EL-MOASSER



Maths

April Tests

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April Tests

Test 1

First group **Choose the correct answer from the given ones.**

(1) The image of the point (3 , 2) by translation (– 1 , 1) is ———

a. (2 , 3)　　b. (4 , 1)

c. (– 2 , 1)　　d. (– 4 , – 1)

(2) The image of the point (– 7 , – 2) by reflection in the y-axis followed by reflection in the X-axis is the point ———

a. (7 , 2)　　b. (7 , – 2)

c. (– 2 , – 7)　　d. (– 7 , 2)

Second group **Answer the following questions.**

(1) If the point (X – 1 , 3) is the image of the point (4 , y) by reflection in the X-axis , find the value of 2 X + y

(2) A box contains identical balls , numbered from 20 to 29. A ball is drawn at random from the box. Find the probability that the drawn ball carries a number divisible by 3

(3) Draw Δ ABC , AB = 5 cm , BC = 4 cm , AC = 3 cm «Do not remove the arcs»

(4) In the Coordinate plane , draw Δ ABC where A (– 4 , 4) , B (– 1 , 1) , C (1 , 4) , then draw its image by rotation around the origin at an angle of measure 90° clockwise.

Test 2

First group **Choose the correct answer from the given ones :**

(1) The image of the point A $(-3, 6)$ by reflection in the X-axis is ———

a. $(-3, 6)$ b. $(3, 6)$

c. $(3, -6)$ d. $(-3, -6)$

(2) A box contains 24 identical balls , 8 balls are white and the rest are red and green. If a ball is drawn at random , then the probability that the drawn ball is white = ———

a. $\frac{1}{3}$ b. $\frac{1}{2}$

c. $\frac{2}{3}$ d. $\frac{1}{8}$

Second group **Answer the following questions :**

(1) If the point $(2X, 5)$ is the image of the point $(1, -2)$ by translation $(5, 7)$ **find the value of :** $3X + X^2$

(2) Find the image of the point $(4, -1)$ by rotation around the origin at an angle of measure 180°

(3) By using a geometrical tools , draw $\angle ABC$ of measure 110° , then draw $\overrightarrow{BD}$ to bisect it.

(4) On the coordinate plane , draw ΔABC where $A(-4, 5)$, $B(-4, 1)$, $C(-1, 3)$ then draw its image by reflection in the y-axis.

Test 3

First group **Choose the correct answer from the given ones :**

(1) The probability of the certain event is ———

a. $\frac{1}{2}$ b. $\frac{4}{5}$

c. zero d. 100 %

(2) The image of the point (– 2 , 7) by rotation around the origin at an angle of measure 270° anticlockwise is the point ———

a.(7 , 2) b.(7 , – 2)

c.(2 , 7) d.(– 7 , – 2)

Second group **Answer the following questions :**

(1) If the point (3 , k) is the image of the point (m , 7) by reflection in the y-axis , find the value of 2m + k.

(2) In the experiment of tossing a coin two times , find the probability of getting at least one head.

(3) Draw a line segment of length 6.5 cm , then use ruler and compass to bisect it. "Do not remove the arcs".

(4) On a coordinate plane , draw Δ ABC , where A (3 , 1) , B (3 , 4) , C (1 , – 2) , then draw its image by translation $(x , y) \longrightarrow (x + 1 , y - 2)$.

Test 4

First group **Choose the correct answer from the given ones :**

(1) In the experiment of rolling a dice once, the probability of getting an even number on the upper face equals ———

a. $\frac{1}{6}$ b. $\frac{1}{3}$

c. $\frac{1}{2}$ d. 1

(2) The image of the point (– 4, 1) by reflection in the X-axis followed by reflection in the y-axis is the point ———

a. (– 4 , 1) b. (4 , – 1)

c. (4 , 1) d. (– 4 , – 1)

Second group **Answer the following questions :**

(1) A bag contains ten cards , numbered from 7 to 16
If a card is drawn at random , find the probability that the drawn card carries a number divisible by 7.

(2) If the image of the point A (– 1 , 6) by reflection in the y-axis is at the point B, find the image of the point B by translation (2 , – 5).

(3) Draw ∠ ABC where m (∠ ABC) = 70° , then use the ruler and the compass to bisect this angle "Do not remove the arcs" .

(4) On the coordinate plane , draw the square ABCD where A (1 , 1) , B (4 , 1) , C (4 , 4) , D (1 , 4), then draw its image by rotation R (0 , 90°).

Test 5

First group **Choose the correct answer from the given ones :**

(1) The image of the point (3 , 2) by rotation R (0 , 90°) is the point ———

a. (– 2 , 3)　　b. (3 , – 2)

c. (2 , 3)　　d. (3 , 2)

(2) Which of the following can not be a probability of an event of a random experiment ?

a. 25%　　b. $\frac{3}{2}$

c. $\frac{2}{3}$　　d. 100%

Second group **Answer the following questions :**

(1) If the point (3 , – 4) is the image of the point (x , y^2) by reflection in the x-axis , find the value of the expression : $x^2 + y^2$

(2) Write the sample space of a random experiment of tossing a coin two times.

