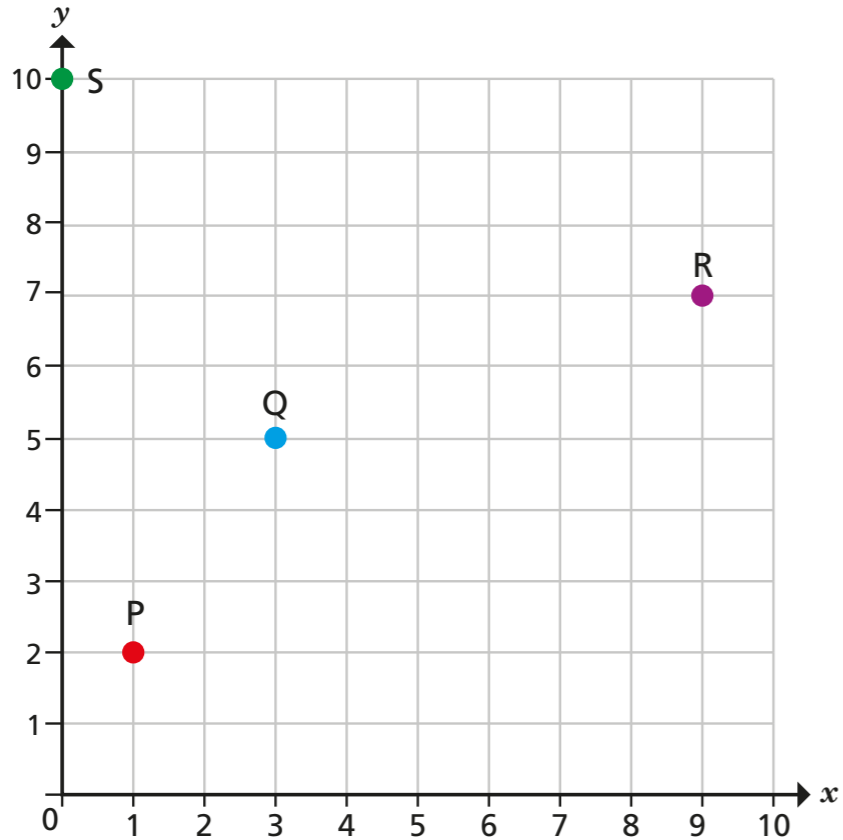


# Translations

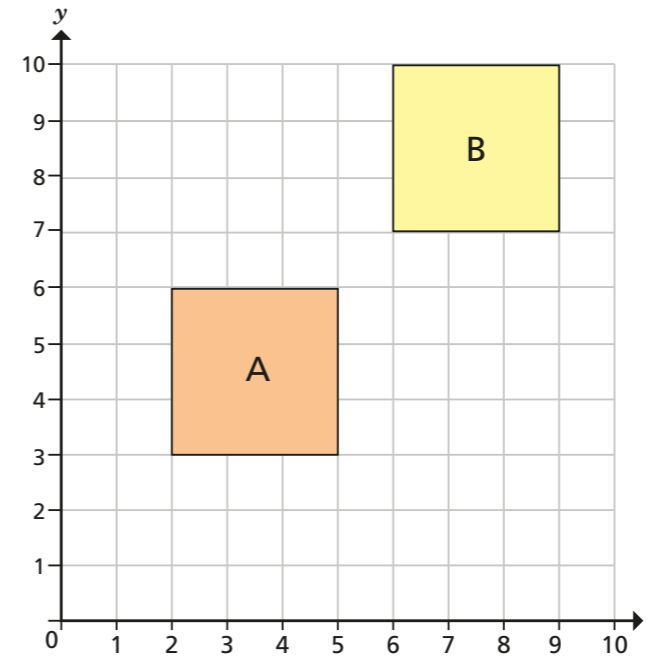
1



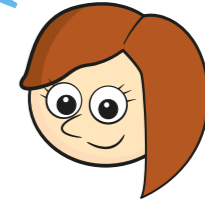
Describe the translations.

- a) From P to Q is  right and  up
- b) From Q to R is  right and  up
- c) From R to S is  left and  up
- d) From S to P is  \_\_\_\_\_ and  \_\_\_\_\_
- e) From Q to P is  \_\_\_\_\_ and  \_\_\_\_\_
- f) From R to Q is  \_\_\_\_\_ and  \_\_\_\_\_
- g) From S to R is  \_\_\_\_\_ and  \_\_\_\_\_
- h) From P to S is  \_\_\_\_\_ and  \_\_\_\_\_

2



The translation from A to B is 1 right and 1 up.



Do you agree with Rosie? \_\_\_\_\_

Explain your answer.

