ALADWAA Gem

2026

MATHEMATICS

نماذج اختبارات الأضواء

لشهـــر نوفمبر

الصـف 1 الإعدادى

الفصل الدراسى الأول

MODEL I

10

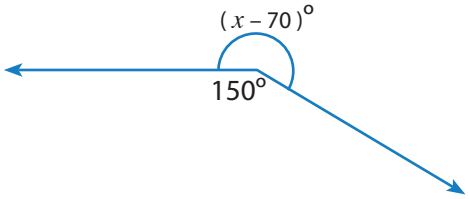
1- Choose the correct answer: 2

a The S.S of $\frac{1}{2}x + 4 = 5$ in $\mathbb{Q}$ is ..... $\left(\{\frac{1}{2}\}, \{18\}, \{2\}, \emptyset\right)$

b **In the opposite figure:**

The value of x = ...

$(270, 280, 140, 220)$



2- Answer each of the following: 8

a If my mother's age now is three times my age, and she is also 24 years older than me.

How old is each of us now?

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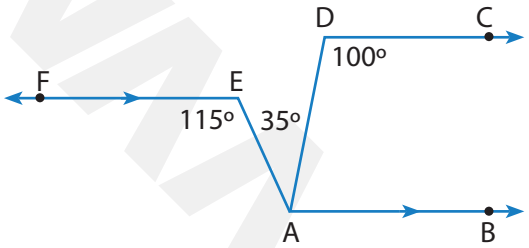
b **In the opposite figure:**

$\overrightarrow{AB}$ // $\overrightarrow{EF}$, m(∠D) = 100° , m(∠E) = 115°

and m(∠DAE) = 35°

Prove that: $\overrightarrow{AB}$ // $\overrightarrow{DC}$



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c **Write in the simplest form, the expression:** $2(n - 3m) - 3(2n - 1)$,

and then **find its value at:** $m = -2$, $n = 2$

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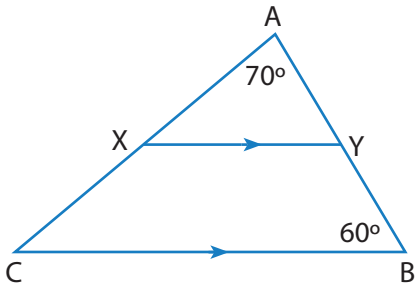
d **In the opposite figure:**

ABC is a triangle,

$Y \in \overline{AB}$, $X \in \overline{AC}$, $\overline{XY} \,//\, \overline{CB}$, $m(\angle A) = 70°$

and $m(\angle B) = 60°$

Find : m ($\angle$AXY) and m ($\angle$YXC)



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MODEL 2

10

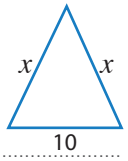
1- Choose the correct answer: 2

a Two complementary angles, the ratio between their measures is 2 : 3 , then the measure of the greater angle is ..... (18° , 36° , 54° , 90°)

b If $\frac{a}{2} = 0.\overline{5}$, what is the value of $|9a - 5|$? ..... (5 , −5 , 0 , 10)

2- Answer each of the following: 8

a If the perimeter of the opposite triangle equals 34 length units , then **what is the value of x ?**



b If $\frac{m}{3} = 7$, **then what is the value of m −19 ?**

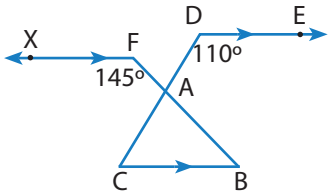
c Find the solution set for each of the following equations in $\mathbb{Q}$:

a) $\frac{1}{3}x + 3 = 12$ **b)** $2(x + 3) = 3(1 - x)$

d **In the opposite figure:**

$\overrightarrow{DE} \parallel \overrightarrow{FX} \parallel \overline{CB}$

, $m(\angle D) = 110°$, $m(\angle F) = 145°$



Calculate the measure of the interior angles of the triangle ABC.

MODEL 3

10

1- Choose the correct answer: 2

a The result of adding the two expressions $-2y - x + 4z$ and $2x + 2y - 4z$ is .....

(x , 6z , zero , $2x - 4y + 8z$)

b The type of the angle that supplements an acute angle is a/an ..... angle.

(acute , obtuse , straight , reflex)

2- Answer each of the following: 8

a Two natural numbers, one of them is three times the other, and their sum is 48.

What are the two numbers?

.....

.....

.....