(3) Draw Δ XYZ in which , XY = 3 cm , m (∠ X) = 90° , m (∠ Y) = 60° , then find by measuring the length of $\overline{YZ}$.

(4) On the coordinate plane , draw $\overline{AB}$ where A (– 2 , 1) , B (5 , – 3) then draw the image of $\overline{AB}$ by translation (– 2 , 3)

Answer of April tests

Test 1

First group

1. (a) **2.** (a)

Second group

1. ∵ $(x - 1 , 3)$ is the image of the point $(4 , y)$ by reflection in the x-axis.

$\therefore x - 1 = 4$ $\therefore x = 4 + 1 = 5$

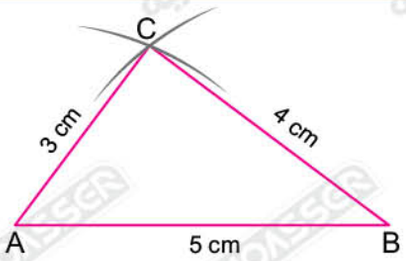
$\therefore - y = 3$ $\therefore y = - 3$

$\therefore 2x + y = 2 \times 5 + (- 3) = 7$

2. ∵ The numbers divisible , by 3 are : 21 , 24 , 27

$\therefore$ The probability that the number is divisible by $3 = \frac{3}{10}$

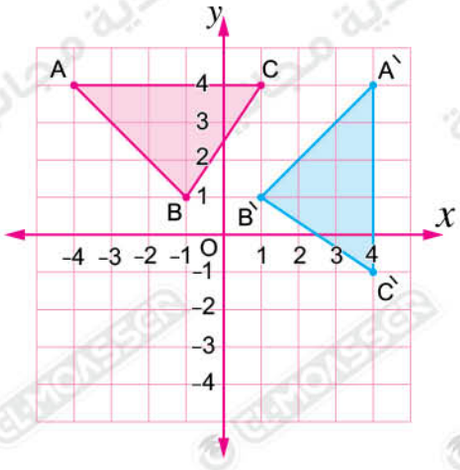
3.



4. A $(- 4 , 4) \xrightarrow{R (O , - 90°)} \grave{A} (4 , 4)$

B $(- 1 , 1) \xrightarrow{R (O , - 90°)} \grave{B} (1 , 1)$

C $(1 , 4) \xrightarrow{R (O , - 90°)} \grave{C} (4 , - 1)$



Test 2

First group

1. (d) **2.** (a)

Second group

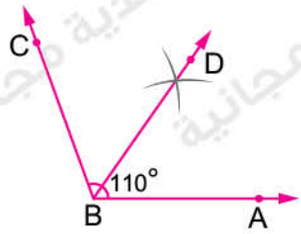
1. The image of the point $(1 , - 2)$ by translation $(5 , 7)$ is $(6 , 5)$

$\therefore 2x = 6$ $\therefore x = 3$

$\therefore 3x + x^2 = 3 (3) + (3)^2 = 18$

2. $(4 , - 1) \xrightarrow{R (O , 180°)} (- 4 , 1)$

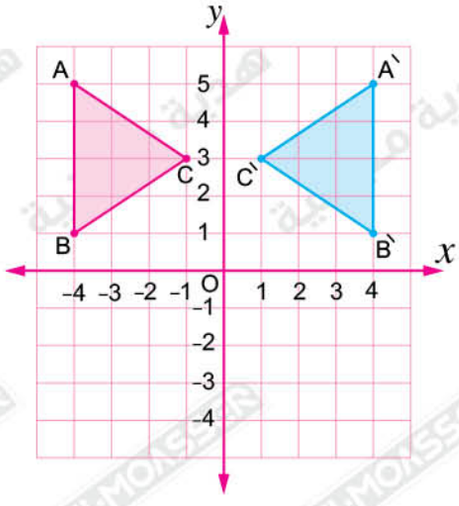
3.



