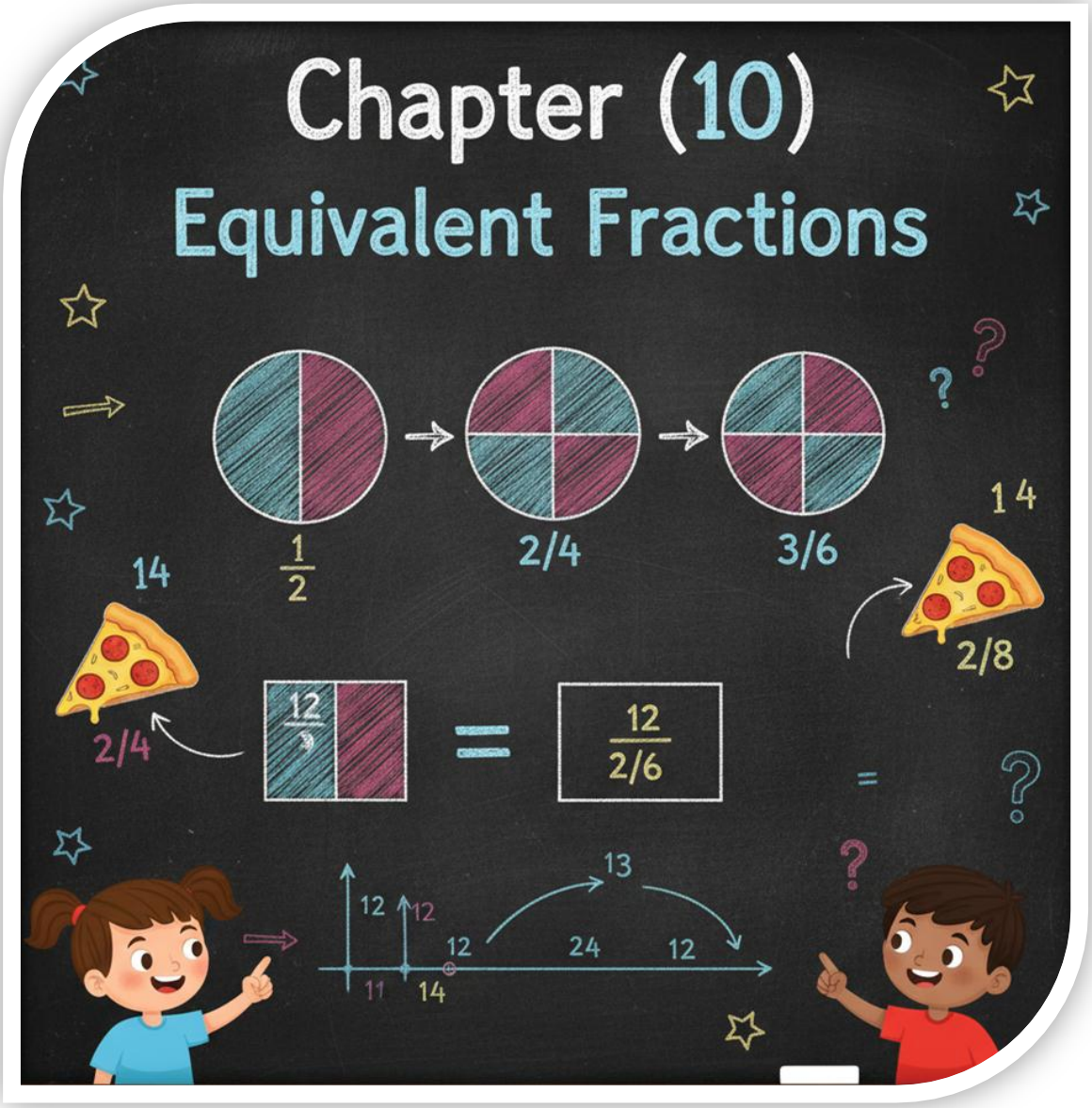
He shared the pie with 5 of his friends.

Samir and each of his friends ate 1 piece of the pie.

What fraction of the pie is left ?

_____

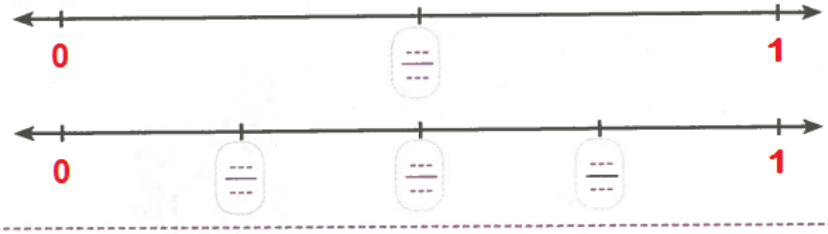
_____



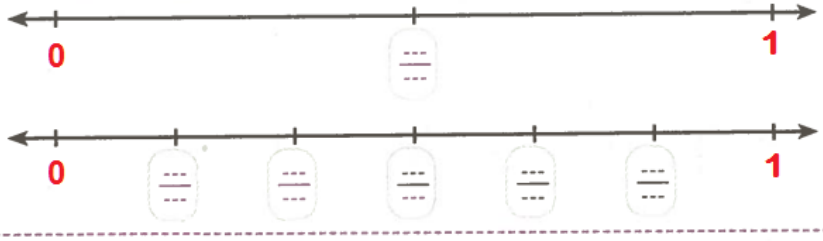
Lesson (1) Equivalent Fractions of a Half

Complete the number line, then write the fraction that is equivalent to $\frac{1}{2}$:

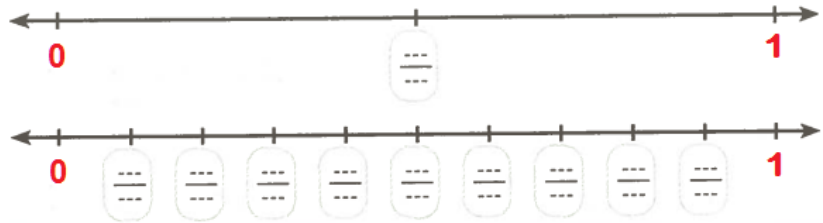
A. $\frac{1}{2} = \frac{\dots}{\dots}$



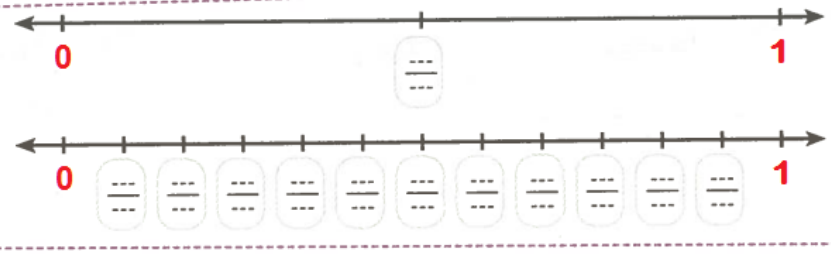
B. $\frac{1}{2} = \frac{\dots}{\dots}$



C. $\frac{1}{2} = \frac{\dots}{\dots}$



D. $\frac{1}{2} = \frac{\dots}{\dots}$



Complete.

a. $\frac{1}{2} = \frac{3}{\_\_\_}$

b. $\frac{1}{2} = \frac{4}{\_\_\_}$

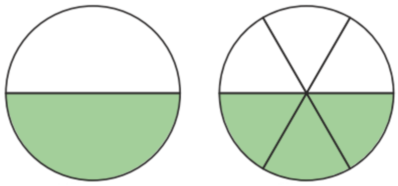
c. $\frac{1}{2} = \frac{\_\_\_}{14}$

d. $\frac{1}{2} = \frac{8}{\_\_\_}$

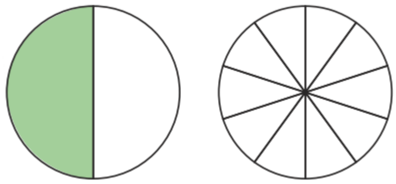
e. $\frac{1}{2} = \frac{\_\_\_}{12}$

f. $\frac{1}{2} = \frac{\_\_\_}{20}$

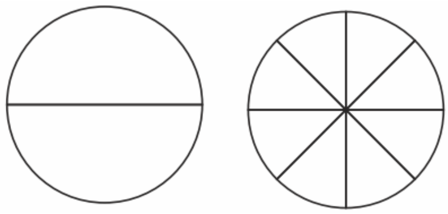
Color, then complete as the example:



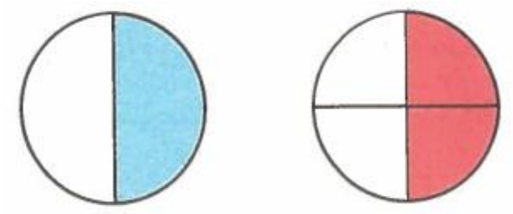
$\frac{1}{2} = \frac{3}{6}$



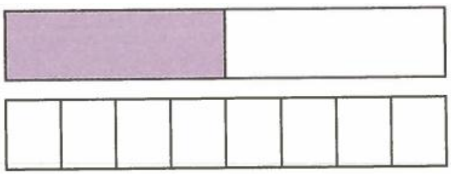
$\frac{1}{2} = \frac{\dots}{\dots}$



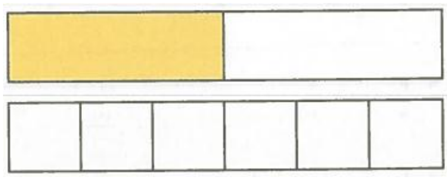
$\frac{1}{2} = \frac{\dots}{\dots}$



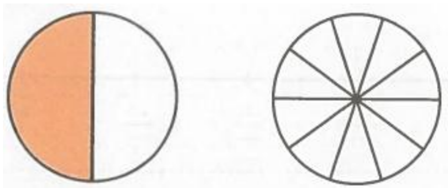
$\frac{1}{2} = \frac{\dots}{\dots}$



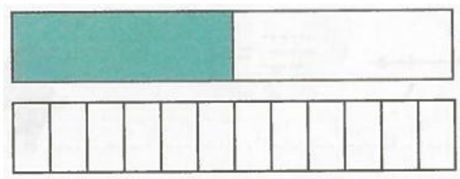
$\frac{1}{2} = \frac{\dots}{\dots}$



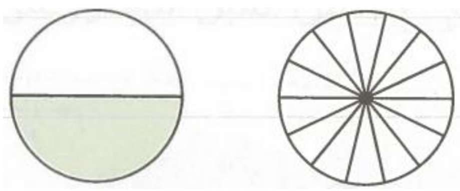
$\frac{1}{2} = \frac{\dots}{\dots}$



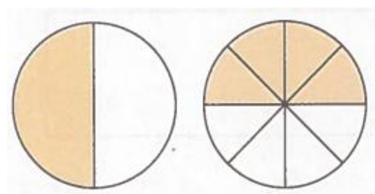
$\frac{1}{2} = \frac{\dots}{\dots}$



$\frac{1}{2} = \frac{\dots}{\dots}$



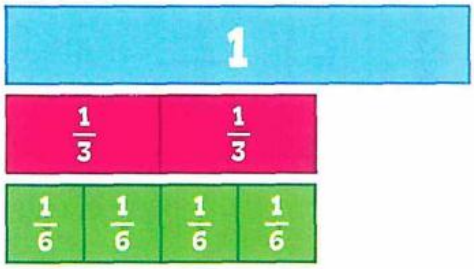
$\frac{1}{2} = \frac{\dots}{\dots}$



$\frac{1}{2} = \frac{\dots}{\dots}$

Lesson (2) More of Equivalent Fractions

What fraction is equivalent to $\frac{2}{3}$?



