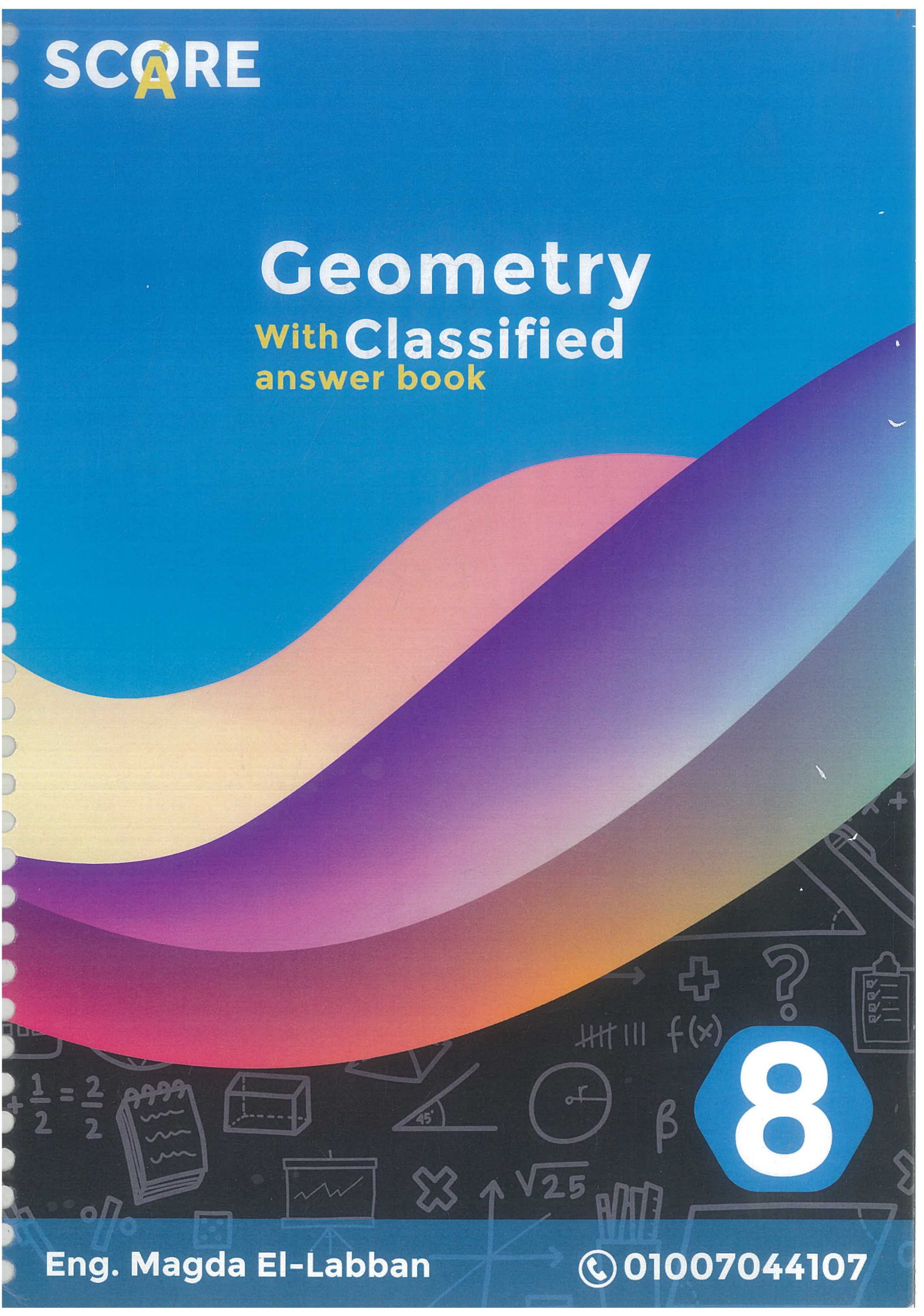
SCORE A

Geometry

With Classified answer book

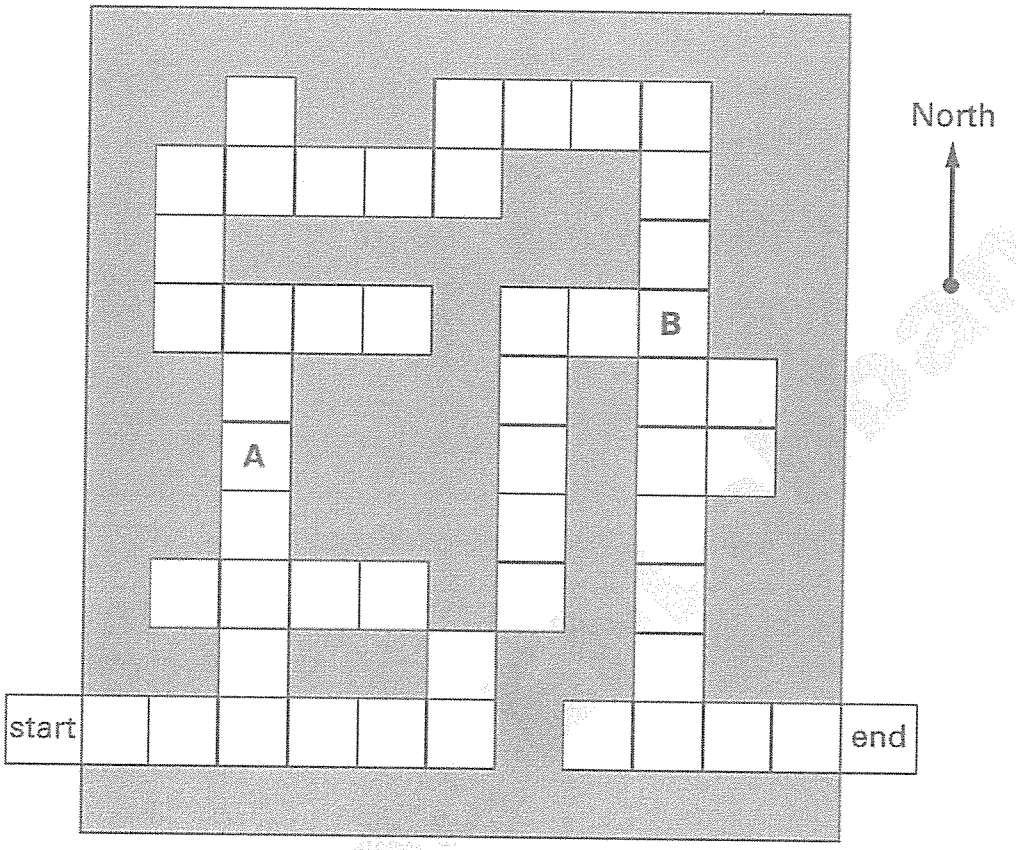


Eng. Magda El-Labban

01007044107

14- Translation

1. The diagram shows a maze.



(a) Andrew is at the square marked A.

He moves two squares north, then he moves one square west.

Where is Andrew now? Write X on the correct square.

(b) Bachir is at the square marked B. He moves to the end of the maze.

Complete the directions to show how he moves.

He moves ..... squares ..... , then

he moves ..... squares .....

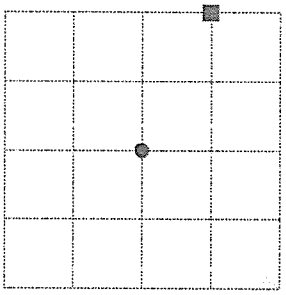
2. Fill in the missing directions to show how the robot could move from ● to ■

Start at ●

Move 1m ....., then

move 1m ....., then

move 1m .....



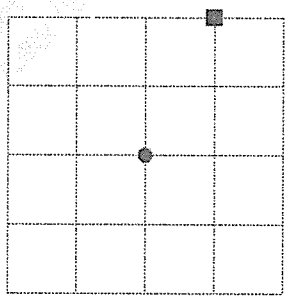
Now show a **different** way the robot could move from ● to ■

Start at ●

Move 1m ....., then

move 1m ....., then

move 1m .....

