

Transformations

- 1 Rotate point (1,4) by 180° clockwise about the origin

(1,4)

A

(-1,-4)

B

(-1,4)

- 2 Reflect point (1,-4) across the Y axis

(1,-4)

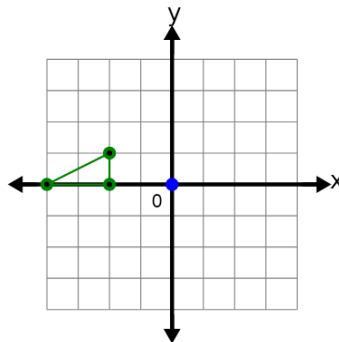
A

(-1,-4)

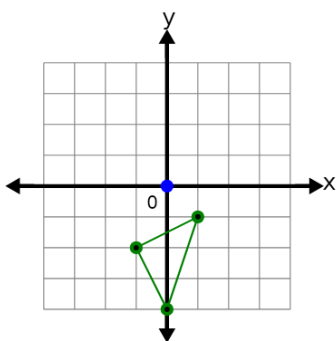
B

(1,-4)

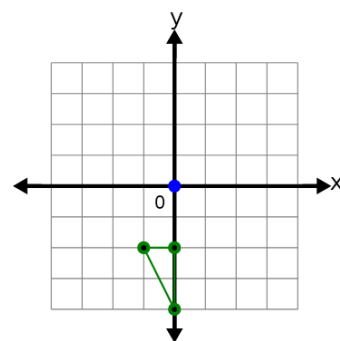
- 3 Rotate this shape by 90° counter-clockwise about the origin



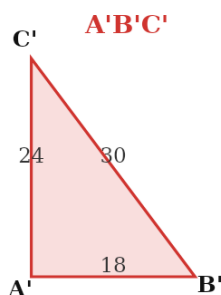
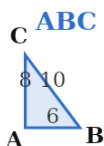
A



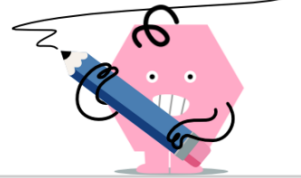
B



- 4 What is the scale factor of the dilation from triangle ABC to triangle A'B'C'?