Complete to find equivalent fractions.

a. $\frac{1}{3} = \frac{\times 4}{\times 4}$

b. $\frac{1}{4} = \frac{\times 3}{\times 3}$

c. $\frac{2}{5} = \frac{\times 5}{\times 5}$

Complete.

a. $\frac{1}{5} = \frac{\quad}{10}$	b. $\frac{2}{3} = \frac{\quad}{9}$	c. $\frac{2}{4} = \frac{1}{\quad}$	d. $\frac{\quad}{4} = \frac{6}{8}$
e. $\frac{1}{4} = \frac{\quad}{20}$	f. $\frac{3}{6} = \frac{\quad}{2}$	g. $\frac{\quad}{6} = \frac{10}{12}$	h. $\frac{2}{7} = \frac{\quad}{14}$
i. $\frac{8}{10} = \frac{4}{\quad}$	j. $\frac{4}{6} = \frac{\quad}{18}$	k. $\frac{4}{6} = \frac{\quad}{3}$	l. $1 = \frac{12}{\quad}$

Lesson (3) Patterns of Equivalent Fractions

Complete the fraction and describe each of the following patterns.
The first one is done for you.

$\boxed{\frac{1}{3}} = \frac{2}{6} = \frac{3}{9} = \frac{4}{12}$

Description of the pattern : The numerator increases by 1 and the denominator increases by 3.

a. $\boxed{\frac{1}{4}} = \frac{\quad}{8} = \frac{\quad}{12} = \frac{4}{\quad}$

Description of the pattern : _____

b. $\boxed{\frac{2}{3}} = \frac{\quad}{6} = \frac{6}{\quad} = \frac{\quad}{12}$

Description of the pattern : _____

Write two equivalent fractions to each fraction.

a. $\frac{2}{3} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

b. $\frac{4}{12} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

c. $\frac{4}{6} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

d. $\frac{4}{10} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

Choose the correct answer.

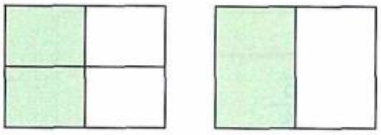
a. $\frac{2}{5} =$ _____ ($\frac{2}{10}$ or $\frac{6}{15}$ or $\frac{4}{5}$ or $\frac{6}{20}$)

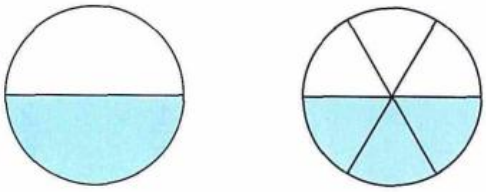
b. $\frac{6}{16} =$ _____ ($\frac{2}{4}$ or $\frac{12}{30}$ or $\frac{6}{6}$ or $\frac{3}{8}$)

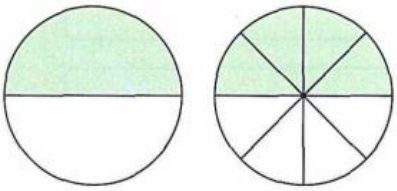
c. $\frac{4}{12} =$ _____ ($\frac{1}{4}$ or $\frac{12}{24}$ or $\frac{8}{24}$ or $\frac{8}{12}$)

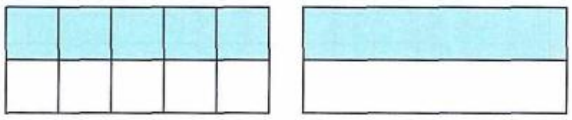
HOMEWORK

Record what fraction each model shows.

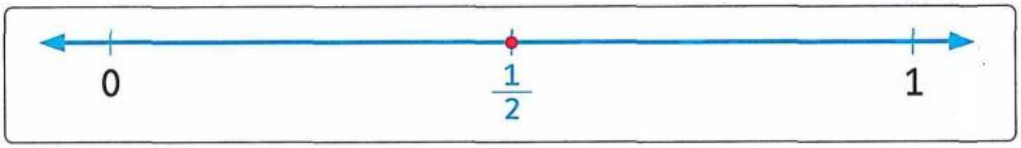
a. 

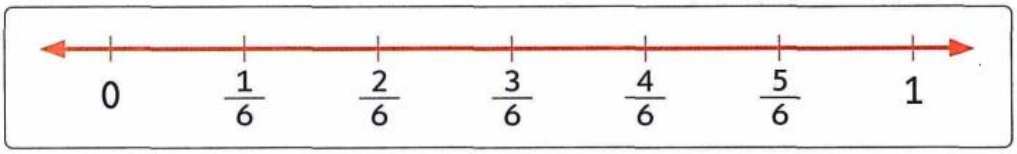
b. 

c. 

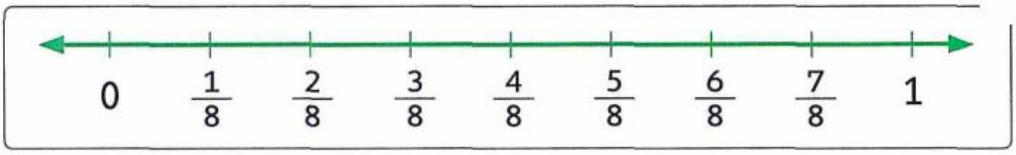
d. 

Find the equivalent fraction of $\frac{1}{2}$. Show the equivalent fraction on the number line.

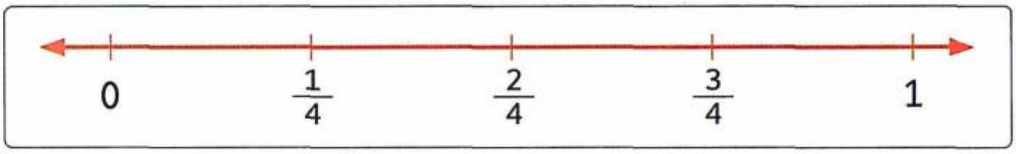


a. 

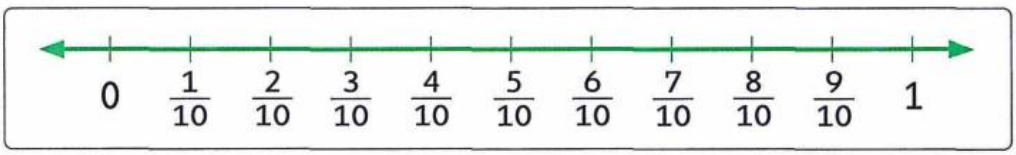
$\frac{1}{2} = \frac{\quad}{6}$

b. 

$\frac{1}{2} = \frac{\quad}{\quad}$

c. 

$\frac{1}{2} = \frac{\quad}{\quad}$

d. 

$\frac{1}{2} = \frac{\quad}{\quad}$

Complete.

g. $\frac{5}{10} = \frac{\quad}{2}$

h. $\frac{9}{18} = \frac{1}{\quad}$

i. $\frac{2}{4} = \frac{1}{\quad}$

Complete to find equivalent fractions.

a. $\frac{3}{6} \xrightarrow{\div 3} \frac{\quad}{\quad} \xleftarrow{\div 3}$

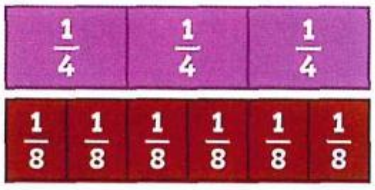
b. $\frac{4}{8} \xrightarrow{\div 4} \frac{\quad}{\quad} \xleftarrow{\div 4}$

c. $\frac{4}{16} \xrightarrow{\div 2} \frac{\quad}{\quad} \xleftarrow{\div 2}$

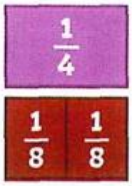
Complete. You may use fraction strips to help.

a. 

$\frac{1}{2} = \frac{\quad}{6}$

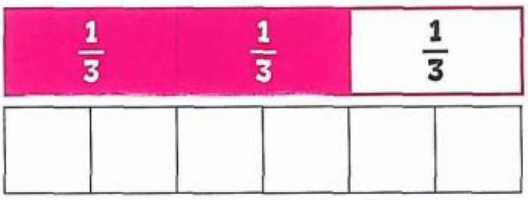
b. 

$\frac{3}{4} = \frac{\quad}{8}$

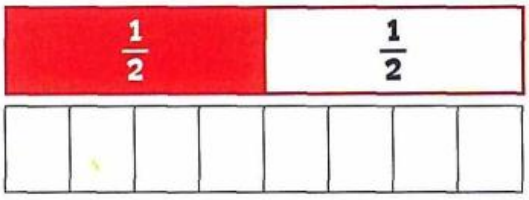
c. 

$\frac{1}{4} = \frac{\quad}{8}$

Color and write the equivalent fraction.

a. 

$\frac{2}{3} = \frac{\quad}{\quad}$

b. 

