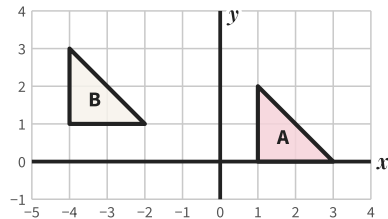


Interleaved: describing transformations

ANSWERS

1

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☒ Reflection ☐ Rotation

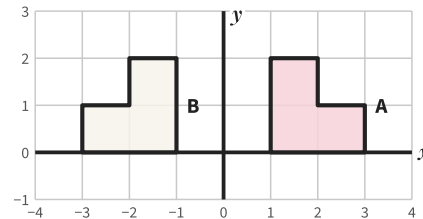
☒ Translation ☐ Enlargement

every corner moves 5 left and 1 up

Answer Translation by $\begin{pmatrix} -5 \\ 1 \end{pmatrix}$

2

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☒ Reflection ☐ Rotation

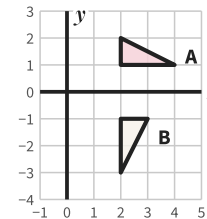
☐ Translation ☐ Enlargement

the same distance either side of the y axis

Answer Reflection in the y axis

3

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☐ Reflection ☒ Rotation

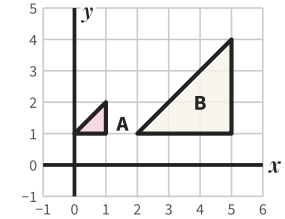
☐ Translation ☐ Enlargement

a quarter turn clockwise about (1, 0)

Answer Rotation 90° clockwise about (1, 0)

4

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☐ Reflection ☐ Rotation

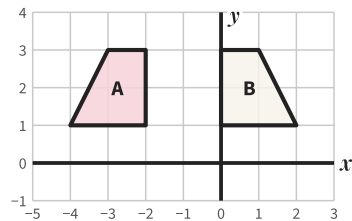
☐ Translation ☒ Enlargement

sides 3 times as long, centre (-1, 1)

Answer Enlargement, scale factor 3, centre (-1, 1)

5

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☒ Reflection ☐ Rotation

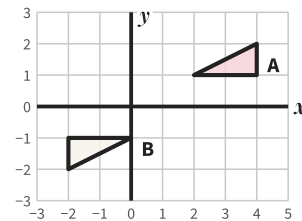
☐ Translation ☐ Enlargement

the mirror line is halfway between, $x = -1$

Answer Reflection in the line $x = -1$

6

Describe fully the single transformation that maps triangle A onto triangle B.



Which method? ☐ Reflection ☒ Rotation

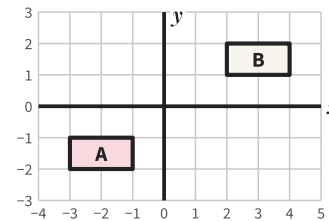
☐ Translation ☐ Enlargement

half a turn about (1, 0)

Answer Rotation 180° about (1, 0)

7

Describe fully the single transformation that maps shape A onto shape B.



Which method? ☐ Reflection ☐ Rotation

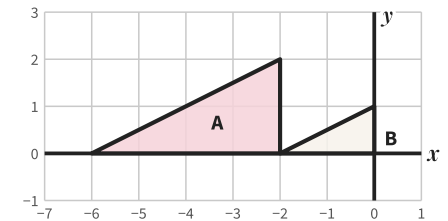
☒ Translation ☐ Enlargement

5 right and 3 up

Answer Translation by $\begin{pmatrix} 5 \\ 3 \end{pmatrix}$

8

Shape B is smaller than shape A. Describe fully the single transformation that maps A onto B.



Which method? ☐ Reflection ☐ Rotation

☐ Translation ☒ Enlargement

sides half as long; join matching corners

Answer Enlargement, scale factor $\frac{1}{2}$, centre (2, 0)

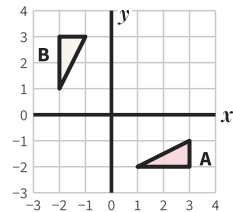
Interleaved: describing transformations *further practice*

ANSWERS

9



Describe fully the single transformation that maps shape A onto shape B.



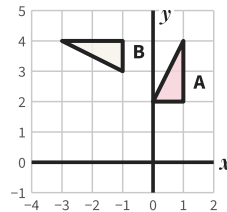
swap each x and y coordinate

Answer *Reflection in the line $y = x$*

10



Describe fully the single transformation that maps shape A onto shape B.



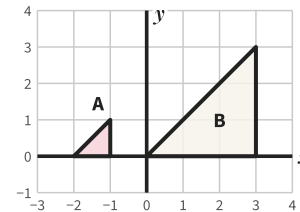
a quarter turn anticlockwise about $(-1, 2)$

Answer *Rotation 90° anticlockwise about $(-1, 2)$*

11



Describe fully the single transformation that maps shape A onto shape B.



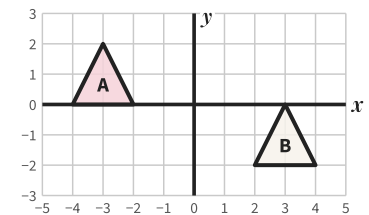
sides 3 times as long, centre $(-3, 0)$

Answer *Enlargement, scale factor 3, centre $(-3, 0)$*

12



Describe fully the single transformation that maps shape B onto shape A.



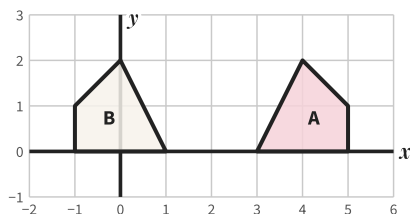
B to A goes 6 left and 2 up

Answer *Translation by $\begin{pmatrix} -6 \\ 2 \end{pmatrix}$*

13



Describe fully the single transformation that maps shape A onto shape B.



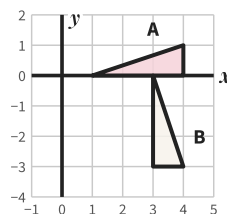
the mirror line is $x = 2$

Answer *Reflection in the line $x = 2$*

14



Describe fully the single transformation that maps shape A onto shape B.



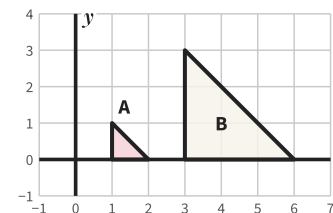
a quarter turn clockwise about $(2, -1)$

Answer *Rotation 90° clockwise about $(2, -1)$*

15



Describe fully the single transformation that maps shape B onto shape A.



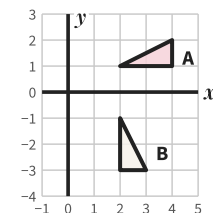
B to A makes it smaller: scale factor one third

Answer *Enlargement, scale factor $\frac{1}{3}$, centre $(0, 0)$*

16



Jo says shape A is mapped onto shape B by a rotation of 90° . Explain what is missing from her answer, and describe the rotation fully.



a rotation needs an angle, a direction and a centre

Answer *direction and centre: Rotation 90° clockwise about $(1, 0)$*