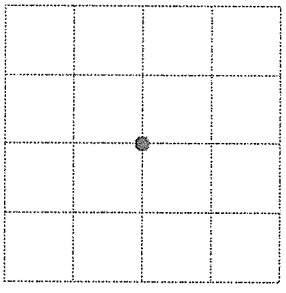


Fill in the missing directions to show one way the robot could move from ● then back to ●

Start at ●

Move 1m ....., then

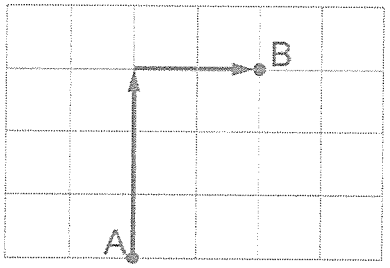
move 1m .....



3. To move **from A to B** on the square grid:

move **North 3**

then **East 2**



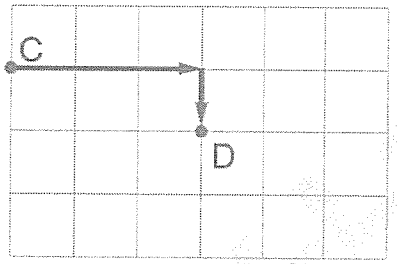
North

Write the missing direction.

To move **from C to D** on the square grid:

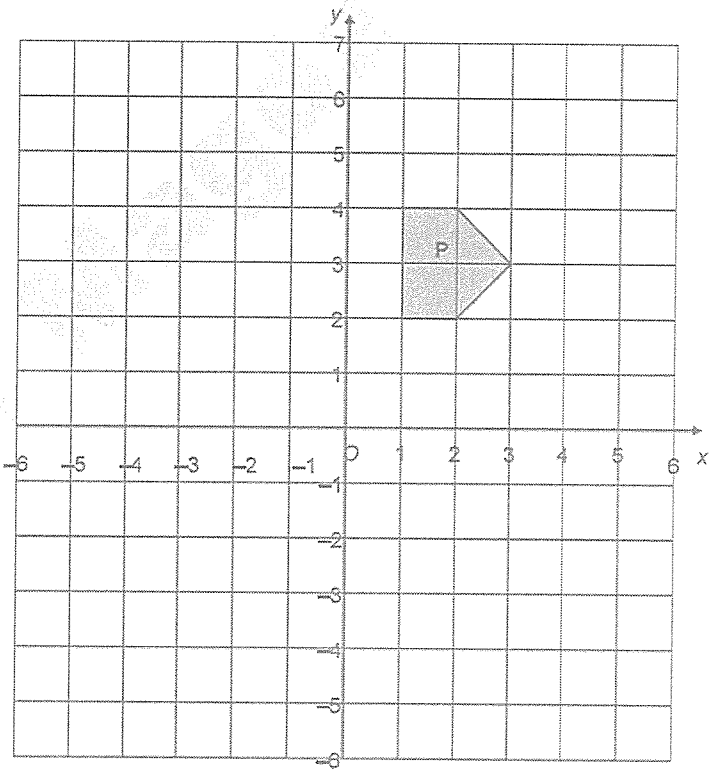
move **East 3**

then _____



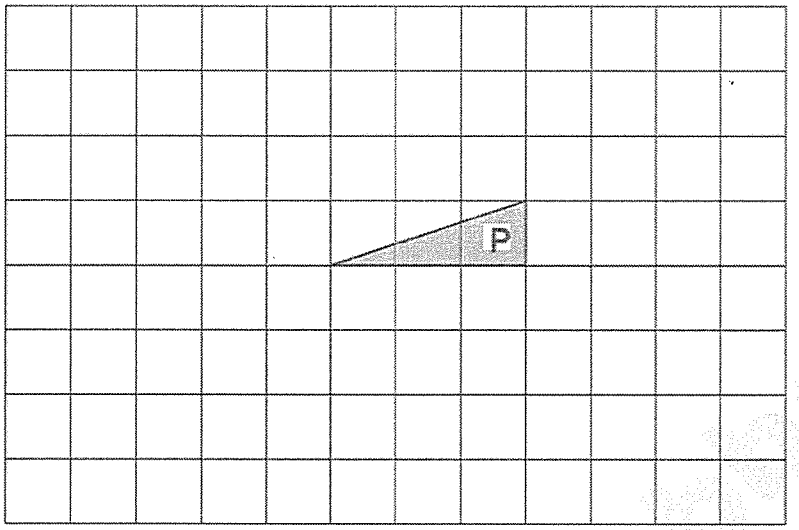
North

4.