$\frac{1}{2} = \frac{\quad}{\quad}$

Write four equivalent fractions to the given fractions.

a. $\frac{1}{2} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

b. $\frac{2}{6} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

Complete.

a. $\frac{2}{3} = \frac{\quad}{15}$	b. $\frac{1}{4} = \frac{\quad}{16}$	c. $\frac{\quad}{5} = \frac{12}{20}$
d. $\frac{6}{8} = \frac{3}{\quad}$	e. $\frac{7}{\quad} = \frac{14}{16}$	f. $\frac{2}{7} = \frac{\quad}{21}$

Complete the fractions

a. $\frac{2}{3} = \frac{\quad}{6} = \frac{6}{\quad} = \frac{\quad}{12}$

b. $\frac{3}{5} = \frac{\quad}{10} = \frac{9}{\quad} = \frac{12}{\quad}$

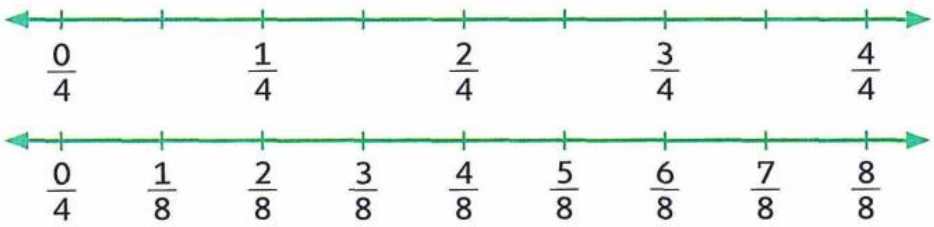
c. $\frac{2}{7} = \frac{4}{\quad} = \frac{\quad}{21} = \frac{\quad}{28}$

d. $\frac{1}{8} = \frac{2}{\quad} = \frac{\quad}{24} = \frac{\quad}{32}$

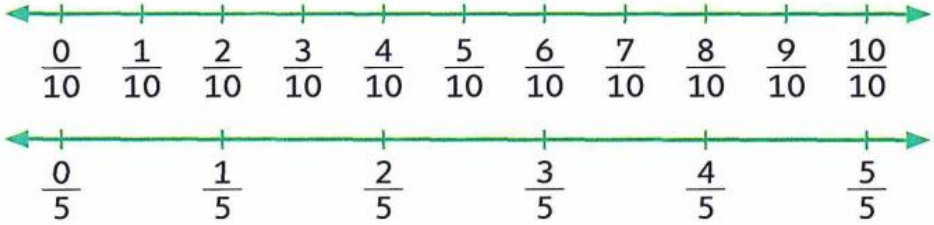
Lesson (4) Equivalent Fractions with the Number Line

Write the equivalent fraction to each of the following using the number line.

a. $\frac{3}{4} = \frac{\quad}{\quad}$



b. $\frac{4}{10} = \frac{\quad}{\quad}$



Lesson (5) Applications on Equivalent Fractions

Habiba and Hatem both had 1 liter of juice.
Habiba said that her family drank $\frac{2}{4}$ of the liter.
Hatem said his family drank the same amount.
If Hatem measured his amount in eighths.
How much juice did his family drink ? _____

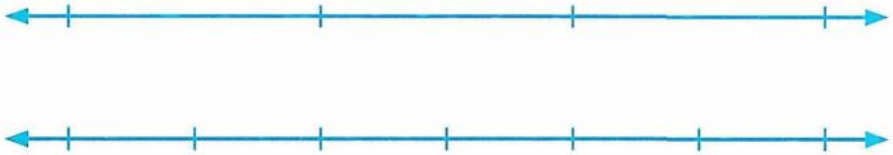
Jana and Menna each made a large pizza for dinner both pizzas were the same size. Jana's pizza was cut into sixths and Menna's pizza was cut into twelfths. Jana ate $\frac{2}{6}$ of her pizza. If Menna wants to eat the same amount of pizza as Jana.

How many slices of pizza will she have to eat ? _____

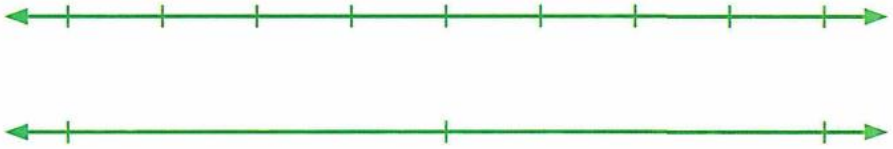
HOMEWORK

Write the equivalent fraction to each of the following using the number lines.

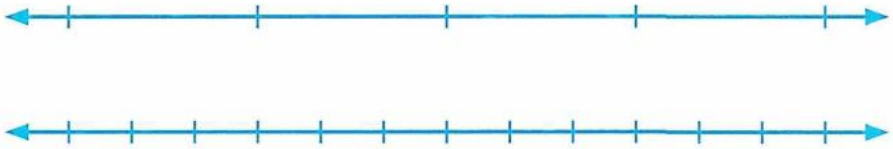
a. $\frac{1}{3} = \frac{\square}{\square}$



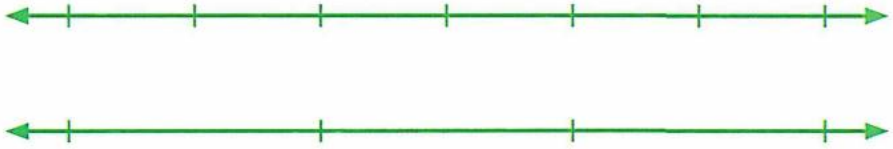
b. $\frac{4}{8} = \frac{\square}{\square}$



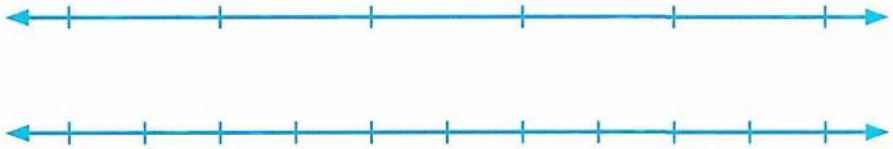
c. $\frac{3}{4} = \frac{\square}{\square}$



d. $\frac{4}{6} = \frac{\square}{\square}$



e. $\frac{3}{5} = \frac{\square}{\square}$



Moutaz and Kamal were eating same-sized cakes. Moutaz's cake was cut into thirds and Kamal's cake was cut into sixths. Moutaz ate 2 slices of his cake.

What fraction of his cake does Kamal have to eat to be the same amount as Moutaz ? _____

Lesson (6) Dividing Using the Bar Models

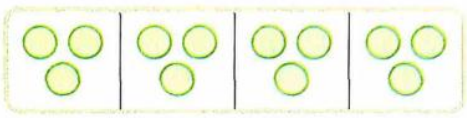
Write a division equation for each bar model. Write the quotient as the example.

Example:

Division equation : 6 ÷ 3 = 2

The quotient = 2

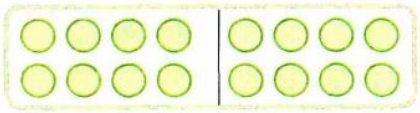
a.



Division equation : ——— ÷ ——— = ———

The quotient = ———

b.



Division equation : ——— ÷ ——— = ———

The quotient = ———

c.

Division equation : ——— ÷ ——— = ———

The quotient = ———

Lesson (7) Story Problems on Division

I have 20 figs to divide evenly between 4 plates.

How many figs should I put on each plate ?

Work area

20

——— ÷ ——— = ——— ——— figs

There are 28 crayons in the classroom that need to be placed in 4 cups.

Each cup must have the same number of crayons.

How many crayons will be in each cup ?

Work area

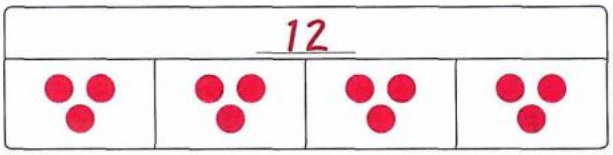
28

——— ÷ ——— = ——— ——— crayons

HOMEWORK

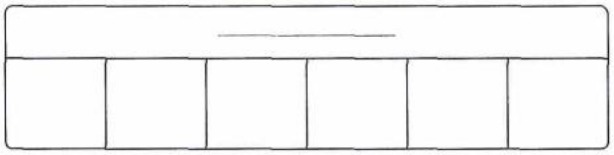
Draw dots to find the quotient as the example.

Example: 12 ÷ 4



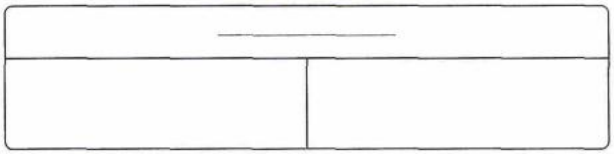
The quotient = 3

a. 12 ÷ 6



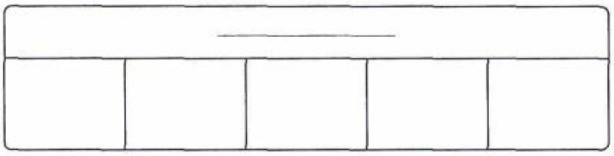
The quotient = _____

b. 8 ÷ 2



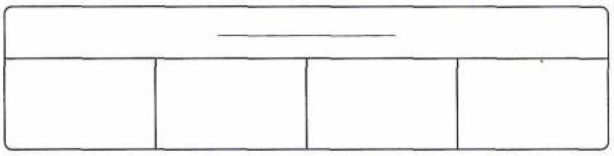
The quotient = _____

c. 15 ÷ 5



The quotient = _____

d. 16 ÷ 4



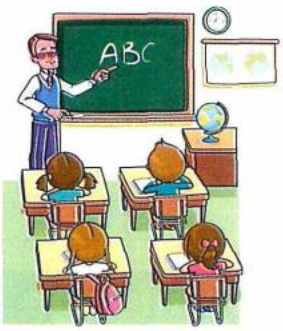
The quotient = _____

Omar has 18 pieces of candy. He wants to give the same amount to each of his 6 friends. **How many pieces would each friend get ?**

Work area

18

_____ ÷ _____ = _____ _____ candies



Diaa placed 40 marbles in rows of 5. **How many rows did he make ?**

Work area

40

____ ÷ ____ = ____ ____ rows

Omnia studied 14 hours. If she studied 2 hours each day.
How many days did she study ?

Work area

14

____ ÷ ____ = ____ ____ days

Diaa has 36 toys he would like to split evenly among 6 friends.
How many toys should each friend receive ?