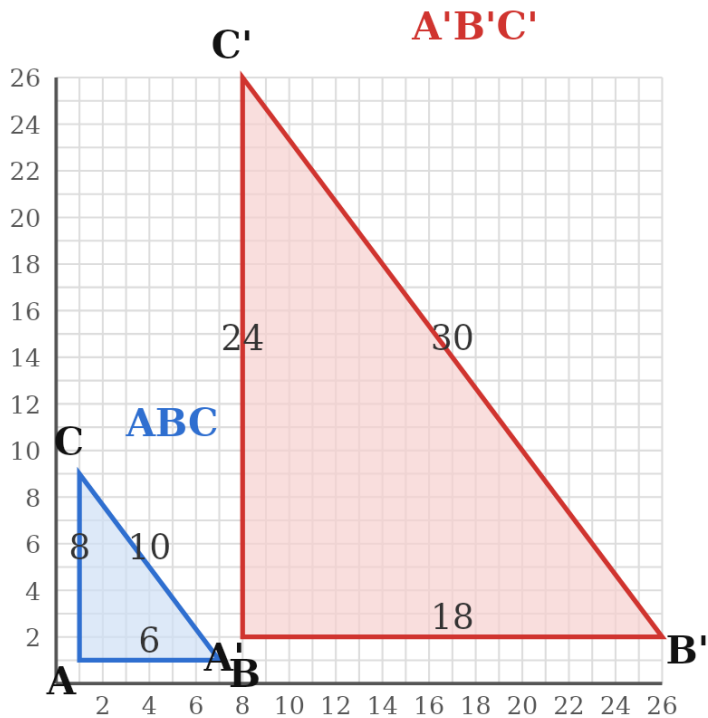


A	3
B	$\frac{1}{3}$
C	$\frac{1}{2}$
D	2



Transformations

5 What is the scale factor of the dilation from triangle ABC to triangle A'B'C'?



A

2

B

3

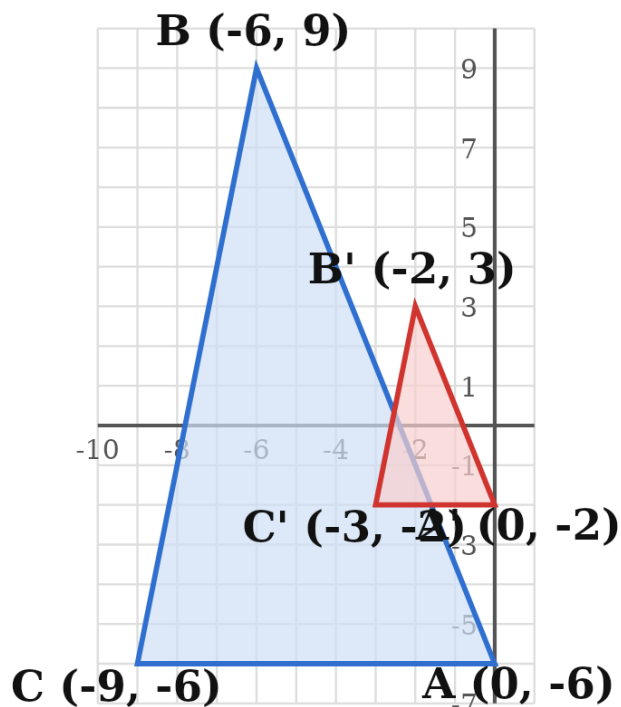
C

$1/2$

D

$1/3$

6 What is the scale factor of the dilation from triangle ABC to triangle A'B'C'?



A

3

B

$1/3$

C

$1/2$

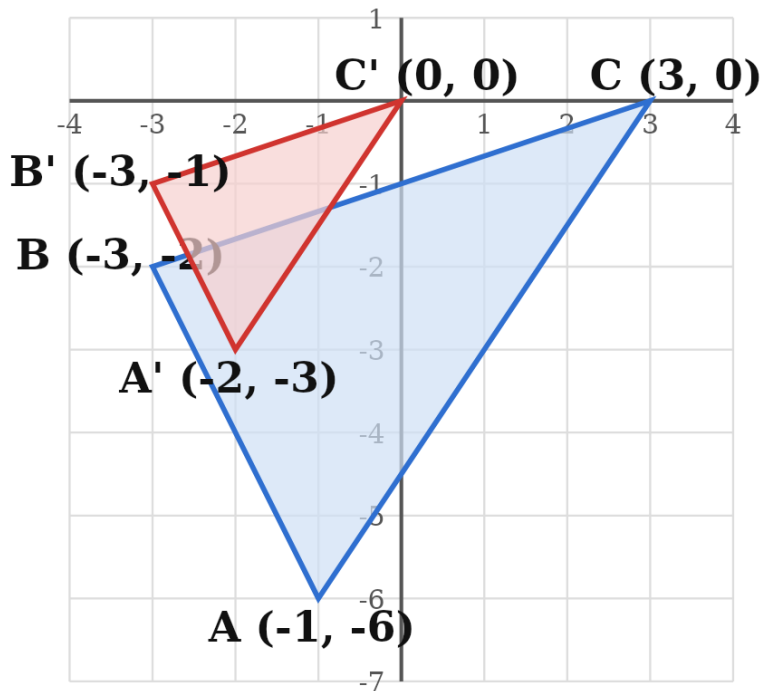
D

2



Transformations

- 7 What is the scale factor of the dilation from triangle ABC to triangle A'B'C'?