4. A $(- 4 , 5) \xrightarrow[\text{in the y-axis}]{\text{By reflection}} \grave{A} (4 , 5)$

B $(- 4 , 1) \xrightarrow[\text{in the y-axis}]{\text{By reflection}} \grave{B} (4 , 1)$

C $(- 1 , 3) \xrightarrow[\text{in the y-axis}]{\text{By reflection}} \grave{C} (1 , 3)$



Test 3

First group

1. (d) **2.** (a)

Second group

1. ∵ The point (3 , k) is the image of the point (m , 7) by reflection in the y–axis

∴ – m = 3

∴ m = – 3

k = 7

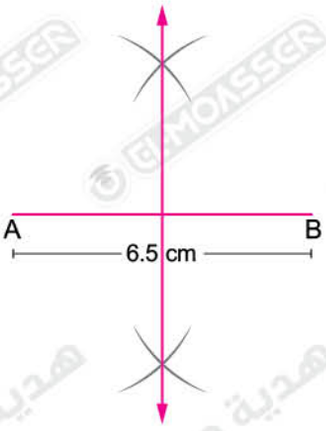
∴ 2 m + k = 2 (– 3) + 7 = 1

2. ∵ S = {(H , H) , (H , T) , (T , H) , (T , T)}

The event of getting one head at least= {(H , H) , (H , T) , (T , H)}

∴ The probability of getting one head at least = $\frac{3}{4}$

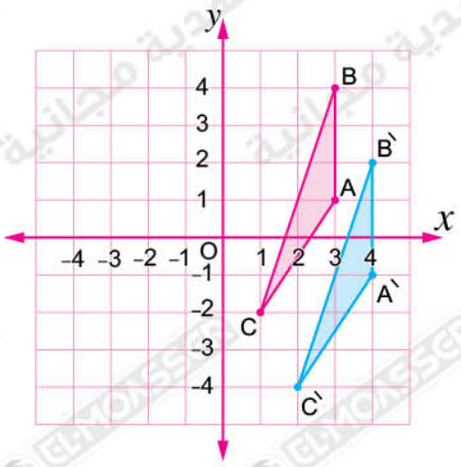
3.



4. A (3 , 1) $\xrightarrow[(x + 1 , y - 2)]{\text{By translation}}$ $\grave{A}$ (4 , – 1)

B (3 , 4) $\xrightarrow[(x + 1 , y - 2)]{\text{By translation}}$ $\grave{B}$ (4 , 2)

C (1 , – 2) $\xrightarrow[(x + 1 , y - 2)]{\text{By translation}}$ $\grave{C}$ (2 , – 4)



Test 4

First group

1. (c) **2.** (b)

Second group

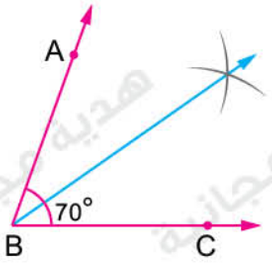
1. ∵ The numbers divisible by 7 are 7 , 14

∴ The probability of getting a card carries number divisible by 7 = $\frac{2}{10} = \frac{1}{5}$

2. A (– 1 , 6) $\xrightarrow[\text{in the y-axis}]{\text{By reflection}}$ B (1 , 6)

B (1 , 6) $\xrightarrow[(2 , - 5)]{\text{By translation}}$ $\grave{B}$ (3 , 1)

3.

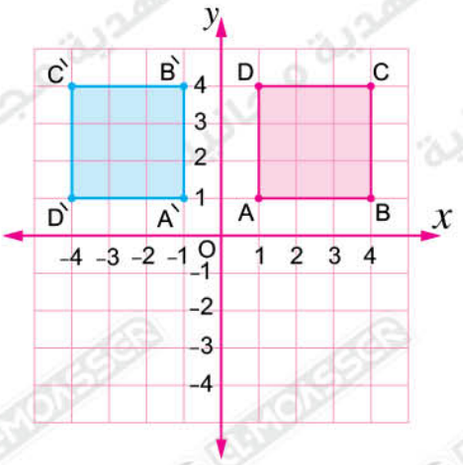


4. A (1 , 1) $\xrightarrow{R (O , 90°)}$ $\grave{A}$ (– 1 , 1)

B (4 , 1) $\xrightarrow{R (O , 90°)}$ $\grave{B}$ (– 1 , 4)

C (4 , 4) $\xrightarrow{R (O , 90°)}$ $\grave{C}$ (– 4 , 4)

D (1 , 4) $\xrightarrow{R (O , 90°)}$ $\grave{D}$ (– 4 , 1)



Test 5

First group

1. (a) **2.** (b)

Second group

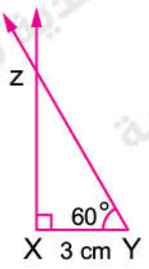
1. ∵ The point $(3 , -4)$ is the image of the point (x , y^2) by reflection in the x-axis

$\therefore x = 3 , -y^2 = -4 \quad \therefore y^2 = 4$

$\therefore x^2 + y^2 = (3)^2 + 4 = 13$

2. $S = \{(H , H) , (H , T) , (T , H) , (T , T)\}$

3.



YZ = 6 cm.

4. $A(-2 , 1) \xrightarrow[(-2 , 3)]{\text{By translation}} \grave{A}(-4 , 4)$

$B(5 , -3) \xrightarrow[(-2 , 3)]{\text{By translation}} \grave{B}(3 , 0)$