Work area

36

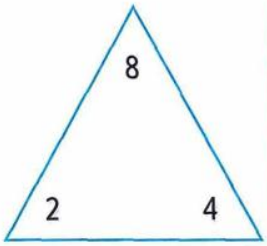
____ ÷ ____ = ____ ____ toys

Lesson (8) The Relation between Multiplication and Division

Write the fact family for each set of numbers in each triangle as the example.

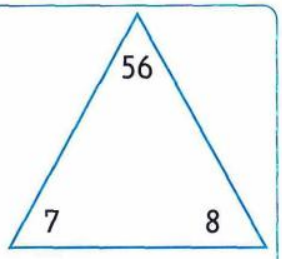
Example:

2 × 4 = 8
4 × 2 = 8
8 ÷ 2 = 4
8 ÷ 4 = 2



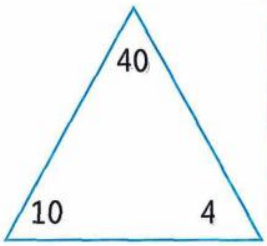
a.

___ × ___ = ___
___ × ___ = ___
___ ÷ ___ = ___
___ ÷ ___ = ___



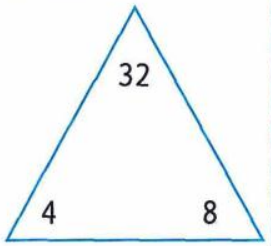
b.

___ × ___ = ___
___ × ___ = ___
___ ÷ ___ = ___
___ ÷ ___ = ___



c.

___ × ___ = ___
___ × ___ = ___
___ ÷ ___ = ___
___ ÷ ___ = ___



Choose 3 numbers then write the fact families:

5	9	2	11	45

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

30	6	3	7	10

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

9	4	32	5	8

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

7	2	12	5	10

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

Complete the fact families:

5	9	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

30	6	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

6	9	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

8	4	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

3	7	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

2	5	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

Complete the fact families:

The factors are: ……… and ………

The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………

The factors are: ……… and ………

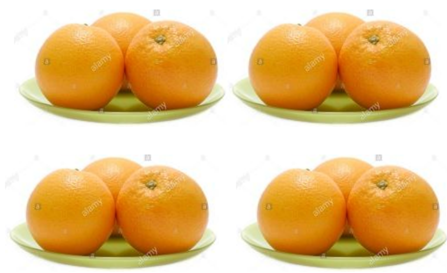
The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………



The factors are: ……… and ………

The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………

The factors are: ……… and ………

The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………

HOMEWORK

Choose which number equations is not included in the same fact family.

a. $7 \times 4 = 28$

- ○ $28 \div 7 = 4$
- ○ $5 \times 7 = 35$
- ○ $28 \div 4 = 7$

b. $18 \div 3 = 6$

- ○ $18 \div 6 = 3$
- ○ $3 \times 6 = 18$
- ○ $9 \times 2 = 18$

c. $42 \div 7 = 6$

- ○ $7 \times 6 = 42$
- ○ $6 \times 7 = 42$
- ○ $30 \div 5 = 6$

Complete.

a. If $3 \times 5 = 15$, then $15 \div$ _____ $= 3$ and $15 \div$ _____ $= 5$

b. If $10 \div 2 = 5$, then _____ $\times 5 = 10$ and _____ $\times 2 = 10$

Complete the fact families:

5	10	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

7	9	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

5	7	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

10	2	.....

..... × ..... = ...
..... × ..... = ...
..... ÷ ..... = ...
..... ÷ ..... = ...

Complete the fact families:

The factors are: ……… and ………

The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………

The factors are: ……… and ………

The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………

The factors are: ……… and ………

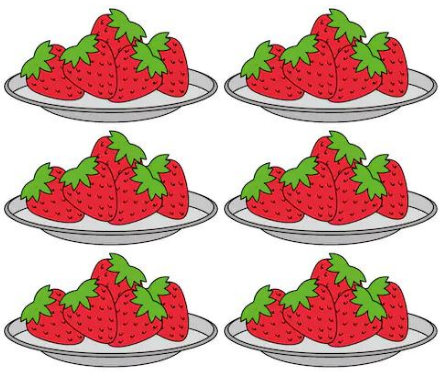
The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………



The factors are: ……… and ………

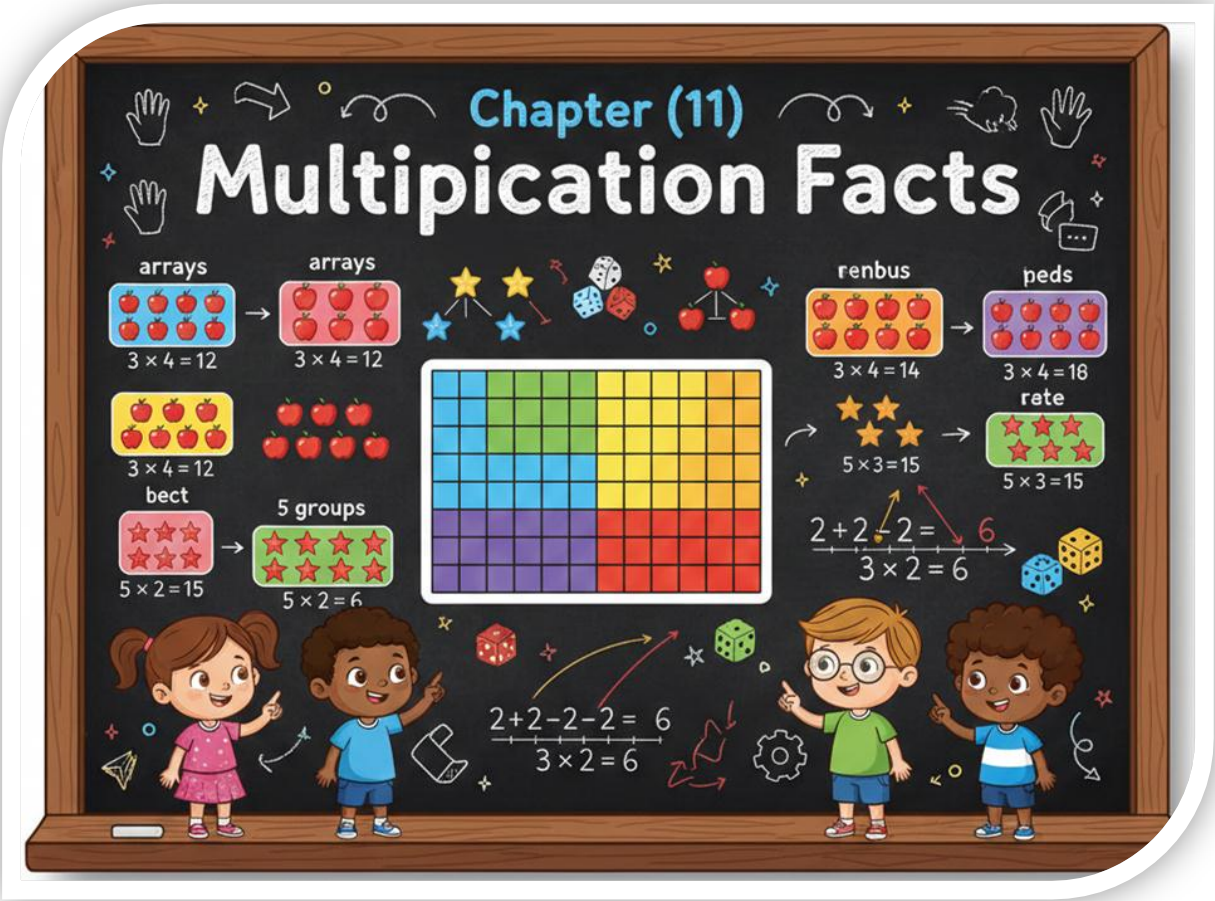
The facts are:

……… × ……… = ………

……… × ……… = ………

……… ÷ ……… = ………

……… ÷ ……… = ………



Lesson (1) Multiplication Facts with Different Strategies

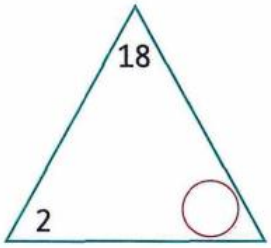
Use strategies to correct the products.

a. 7 × 5 = 30	**b.** 2 × 4 = 6	**c.** 11 × 6 = 60
d. 9 × 9 = 80	**e.** 4 × 6 = 25	**f.** 12 × 4 = 36
g. 5 × 5 = 35	**h.** 7 × 8 = 48	**i.** 6 × 6 = 30

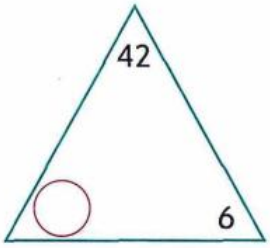
Lesson (2) Story Problems on Multiplication and Division

Determine the missing number in each equation.

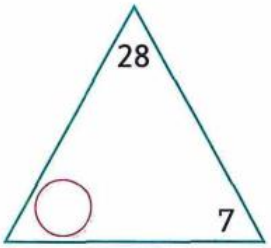
$2 \times \square = 18$



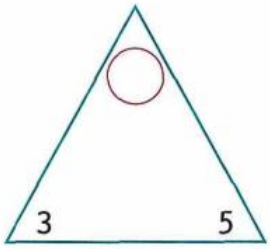
$\square \times 6 = 42$



$28 \div \square = 7$



$\square \div 3 = 5$

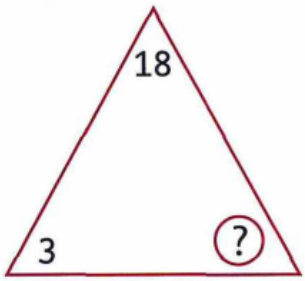


Solve the problem using fact family triangle.

Sylvia wants to distribute 18 apples among 3 boxes.

How many apples in each box ?

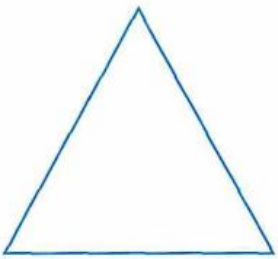
Problem equation : _____



Omar studies 4 hours every day.

How many hours does he spend in studying for 9 days ?