.....

b If the lengths of two sides of a triangle are 5 cm and 2 cm, **what is the largest integer that can represent the length of the third side?**

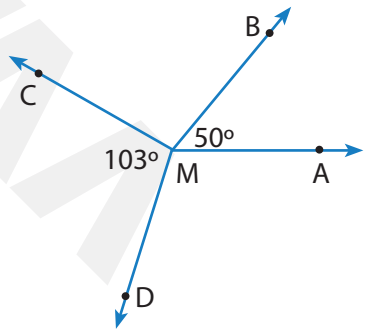
.....

c **In the opposite figure:**

m ($\angle$BMC) = 2 m ($\angle$AMB), m ($\angle$AMB) = 50° ,

m ($\angle$DMC) = 103°

Find: m ($\angle$AMD)



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d **Find the solution set of each of the following in $\mathbb{Z}$**

$3 - 3x = 19$

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إجابات نماذج اختبارات الأضواء

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الصـف 1 الإعدادى

الفصل الدراسى الأول

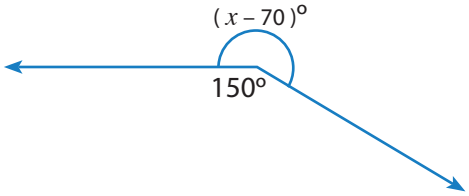
MODEL I

1- Choose the correct answer:

a The S.S of $\frac{1}{2}x + 4 = 5$ in $\mathbb{Q}$ is ..... ($\{\frac{1}{2}\}$, {18} , {2} , Ø)

b **In the opposite figure:**

The value of x = ...



(270 , 280 , 140 , 220)

2- Answer each of the following:

a If my mother's age now is three times my age, and she is also 24 years older than me.

How old is each of us now?

Let the age be x years and the age of my mother be $3x$ years.

$3x - x = 24$

$2x = 24$

$x = \frac{24}{2} = 12$

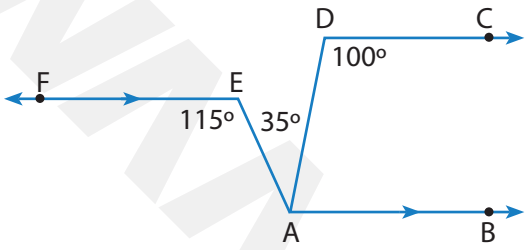
My age now is 12 years.

The mother's age now is 36 years.

b **In the opposite figure:**

$\overrightarrow{AB}$ // $\overrightarrow{EF}$, m (∠D) = 100° , m (∠E) = 115°

and m (∠DAE) = 35°



Prove that: $\overrightarrow{AB}$ // $\overrightarrow{DC}$

Proof:

∵ $\overrightarrow{AB}$ // $\overrightarrow{EF}$, $\overleftrightarrow{EA}$ is a transversal.

∴ m (∠FEA) = m (∠EAB) = 115° (alternating interior angles)

∴ m (∠DAB) = 115° – 35° = 80°

∵ m (∠CDA) + m (∠DAB) = 100° + 80° = 180°

and they are interior angles and on one side of the transversal.

∴ $\overrightarrow{AB}$ // $\overrightarrow{DC}$

c **Write in the simplest form, the expression:** $2(n-3m)-3(2n-1)$,

and then **find its value at:** $m=-2$, $n=2$

$2(n-3m)-3(2n-1)=2n-6m-6n+3$

$=-4n-6m+3$

The value at $m=-2$, $n=2$ is $-4(2)-6(-2)+3=-8+12+3=7$

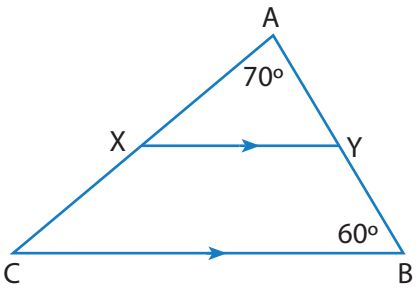
d **In the opposite figure:**

ABC is a triangle,

$Y \in \overline{AB}$, $X \in \overline{AC}$, $\overline{XY} \,//\, \overline{CB}$, $m(\angle A)=70°$

and $m(\angle B)=60°$

Find : m ($\angle$AXY) and m ($\angle$YXC)



Solution:

$\because \overline{CB} \,//\, \overline{XY}$, $\overleftrightarrow{AB}$ is a transversal.