On the grid, translate the shaded shape **P** by 2 units to the right and 3 units up Label the new shape **R.**

5. Translate shape P 3 squares to the left and 2 squares down.



6. A shape is translated by the $\begin{pmatrix} -5 \\ 0 \end{pmatrix}$

In which direction does the shape move? Circle your answer.

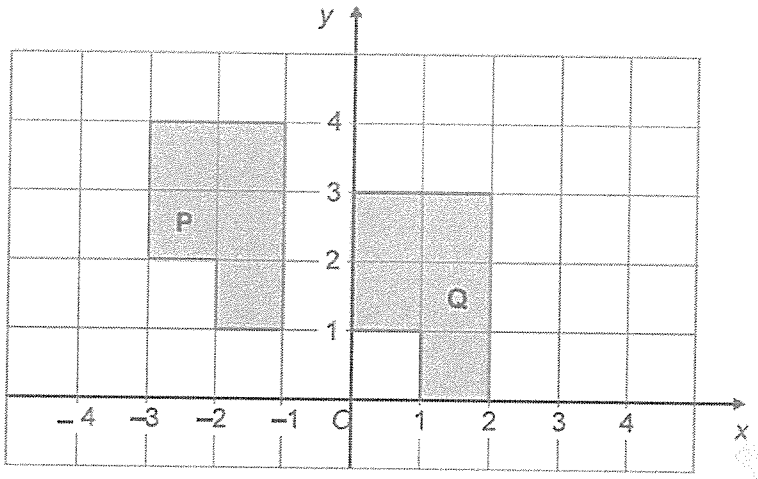
up down left right

7. A triangle has vertices at (23, 17), (20, −19) and (−3, 1)
The triangle is translated by the − 17 units in direction of X and 2 units in Y direction .
Find the coordinates of each vertex after the translation.

8. Here are the coordinates of a triangle:
(-1, 1), (-4, 1), (-4, 4)

The first coordinate translates to (4, -4).
What are the other coordinates?

9. a)



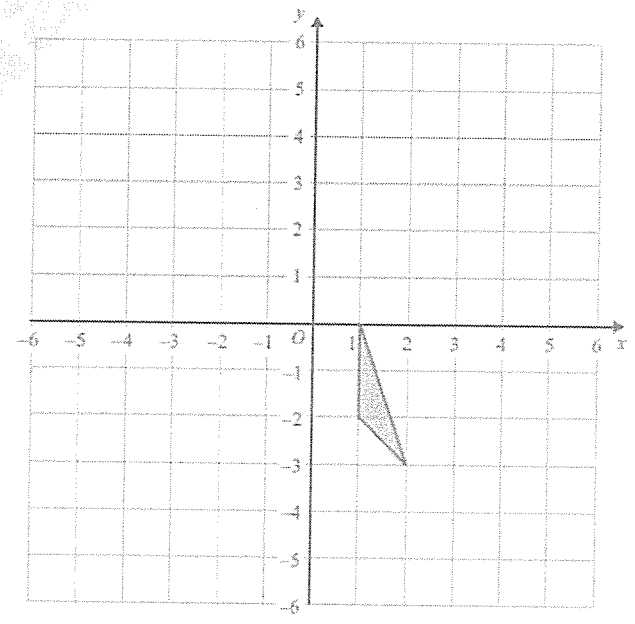
Describe fully the single transformation that will map shape **P** onto shape **Q**.

.....