_____



Lesson (3) Creating Story Problems on Multiplication

Write a multiplication story problem that could be represented by the equation shown. Solve the problem to show the result.

$7 \times 4 =$ ☐

Lesson (4) Creating Story Problems on Division

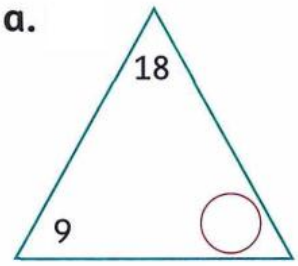
Write a division story problem that could be represented by the equation shown. Solve the problem to show the result.

$24 \div 6 =$ ☐

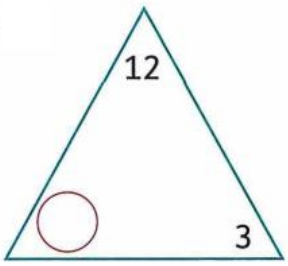
HOMEWORK

For each of the following triangles. Determine the unknown and record it.

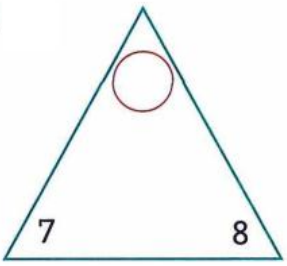
a.



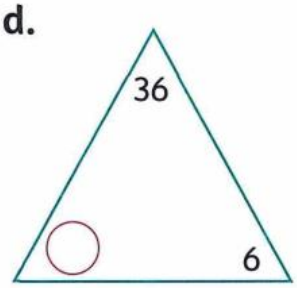
b.



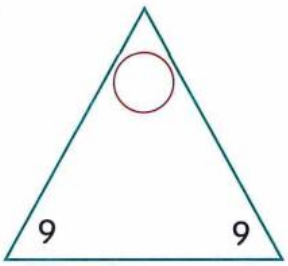
c.



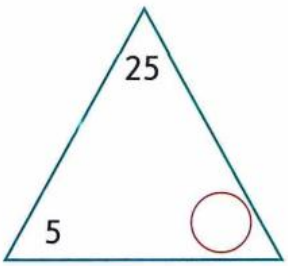
d.



e.

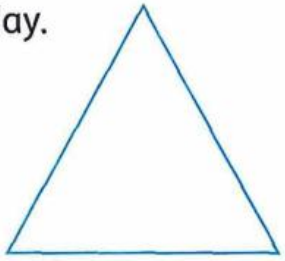


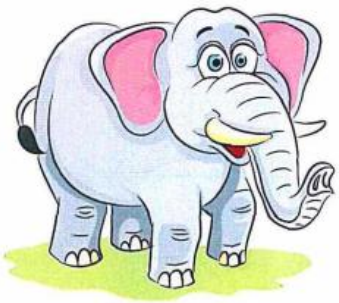
f.



There are 9 elephants at the zoo.
Each elephant eats 2 bales of hay in a day.

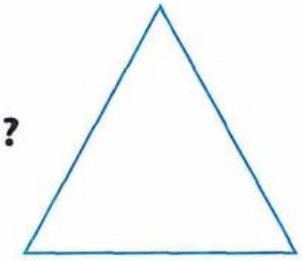
How many bales of hay does the zookeeper need to feed all 9 elephants for one day ?





Adam baked 24 cookies. He gives a bag to 8 of his friends.

How many cookies are in each bag ?

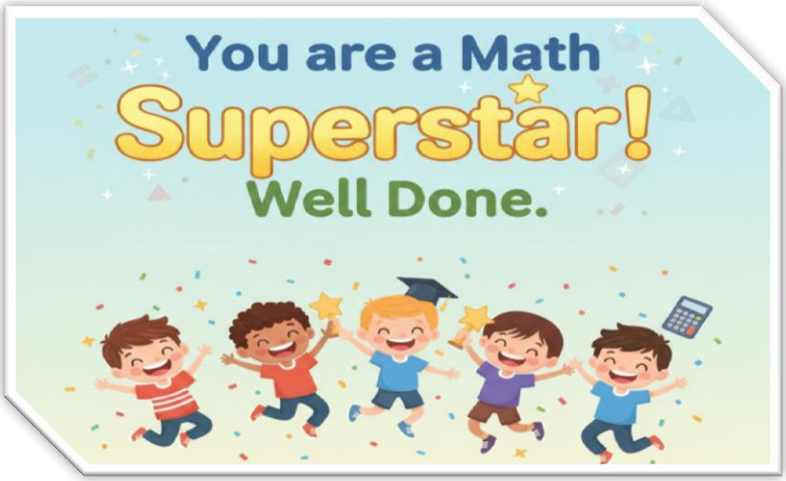


Write a multiplication story problem that could be represented by the equation shown. Solve the problem to show the result.

$8 \times 9 = \square$

Write a division story problem that could be represented by the equation shown. Solve the problem to show the result.

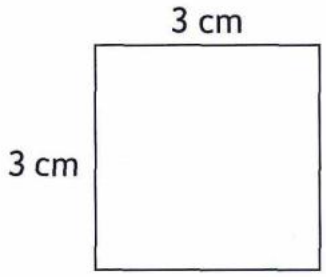
$20 \div 5 = \square$



Lesson (5) Story Problems on the Perimeter and the Area

Calculate the perimeter and the area of each figure.

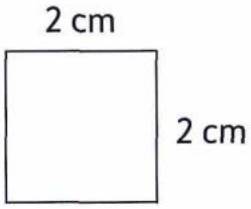
a.



Perimeter = _____

Area = _____

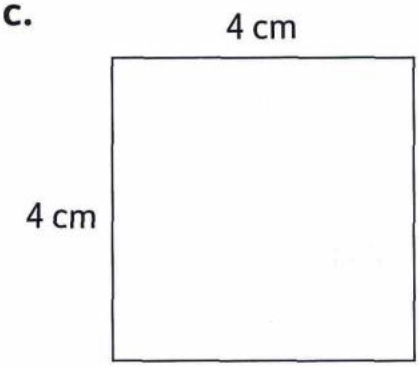
b.



Perimeter = _____

Area = _____

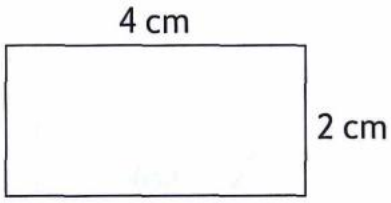
c.



Perimeter = _____

Area = _____

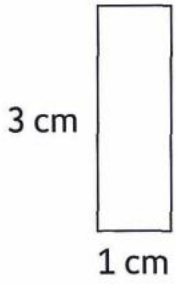
d.



Perimeter = _____

Area = _____

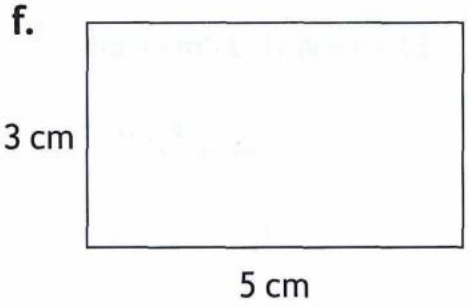
e.



Perimeter = _____

Area = _____

f.



Perimeter = _____

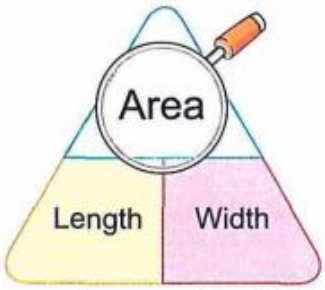
Area = _____

Omar measured his garden, and it is 3 meters wide and 4 meters long. Draw a sketch of Omar's garden and label the dimensions. Find the area of Omar's garden and record your findings below. Then, find the perimeter of Omar's garden and record your findings below. Remember to label your answers.

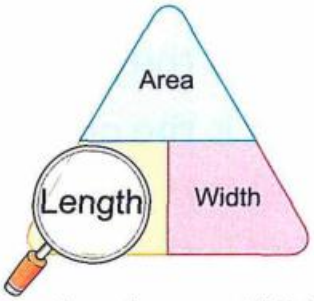
What is the area of Omar's garden ?

What is the perimeter of Omar's garden ?

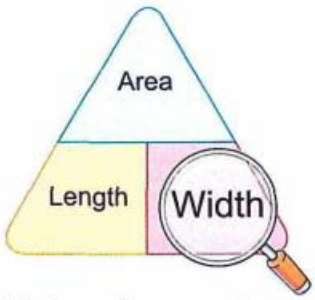
Lesson (6) The Perimeter for a Given Area and a Side Length



Area = Length × Width



Length = Area ÷ Width



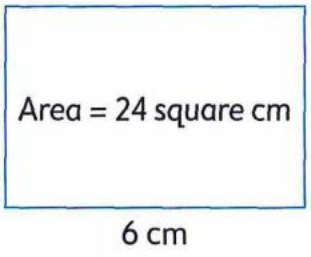
Width = Area ÷ Length

A rectangle of area 20 square cm, and its length is 5 cm.

What is its perimeter ? (Think : Width = Area ÷ Length)

Perry drew the opposite rectangle.

Calculate the perimeter of Perry's rectangle.



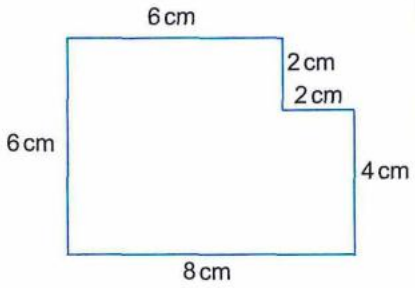
Ali sketch a rectangular painting with an area of 28 square cm

The width of his painting is 4 cm. Sketch Ali's painting.

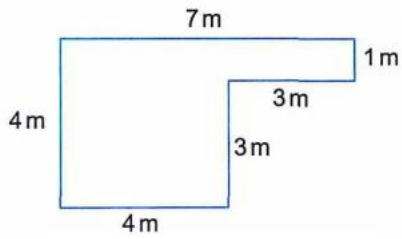
Find the length of his painting, then calculate the perimeter.