A

3

B

 $1/3$

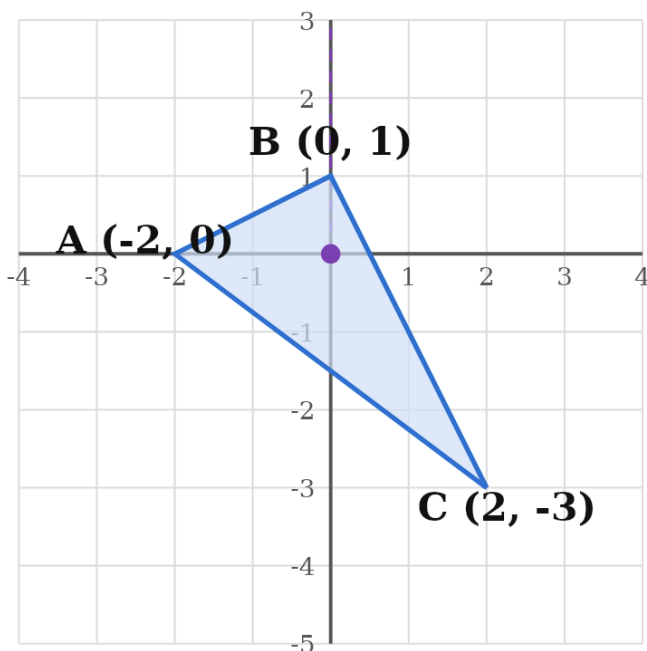
C

 $1/2$

D

2

- 8 Triangle ABC is dilated about the center $(0, 0)$ with a scale factor of 2. What are the coordinates of B', the image of B?



A

 $(-1, 2)$

B

 $(2, -1)$

C

 $(0, 2)$

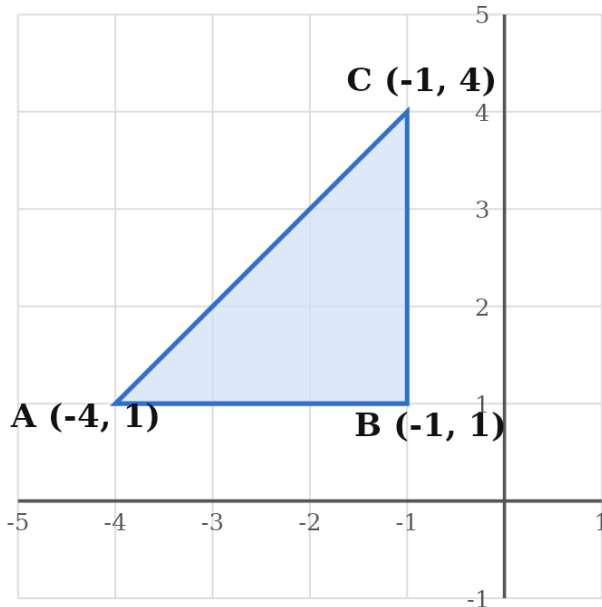
D

 $(-2, 5)$



Transformations

- 9 The triangle ABC is transformed by two transformations in sequence: (1) translate 1 unit right and 4 units down; then (2) dilate by a scale factor of 1 about the origin. Is the final image congruent or similar to triangle ABC?



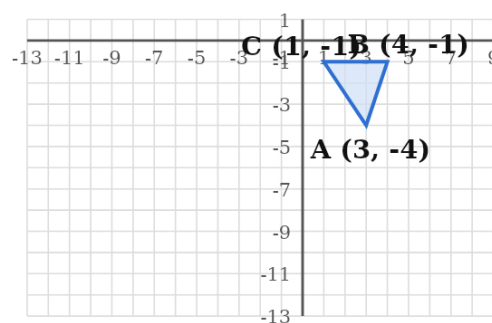
A

Similar

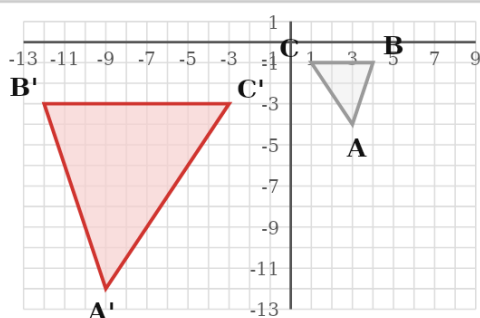
B

Congruent

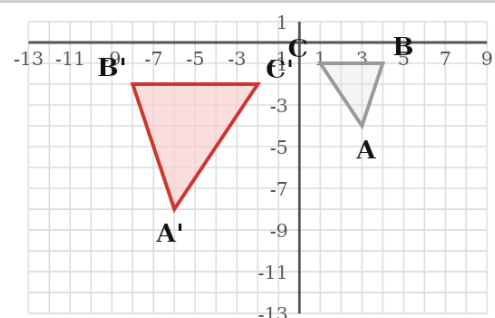
- 10 The triangle ABC is transformed by two transformations in sequence: (1) reflect across the y-axis; then (2) dilate by a scale factor of 2 about the origin. Which grid shows the final image?

