

Year 4: Translating shapes: worksheet

Year 4 - Coordinates and Translation - Lesson 10.5

Name: _____

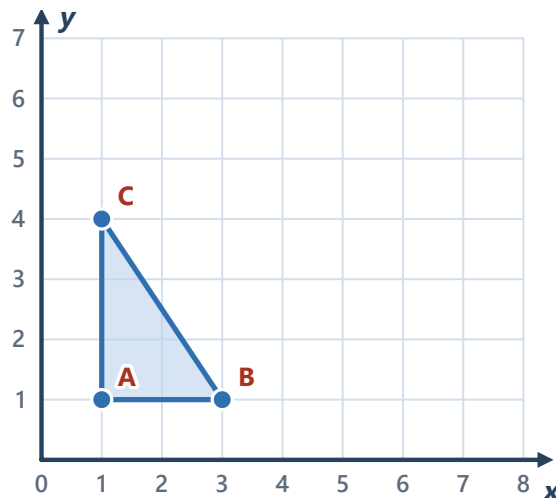
Date: _____

Score: _____

13 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/ks2-sats/maths/year-4/ch10-position-direction/translating-shapes/

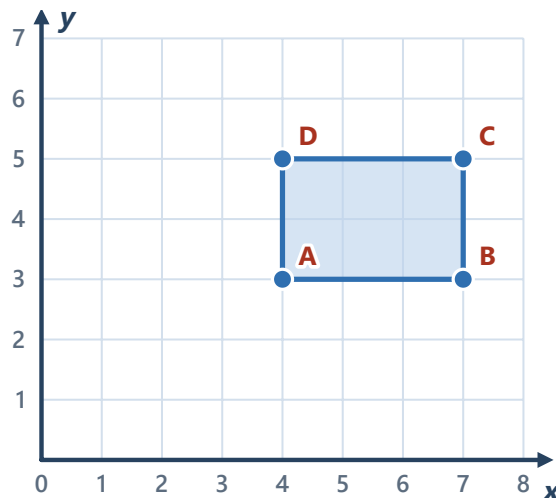
Exercise 10E Translating shapes Non-calculator

- 1 Triangle ABC has corners A (1, 1), B (3, 1) and C (1, 4). Translate it **4 right and 2 up**. Write the coordinates of the new corners.



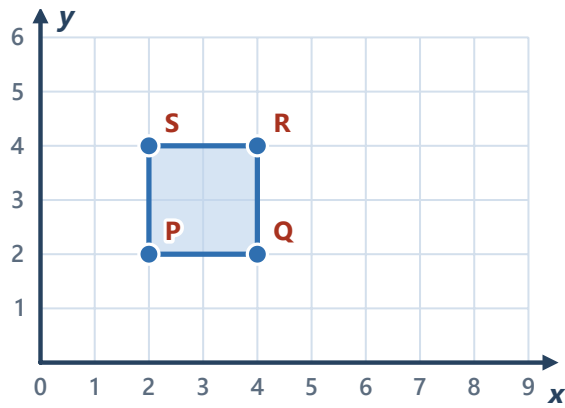
Answer: _____

- 2 Rectangle ABCD has corners A (4, 3), B (7, 3), C (7, 5) and D (4, 5). Translate it **3 left and 2 down**. Write the coordinates of the new corners.



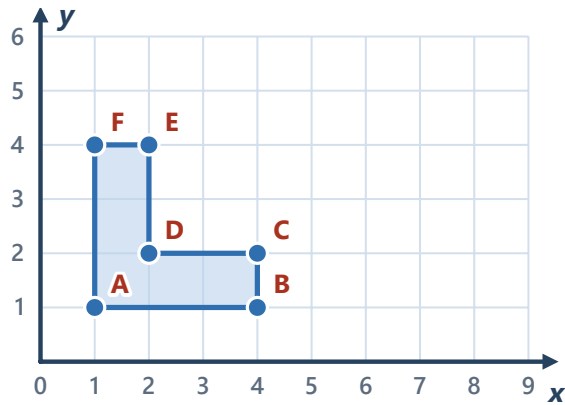
Answer: _____

- 3 Square PQRS has corners P (2, 2), Q (4, 2), R (4, 4) and S (2, 4). Translate it **5 right**. Write the coordinates of the new corners.