Lesson (7) Applications on the Perimeter and the Area

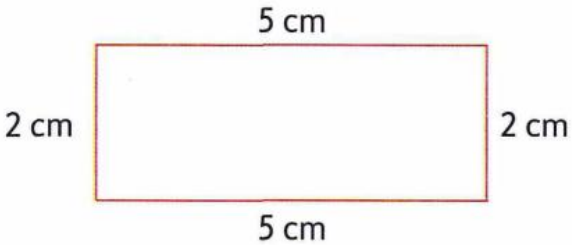
Use your prefered way to find the perimeter and the area of the opposite figure.



Use your prefered way to find the perimeter and the area of the opposite figure.

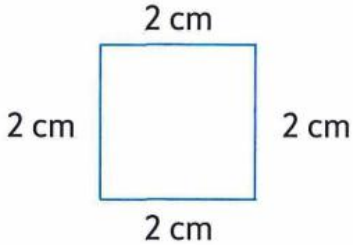


HOMEWORK



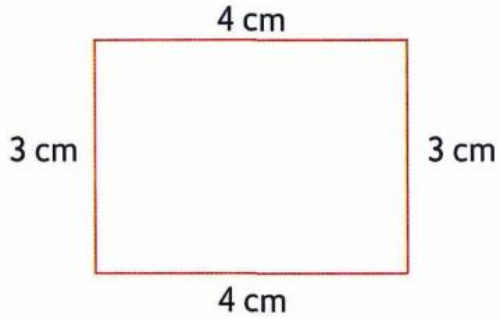
Perimeter = _____

Area = _____



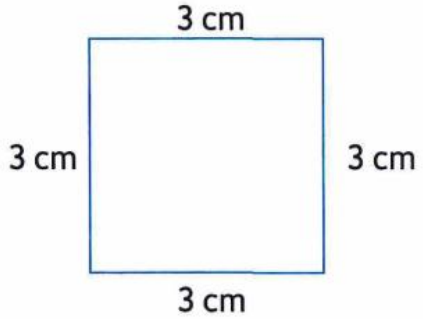
Perimeter = _____

Area = _____



Perimeter = _____

Area = _____



Perimeter = _____

Area = _____

Gehad drew a square that has side lengths of 8 cm

Sketch Gehad's square.

What is the perimeter of the square ?

What is the area of the square ?

Jaida sketched a rectangular painting with an area of 56 square cm

The length of her painting is 8 cm. Sketch Jaida's painting.

Find the width of the painting, then calculate the perimeter.

_____

_____

Taha made a tiny rectangular painting with an area of 72 square cm

The width of his painting is 9 cm

Sketch Taha's painting.

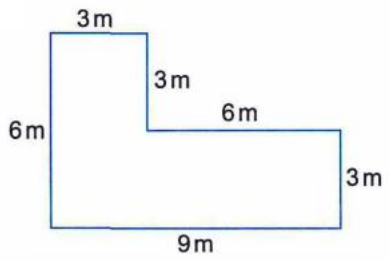
What is the length of his painting ?

What is the perimeter of his painting ?

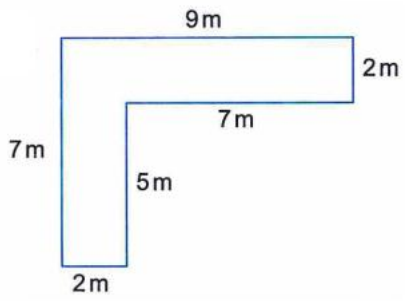
_____

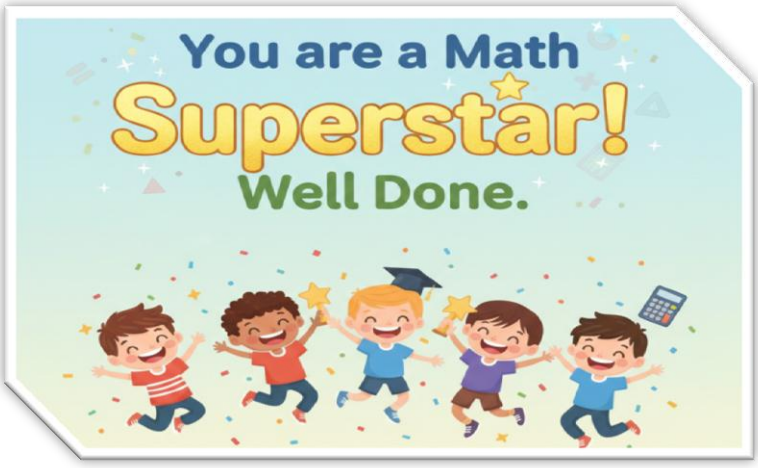
_____

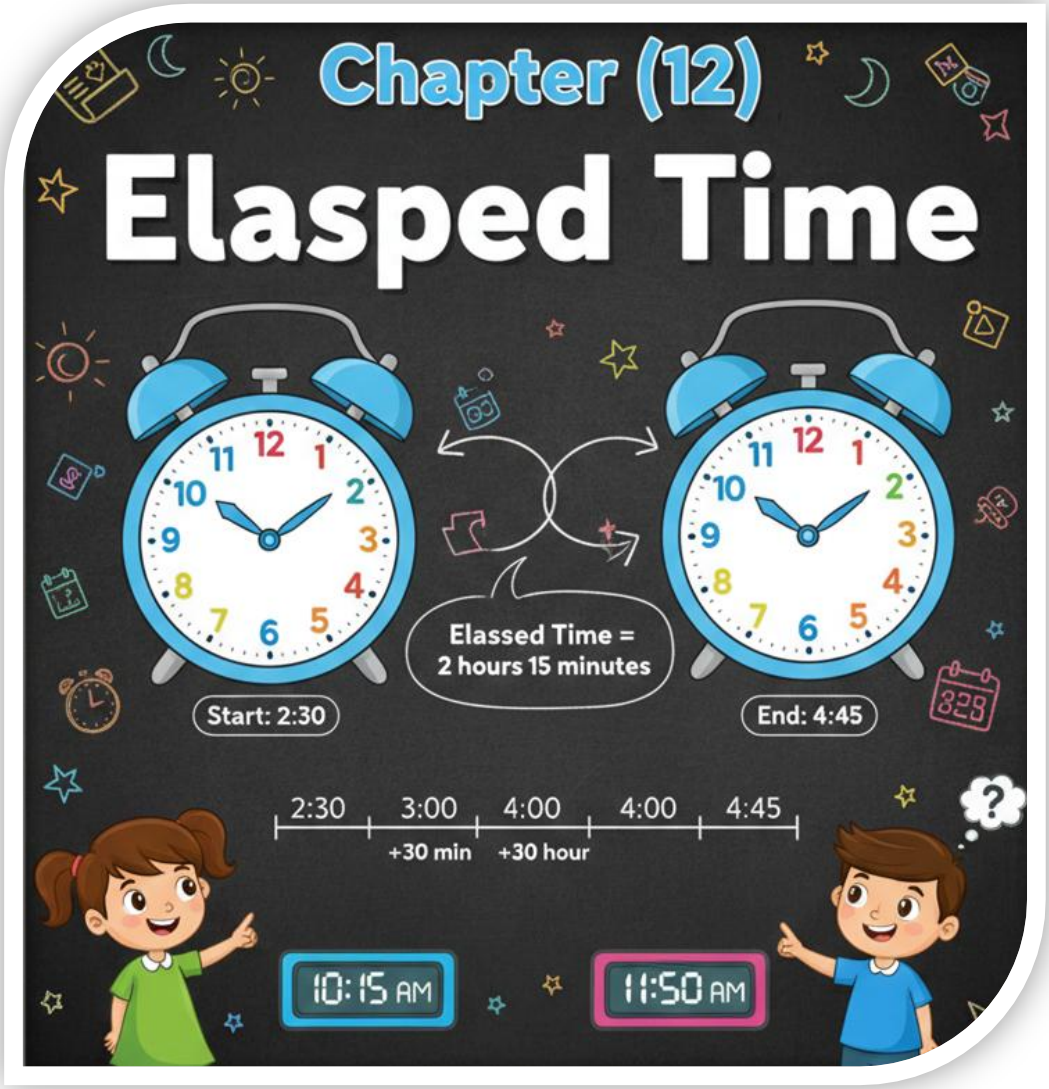
Use your prefered way to find the perimeter and the area of the opposite figure.



Use your prefered way to find the perimeter and the area of the opposite figure.

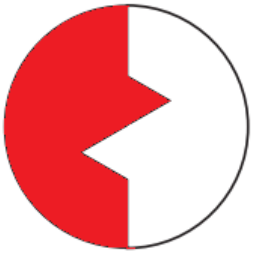






Lesson (1) Creating Halves with Non-Routine Way

Put (✓) under shapes that show one half is shaded: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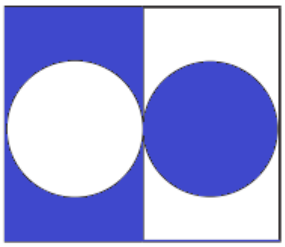
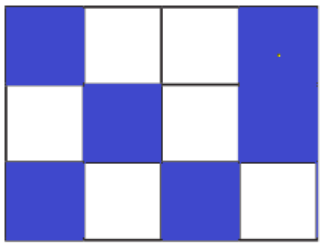
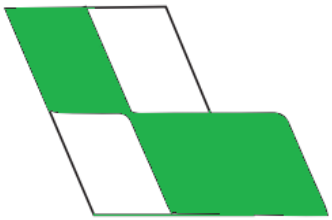

( )


( )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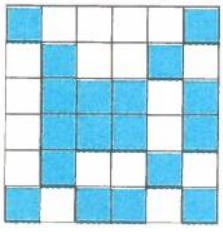
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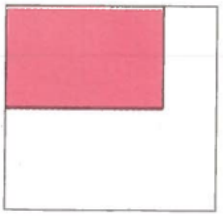
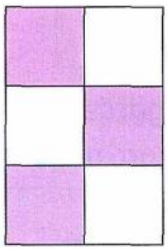

( )

Complete the following and write the fraction which represents the colored figure.

a.

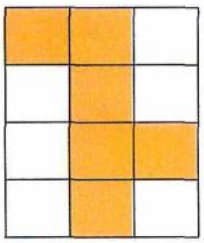
1. Number of all parts = ____
2. Number of colored parts = ____
3. Number of uncolored parts = ____



4. The fraction which represents the colored figure = ____

b.