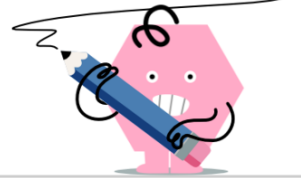


A



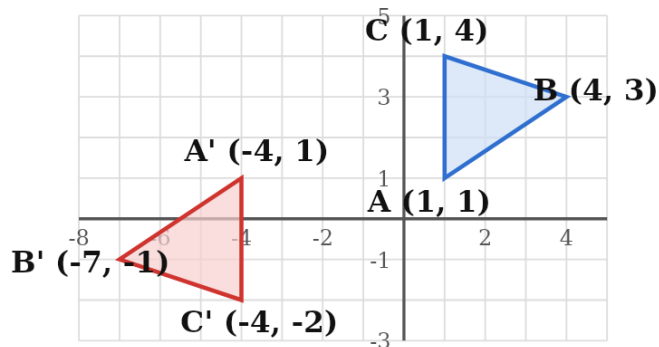
B





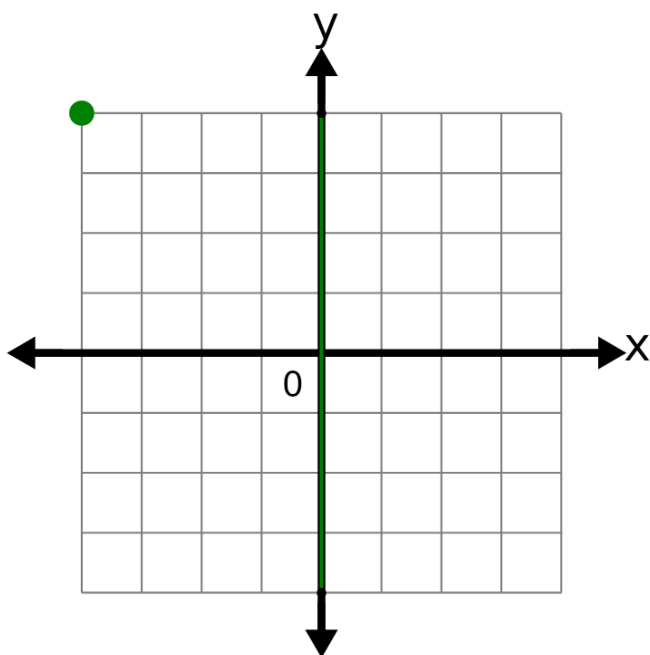
Transformations

- 11** The triangle ABC (blue) is transformed onto triangle A'B'C' (red) by two transformations applied in sequence. Which pair of transformations was used?

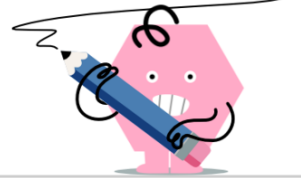


- A Rotate 180° about the origin, then translate 3 units right and 2 units down.
- B Translate 3 units right and 2 units down, then rotate 180° about the origin.
- C Translate 3 units left and 2 units up, then rotate 180° about the origin.
- D Rotate 270° counter-clockwise about the origin, then dilate by a scale factor of 2 about the origin.

- 12** Reflect this point across the Y axis

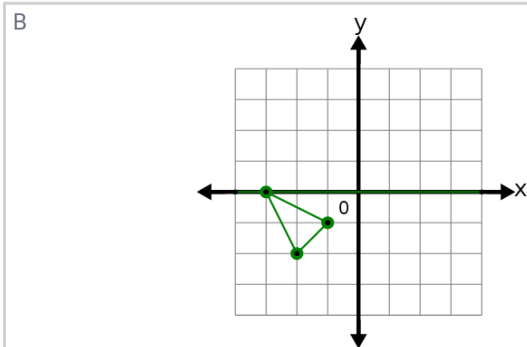
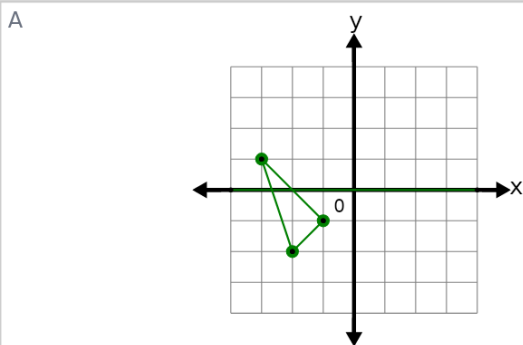
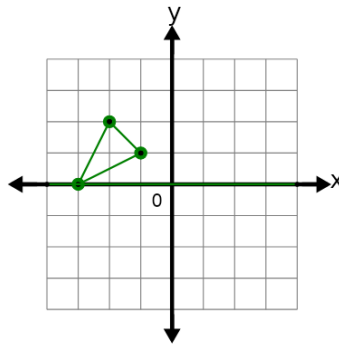


- A
- (4,4)
- B
- (4,-4)

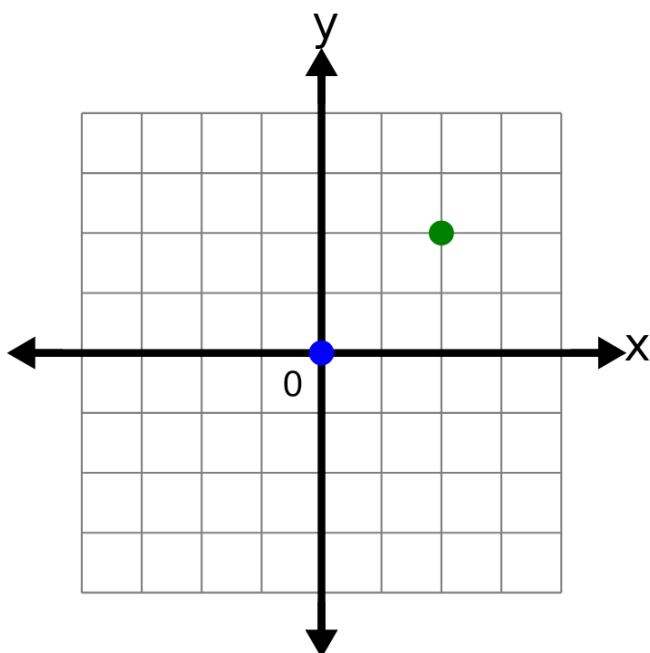


Transformations

13 Reflect this shape across the X axis



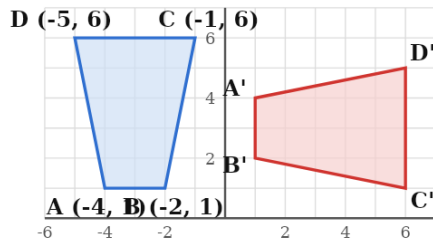
14 Rotate this point by 90° clockwise about the origin





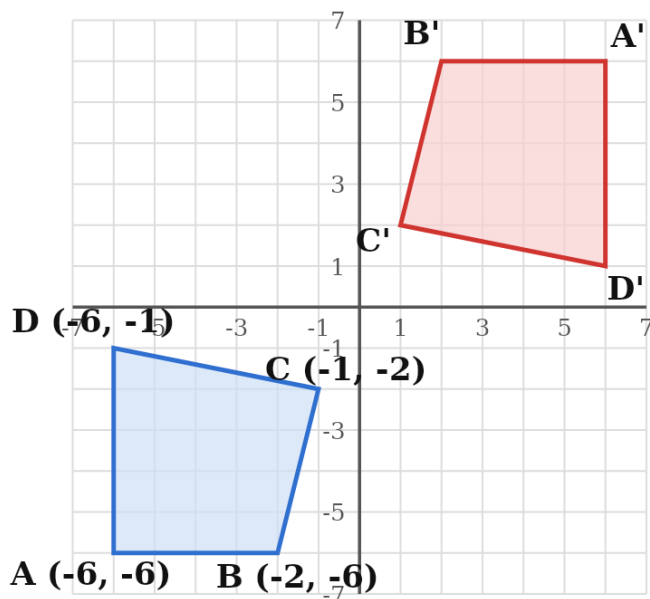
Transformations

- 15** The quadrilateral ABCD is rotated 90° clockwise about the origin to give quadrilateral A'B'C'D'. What are the coordinates of C'?



A	(6, -1)
B	(-6, 1)
C	(-6, -1)
D	(6, 1)

- 16** The quadrilateral ABCD is rotated 180° about the origin using the rule $(x, y) \rightarrow (-x, -y)$ to give quadrilateral A'B'C'D'. What are the coordinates of A'?



A	(-6, -6)
B	(-6, 6)
C	(6, -6)
D	(6, 6)