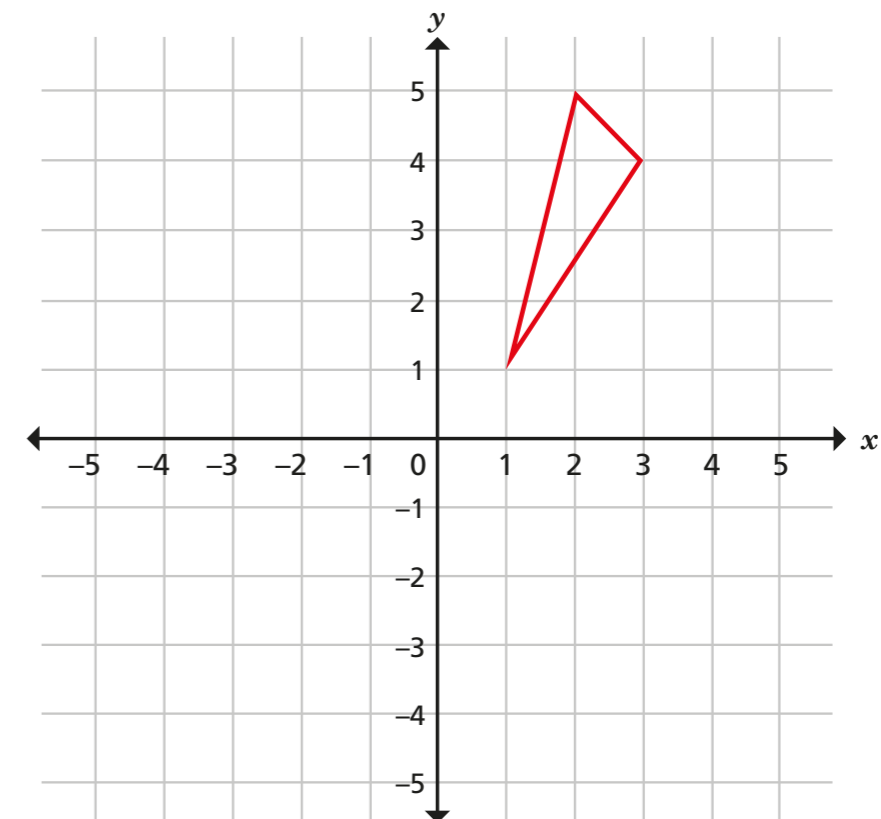
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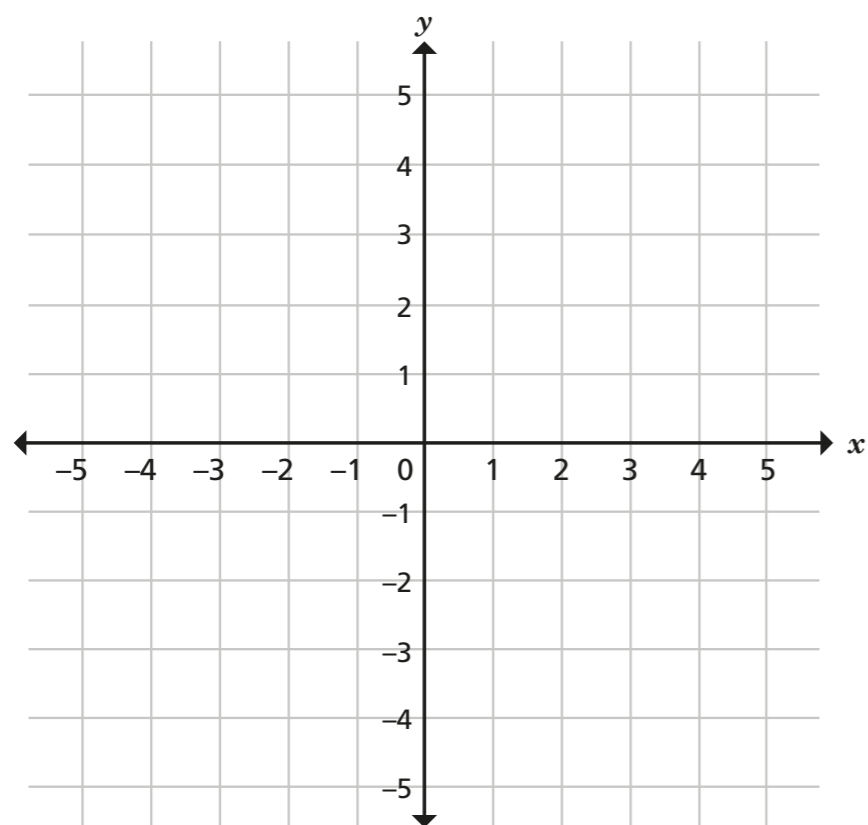
3

Translate the triangle 6 left.