1. Number of all parts = ____
2. Number of colored parts = ____
3. Number of uncolored parts = ____

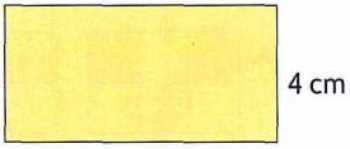


4. The fraction which represents the colored figure = ____

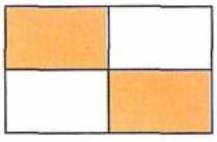
Find the half of area of each of the following rectangles. Choose the way you prefered.

a.

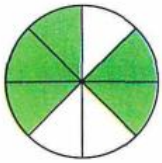
b.

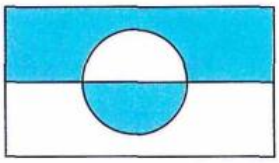


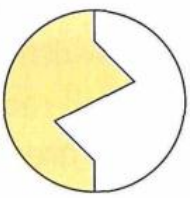
Circle the shapes below that show one-half colored.

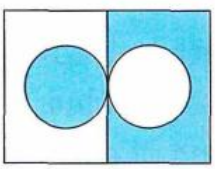
a. 

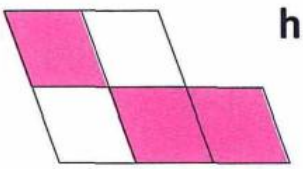
b. 

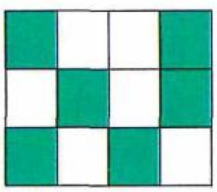
c. 

d. 

e. 

f. 

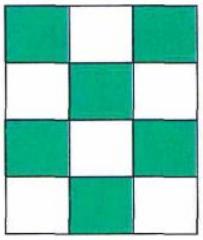
g. 

h. 

Complete the following and write the fraction which represents the colored figure.

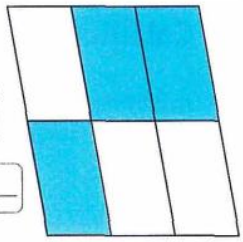
a.

1. Number of all parts = ____
2. Number of colored parts = ____
3. Number of uncolored parts = ____
4. The fraction which represents the colored figure = ____



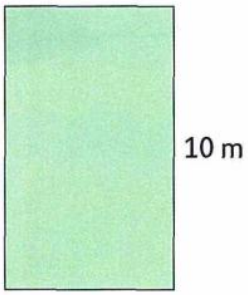
b.

1. Number of all parts = ____
2. Number of colored parts = ____
3. Number of uncolored parts = ____
4. The fraction which represents the colored figure = ____

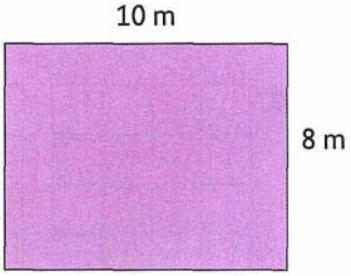


Find the half of area of each of the following rectangles.
Choose the way you prefered.

a.



b.



Lesson (2) Ordering Fractions Using the Number Line

Put the following fractions on the number line.

a. $\frac{1}{3}$, $\frac{1}{6}$, $\frac{4}{6}$, $\frac{3}{6}$

b. $\frac{1}{5}$, $\frac{3}{10}$, $\frac{5}{10}$, $\frac{4}{4}$

c. $\frac{1}{3}$, $\frac{3}{6}$, $\frac{2}{3}$, $\frac{0}{5}$

Lesson (3) Applications on Numbers

Remember: ones, tens, hundreds, thousands

Write the place value of the red digit:

A	67 511	➔	.....
B	893 052	➔	.....
C	715 980	➔	.....
D	821 374	➔	.....
E	501 234	➔	.....

Write the value of the red digit:

A	67 511	➔	.....
B	893 052	➔	.....
C	715 980	➔	.....
D	821 374	➔	.....
E	501 234	➔	.....

Write the expanded form as the example:

A	67 511	=	1 + 10 + 500 + 7 000 + 60 000
B	893 052	=	..... + ... + ... + ... + ... + ...
C	715 980	=	..... + ... + ... + ... + ... + ...
D	821 374	=	..... + ... + ... + ... + ... + ...
E	501 234	=	..... + ... + ... + ... + ... + ...

Form the greatest and the smallest number:

4 1 8 3 4 6

The greatest number: .....

The Smallest number: .....

9 5 4 8 3 6

The greatest number: .....

The Smallest number: .....

Rearrange the digits to get the greatest number and the least number from the given digits.

a. 3 4 6 2 9
greatest : _____ least : _____

b. 2 1 1 7 6
greatest : _____ least : _____

c. 6 4 0 8 1
greatest : _____ least : _____

d. 6 9 7 0 2 4
greatest : _____ least : _____

Write the numbers in order from least to greatest.

a. 61,734 6,950 61,850 116,658
The order is : _____ , _____ , _____ , _____

b. 561,248 91,234 74,005 9,706
The order is : _____ , _____ , _____ , _____

Write the numbers in order from greatest to least.

a. 22,012 8,234 14,235 109,010
The order is : _____ , _____ , _____ , _____

b. 37,309 8,562 37,903 4,298
The order is : _____ , _____ , _____ , _____

HOMEWORK

Put the following fractions on the number line.

a. $\frac{2}{8}$, $\frac{7}{8}$, $\frac{3}{4}$, $\frac{3}{6}$

b. $\frac{6}{6}$, $\frac{3}{5}$, $\frac{1}{10}$, $\frac{1}{2}$

c. $\frac{1}{6}$, $\frac{2}{6}$, $\frac{4}{4}$, $\frac{4}{6}$

Write the value and place value of the colored digit.

	place value	value		place value	value
a. 42,517			b. 104,728		
c. 580,609			d. 600,006		
e. 31,984			f. 5,128		
g. 63,810			h. 710,014		
i. 85,002			j. 2,739		

Rearrange the digits to get the greatest number and the least number from the given digits.

a. 3 1 4 2
greatest : ____ least : ____

b. 8 9 1 4
greatest : ____ least : ____

c. 0 7 4 5
greatest : ____ least : ____

d. 7 3 0 9
greatest : ____ least : ____

Write the numbers in order from least to greatest.

a. 345,010 543,100 354,010 345,001

The order is : _____ , _____ , _____ , _____

b. 34,170 599 35,005 9,730 705,662

The order is : _____ , _____ , _____ , _____ , _____

Write the numbers in order from greatest to least.

a. 100,701 99,358 100,702 8,359 98,781

The order is : _____ , _____ , _____ , _____

b. 80,499 801 8,941 801,014 80,949

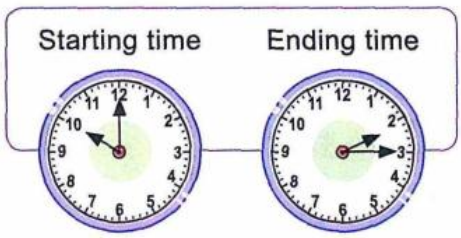
The order is : _____ , _____ , _____ , _____ , _____

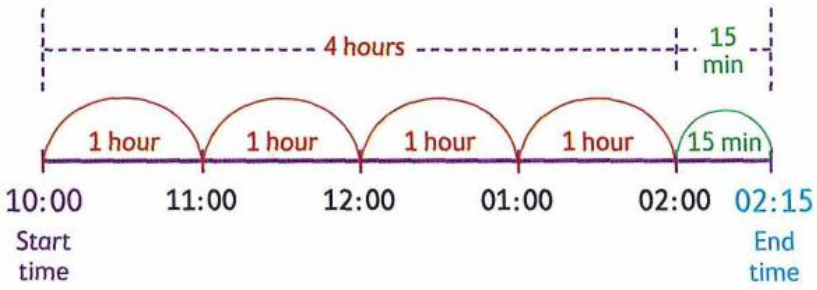
Lesson (4) Elapsed Time

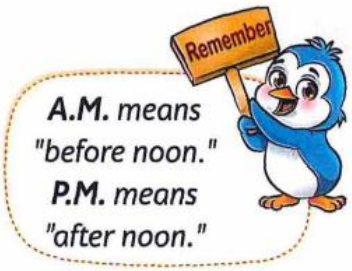
Example 1

Sara arrived at the mall at 10:00 A.M.
She leaved the mall at 02:15 P.M.

How long did she spend at the mall ?





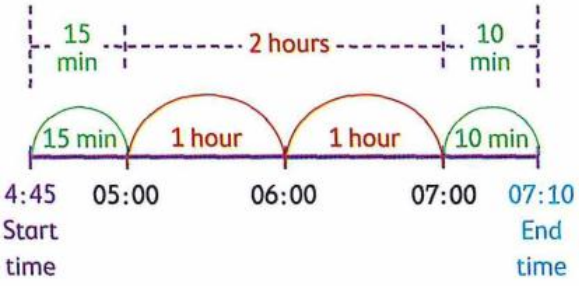


So, Sara spent 4 hours and 15 minutes.

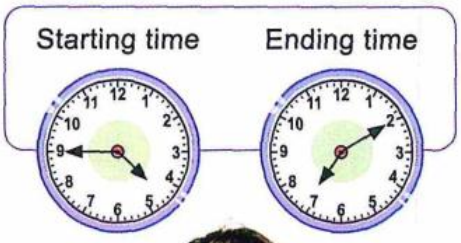
Example 2

Ziad arrived at the library at 04:45 P.M.
He leaved the library at 07:10 P.M.

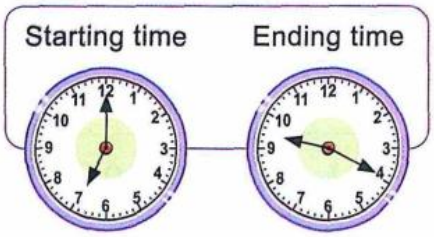
How long did he stay at the library ?



so, Ziad stayed 2 hours and 25 minutes

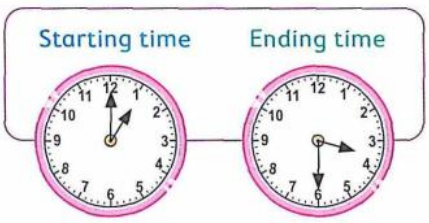


A television cartoon movie begins at 07:00 P.M. and ends at 09:20 P.M. Find the elapsed time.