$\therefore m(\angle AYX)=m(\angle B)=60°$ (corresponding angles)

In $\triangle$ AXY :

$\therefore m(\angle AXY)=180°-(70°+60°)=50°$

$\because m(\angle AXY)+m(\angle YXC)=180°$

$\therefore m(\angle YXC)=180°-50°=130°$ (two adjacent supplementary angles)

MODEL 2

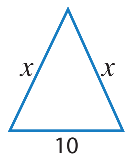
1- Choose the correct answer:

a Two complementary angles, the ratio between their measures is 2 : 3 , then the measure of the greater angle is .... (18° , 36° , 54° , 90°)

b If $\frac{a}{2} = 0.\overline{5}$, what is the value of $|9a - 5|$? .... (5 , −5 , 0 , 10)

2- Answer each of the following:

a If the perimeter of the opposite triangle equals 34 length units , then **what is the value of x ?**



The perimeter of the triangle = The sum of lengths of all its sides

$x + x + 10 = 34$

$2x + 10 = 34$

$2x = 24$

$x = 12$ length units

b If $\frac{m}{3} = 7$, **then what is the value of m −19 ?**

$\because \frac{m}{3} = 7$

$\therefore m = 21$

Then $m - 19 = 21 - 19 = 2$

c Find the solution set for each of the following equations in $\mathbb{Q}$:

a) $\frac{1}{3}x + 3 = 12$ **b)** $2(x + 3) = 3(1 - x)$

solution:

a) $\frac{1}{3}x + 3 = 12$

$\frac{1}{3}x = 9$

$x = 27$ $\therefore$ S.S = {27}

b) $2(x + 3) = 3(1 - x)$

$2x + 6 = 3 - 3x$

$2x + 3x = 3 - 6$

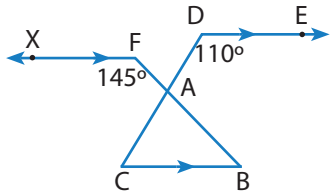
$5x = -3$

$x = \frac{-3}{5}$ $\therefore$ S.S = $\{\frac{-3}{5}\}$

d **In the opposite figure:**

$\overrightarrow{DE} \parallel \overrightarrow{FX} \parallel \overline{CB}$

, $m(\angle D) = 110°$, $m(\angle F) = 145°$



Calculate the measure of the interior angles of the triangle ABC.

solution:

$\because \overrightarrow{DE} \parallel \overline{CB}$ and $\overleftrightarrow{DC}$ is a transversal

$\therefore m(\angle D) + m(\angle C) = 180°$ (Two interior angles on the same side of the transversal)

$\therefore m(\angle C) = 180° - 110° = 70°$

$\because \overline{CB} \parallel \overrightarrow{FX}$ and $\overleftrightarrow{FB}$ is a transversal

$\therefore m(\angle F) + m(\angle B) = 180°$ (Two interior angles on the same side of the transversal)

$\therefore m(\angle B) = 180° - 145° = 35°$

In $\triangle ABC$:

$\therefore m(\angle BAC) = 180° - (70° + 35°) = 75°$

MODEL 3

1- Choose the correct answer:

a The result of adding the two expressions $-2y - x + 4z$ and $2x + 2y - 4z$ is .....

(x , 6z , zero , $2x - 4y + 8z$)

b The type of the angle that supplements an acute angle is a/an ..... angle.

(acute , obtuse , straight , reflex)

2- Answer each of the following:

a Two natural numbers, one of them is three times the other, and their sum is 48.

What are the two numbers?

Let the number be x and the other number be $3x$

$x + 3x = 48$

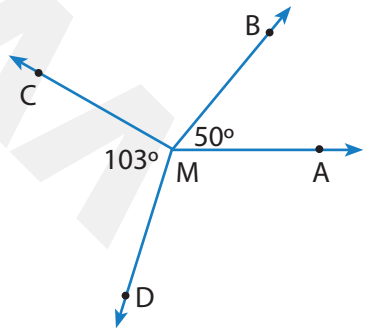
$4x = 48$ $\quad\quad$ $\therefore x = \frac{48}{4} = 12$

The two numbers are 12 and 36

b If the lengths of two sides of a triangle are 5 cm and 2 cm, **what is the largest integer that can represent the length of the third side?**

The largest integer of the length of the third side is 6 cm.

c **In the opposite figure:**



m ($\angle$BMC) = 2 m ($\angle$AMB), m ($\angle$AMB) = 50° ,

m ($\angle$DMC) = 103°

Find: m ($\angle$AMD)

m ($\angle$BMC) = 2 m ($\angle$AMB) = $2 \times 50° = 100°$

m ($\angle$AMD) = $360° - (50° + 100° + 103°) = 107°$

d **Find the solution set of each of the following in $\mathbb{Z}$**

$3 - 3x = 19$

Solution:

$3x = 3 - 19$

$3x = -16$ $\quad\quad$ $\therefore x = \frac{-16}{3}$ $\quad\quad$ $\therefore S.S = \emptyset$