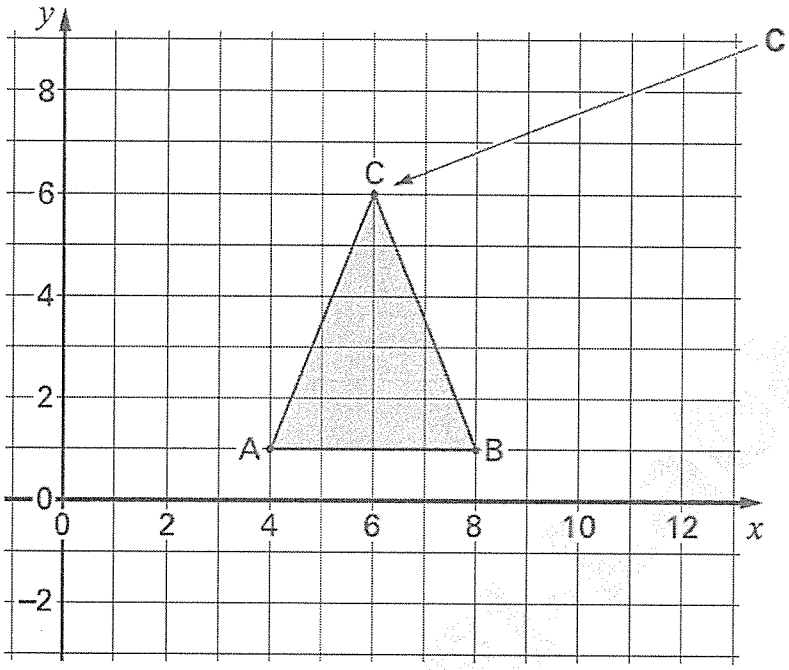
.....

.....

b) Translate the triangle by $\begin{pmatrix} 3 \\ 2 \end{pmatrix}$



10. On this square grid, A and B must not move.



When C is at (6, 6), triangle ABC is **isosceles.**

(a) C moves so that triangle ABC is still **isosceles.**

Where could C have moved to?

Write the coordinates of its new position.

(....., ...)

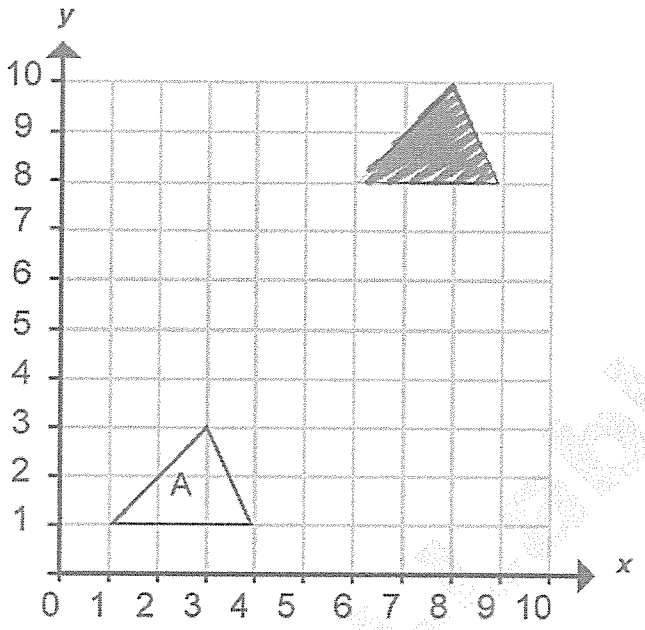
(b) Then C moves so that triangle ABC is **isosceles and right-angled.**

Where could C have moved to?

Write the coordinates of its new position.

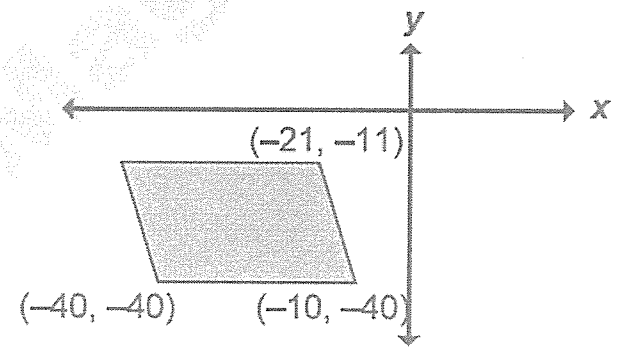
(....., ...)