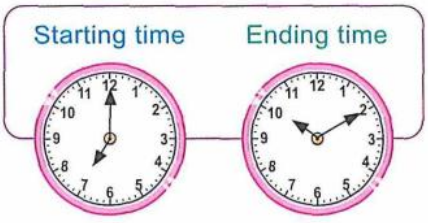
Use each analog clock to find the elapsed time.

a.



Elapsed time

b.



Elapsed time

Write the elapsed time:

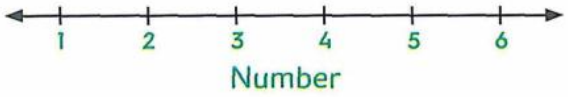
	Start time	End time	Elapsed time
A	4:00 a.m.	7:30 a.m.	.....
B	5:30 p.m.	9:30 p.m.	.....
C	3:15 a.m.	8:00 a.m.	.....
D	11:30 a.m.	9:30 p.m.	.....
E	5:20 p.m.	12:30 a.m.	.....
F	4:00 p.m.	6:30 p.m.	.....
G	9:30 a.m.	4:30 p.m.	.....
H	10:15 p.m.	4:15 a.m.	.....

Lesson (5) Applications on Data Representations

1 The following table shows the roll of dice 35 times. Represent the data by a line plot.

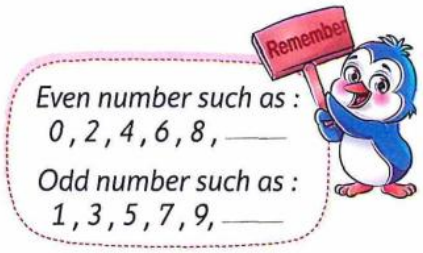
Dice rolls

Dice rolls		
Number	Tally	Times
1	𝍸 |	6
2	𝍸	5
3	𝍸 ||||	9
4	𝍸 |||	8
5	|||	3
6	||||	4



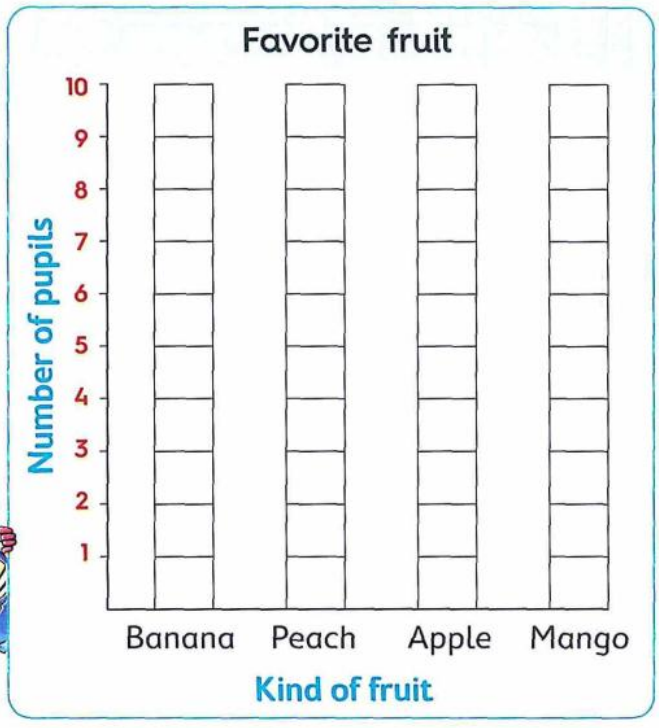
Key
Each X
= _____ time

- **Answer the following questions :**
  - **a.** Which number is rolled the most ? _____
  - **b.** Which number is rolled the least ? _____
  - **c.** How many times shows an even number ? _____
  - **d.** How many times shows an odd number ? _____
  - **e.** What is the difference between the total even rolls and total odd rolls ? _____



2 The following tally table shows the class favorite fruit, complete the table. Represent these data by a bar graph.

Favorite fruit		
Fruit	Tally	Number
Banana	𝍸 |||	____
Peach	||||	____
Apple	𝍸 𝍸	____
Mango	𝍸 |	____

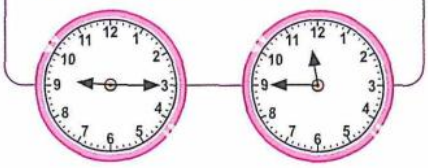


- **Answer the following questions :**
  - **a.** Which fruit is liked the most ? _____
  - **b.** Which fruit is liked the least ? _____
  - **c.** How many more pupils liked banana than mango ? _____

HOMEWORK

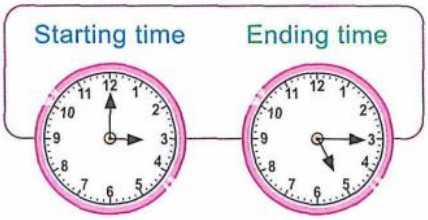
Use each analog clock to find the elapsed time.

a. Starting time Ending time



Elapsed time

b. Starting time Ending time



Elapsed time

Write the elapsed time:

	Start time	End time	Elapsed time
A	07:25	09:30	.....
B	03:15	06:45	.....
C	11:05	04:30	.....
D	01:55	08:25	.....

Complete the table, represent the data by a line plot.

Ages of children in karate class

Key: Each x represents _____

Ages of children in karate class		
Age in years	Tally	Number
7	||	_____
8	||||	_____
9	||	_____
10	𝍸 |	_____
11	|||	_____
12	||	_____

Answer the following questions :

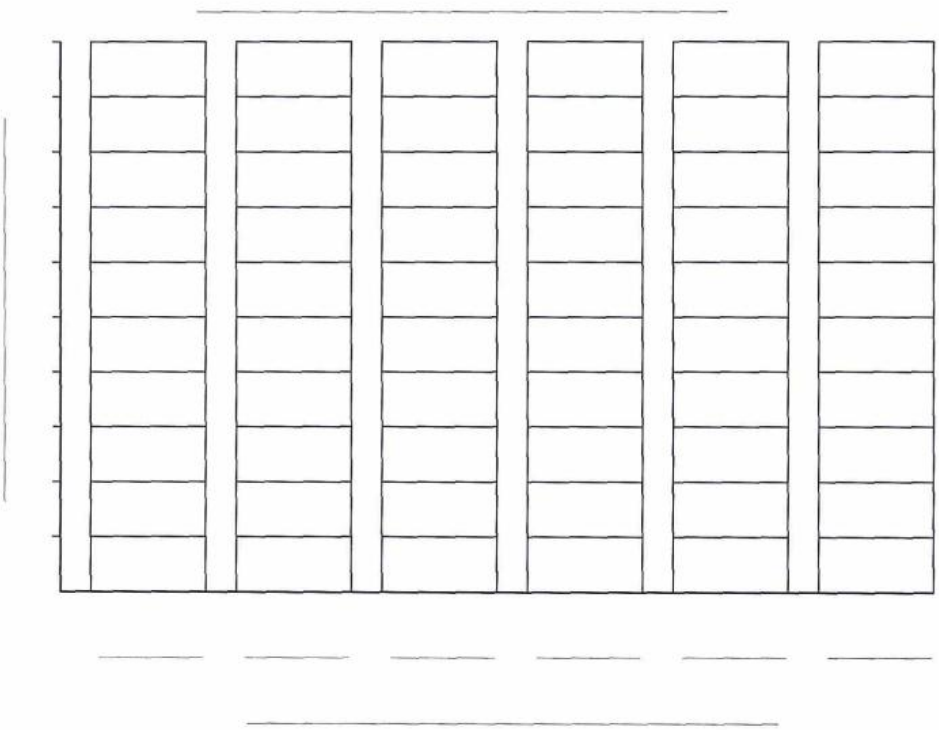
a. How many children in the class are 11 years ? _____ children.

b. What age is the greatest number of children ? _____ years old.

c. How many children are even years old ? _____ children.

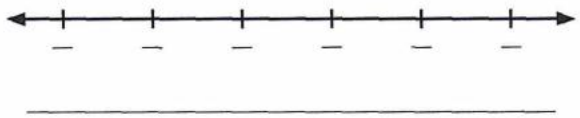
d. How many children are in karate class in all ? _____ children.

Represent the data by a bar graph.



Complete the table, represent the data by a line plot.

_____

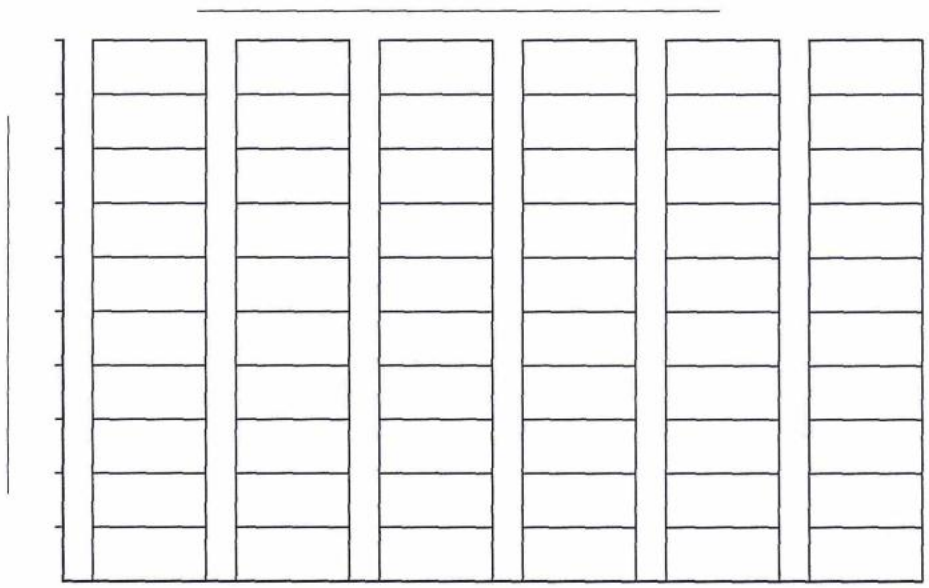


_____

Key Each x represents _____

Players' ages of football team		
Age in years	Tally	Number
22	|||	_____
23	𝍸 |	_____
24	𝍸 |||	_____
25	𝍸 |	_____
26	||	_____
27	|||	_____

- **Represent the data by bar graph :**



_____ _____ _____ _____ _____ _____

_____

- **Answer the following questions :**

a. How many players are 25 years old ? _____

b. Which age has the greatest number of players ? _____

c. How many players are younger than 26 years old ? _____

d. How many players are in the football team ? _____