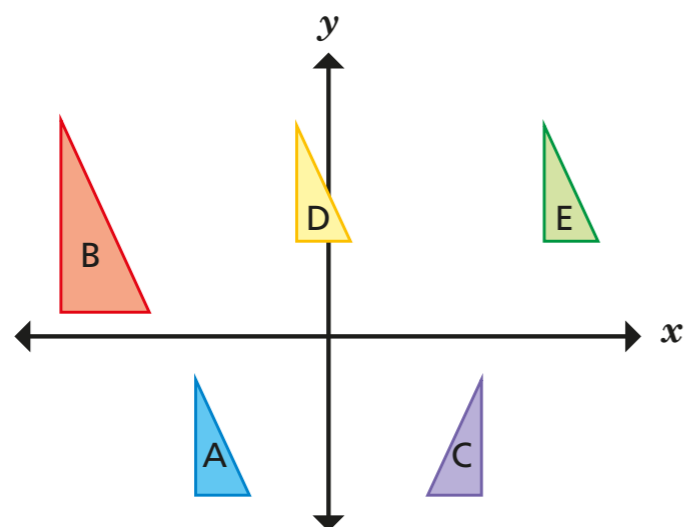


- 4 These coordinates form a quadrilateral:  $(-5, 5)$ ,  $(-5, 1)$ ,  $(-1, 4)$ ,  $(-1, 2)$   
It is translated 3 right and 4 down.

Draw the quadrilateral on the grid in its **new** position.



5

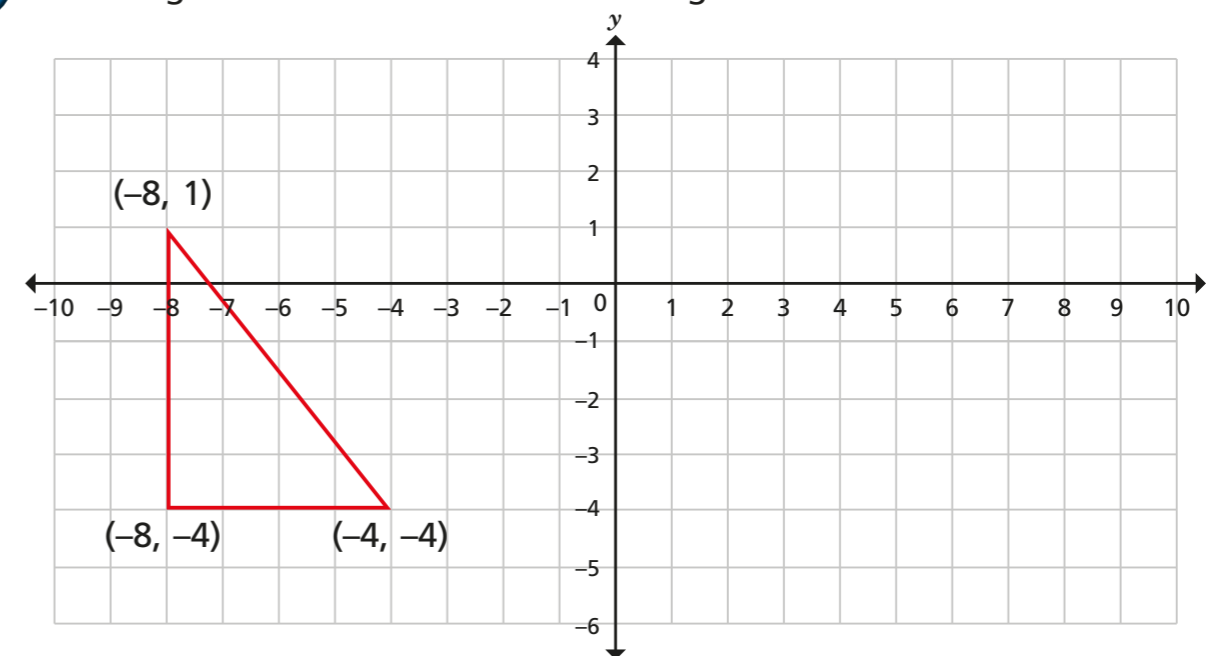


Which triangles are translations of each other?

Explain why the others are not translations.



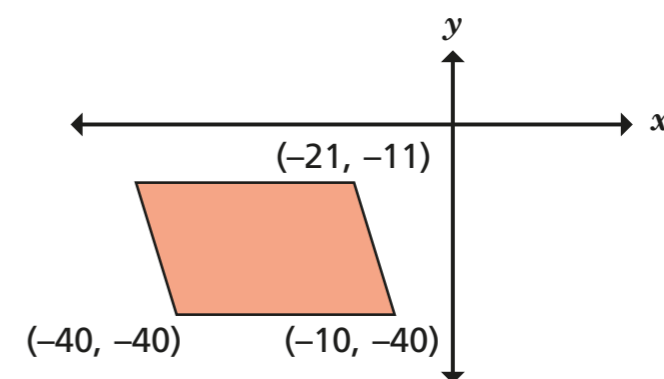
- 6 A triangle is drawn on the coordinate grid.



- 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 |
|------------|-------------------------|--------------------------|--------------------------------------|
| $(0, 0)$   |                         |                          |                                      |
| $(4, -5)$  |                         |                          |                                      |
| $(2, -1)$  |                         |                          |                                      |
| $(-6, -3)$ |                         |                          |                                      |
| $(3, -4)$  |                         |                          |                                      |

7



This parallelogram has been translated 50 left and 25 down.

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