11. Dora has translated triangle A 2 squares to the right and 7 squares up.



Is Dora's drawing correct? Explain why. _____

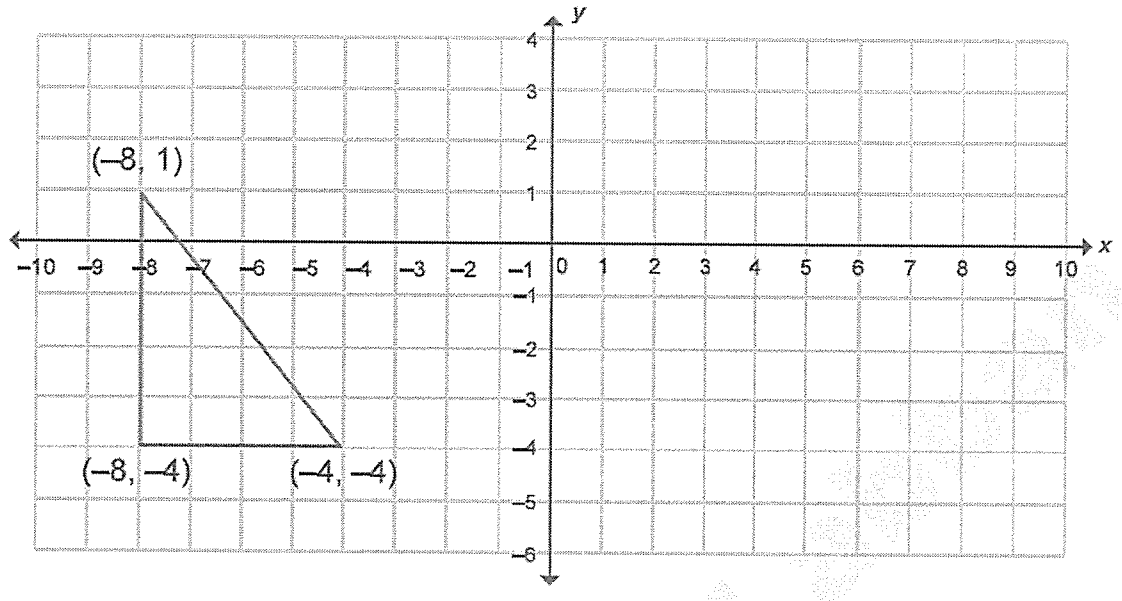
12.



This parallelogram has been translated 50 left and 25 down.

What were the coordinates of **all four** vertices before it was translated?

13. A triangle is drawn on the coordinate grid.

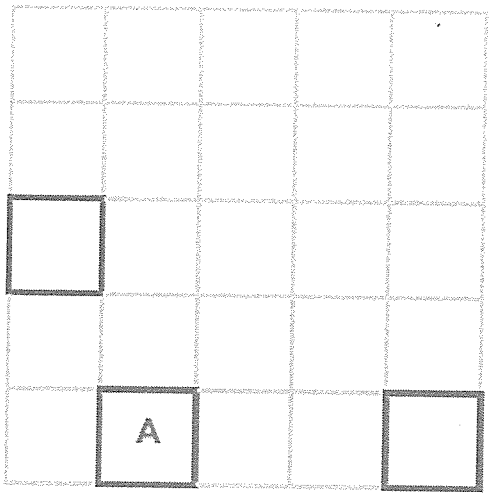


a) Translate the triangle 9 right and 1 down.

b) Tick the correct box for each coordinate.

Point	Inside the new triangle	Outside the new triangle	On the perimeter of the new triangle
(0, 0)			
(4, –5)			
(2, –1)			
(–6, –3)			
(3, –4)			

14. Starting from shape A each time, circle the translation that has not been completed.

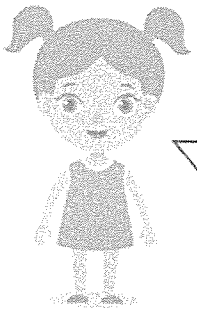


1 left, 2 up

1 left, 0 down

3 right, 0 down

Kenya is translating shapes.



When you translate a shape, the angles of the shape can change.

Do you agree with Kenya?
Support your answer by drawing your own example.