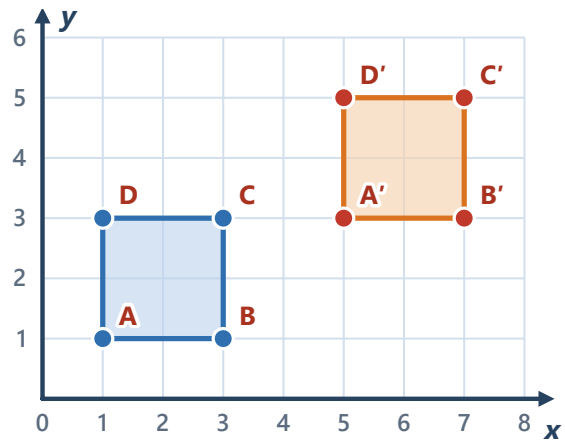
Answer:

- 4 The L-shape ABCDEF has corners A (1, 1), B (4, 1), C (4, 2), D (2, 2), E (2, 4) and F (1, 4). Translate it **3 right and 1 up**. Write the coordinates of the new corners.



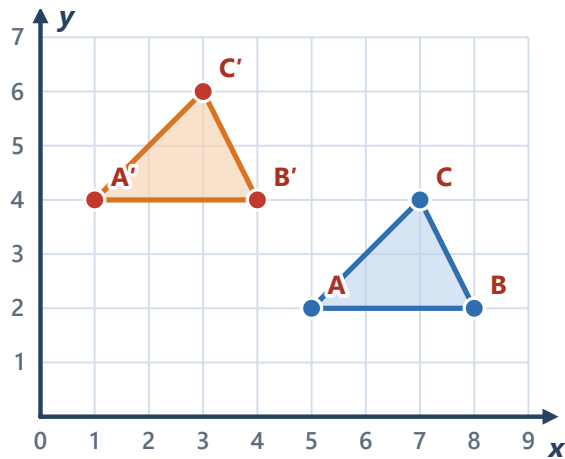
Answer:

- 5 Shape ABCD (blue) is translated to A'B'C'D' (orange). Describe the translation.



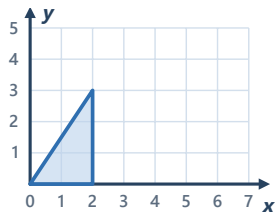
Answer:

- 6 Triangle ABC (blue) is translated to triangle A'B'C' (orange). Describe the translation.

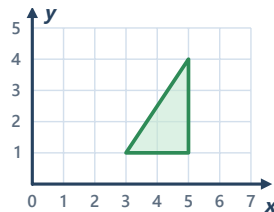


Answer:

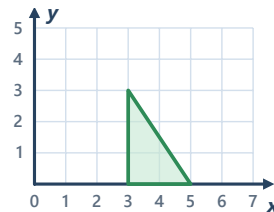
- 7 Which shape, B, C or D, is a translation of shape A? Write the letter.



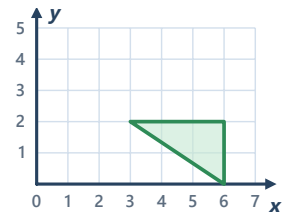
A



B



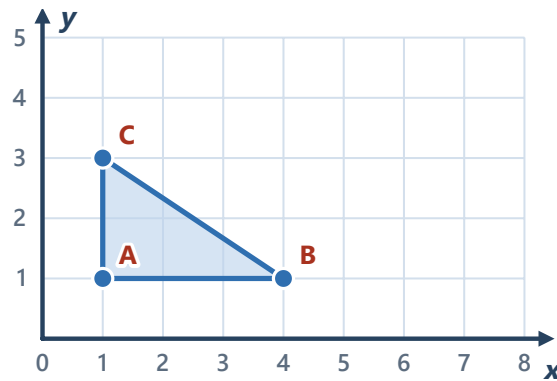
C



D

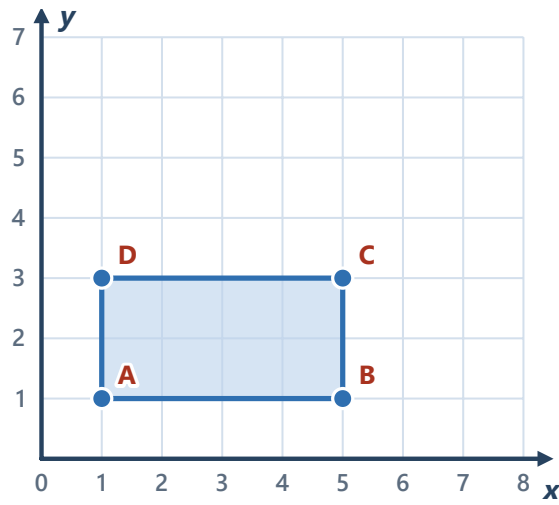
Answer:

- 8 Triangle ABC has corners A (1, 1), B (4, 1) and C (1, 3). Ravi translates it 3 right. He writes A' (4, 1), B' (7, 1) and C' (1, 3). What has he done wrong? What should C' be?



Answer:

- 9 Rectangle ABCD has corners A (1, 1), B (5, 1), C (5, 3) and D (1, 3). It is translated so that A moves to A' (3, 4).



(a) Where does C move to?

Answer:

(b) Where does D move to?

Answer:

10 Write **always**, **sometimes** or **never** for each sentence.

(a) A translated shape is bigger than the first shape.

Answer:

(b) A translated shape has the same side lengths as the first shape.

Answer:

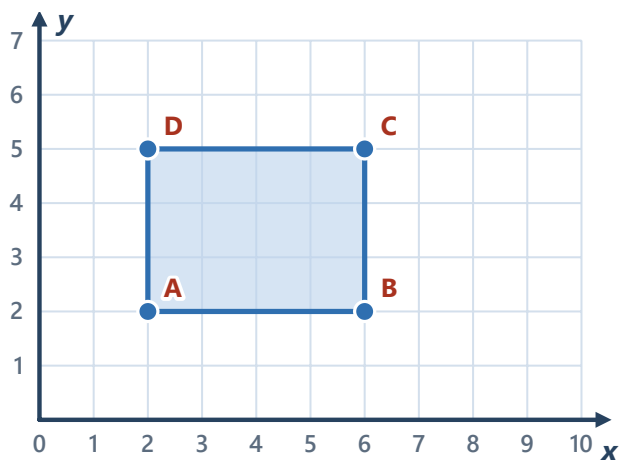
(c) A translation turns the shape round.

Answer:

(d) When a shape is translated, all its x-coordinates get bigger.

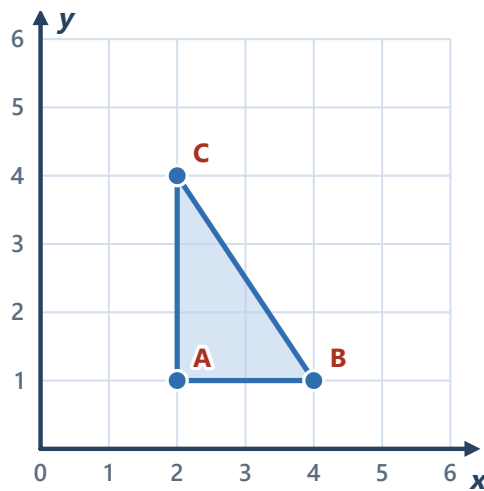
Answer:

11 Rectangle ABCD has corners A (2, 2), B (6, 2), C (6, 5) and D (2, 5). Each grid square is 1 cm by 1 cm. The rectangle is translated 3 right and 1 up. What are the perimeter and the area of the new rectangle?



Answer:

12 Triangle ABC has corners A (2, 1), B (4, 1) and C (2, 4). The grid starts at 0.



- (a) Translate it 3 left. Can it be done on this grid? If so, write the new coordinates.

Answer:

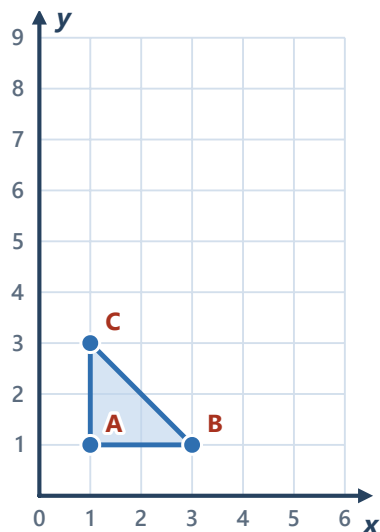
- (b) Translate it 2 left. Can it be done on this grid? If so, write the new coordinates.

Answer:

- (c) Translate it 2 down. Can it be done on this grid? If so, write the new coordinates.

Answer:

- 13** Triangle ABC has corners A (1, 1), B (3, 1) and C (1, 3). It is translated 3 right and 1 up. Then the new triangle is translated 2 left and 4 up. Write the final coordinates of the three corners. What **one** translation would take ABC to the same place?



Answer: