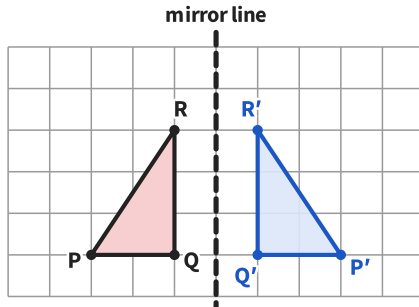


Mixed Transformations: Perform

ANSWERS

1

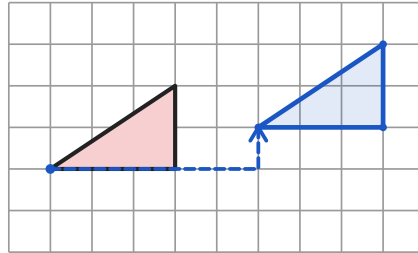
Reflect the shape in the mirror line.



	P	Q	R
squares to the line	3	1	1

2

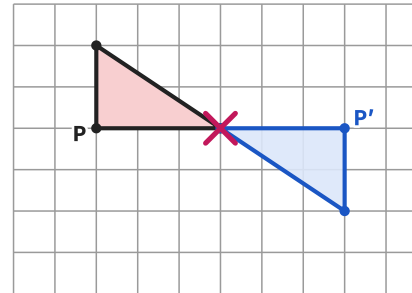
Translate the shape by $\begin{pmatrix} 5 \\ 1 \end{pmatrix}$.



5	(right) / left
1	(up) / down

3

Rotate the shape 180° about the cross.

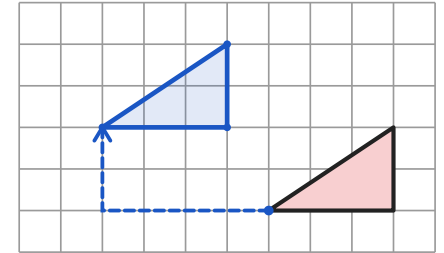


squares from the cross

P	3	up / down / (left) / right
P'	3	up / down / left / (right)

4

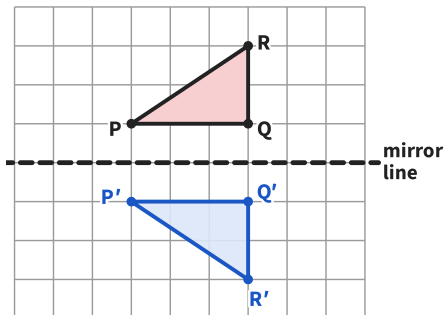
Translate the shape by $\begin{pmatrix} -4 \\ 2 \end{pmatrix}$.



4	right / (left)
2	(up) / down

5

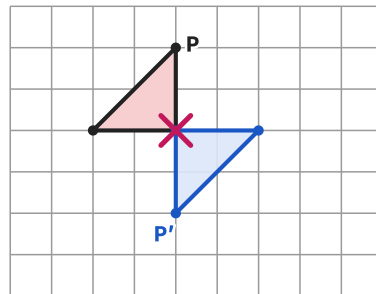
Reflect the shape in the mirror line.



	P	Q	R
squares to the line	1	1	3

6

Rotate the shape 180° about the cross.

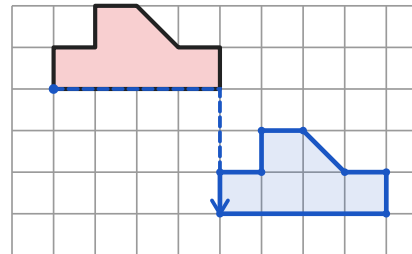


squares from the cross

P	2	(up) / down / left / right
P'	2	up / (down) / left / right

7

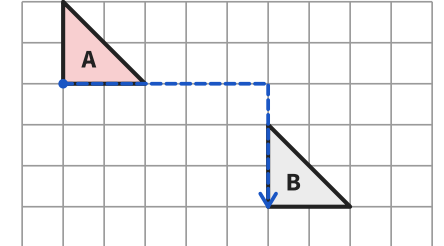
A toy car is pushed across a mat by $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$. Draw the car in its new place.



4	(right) / left
3	up / (down)

8

Shape A moves to shape B. Circle the move. Fill in the boxes.

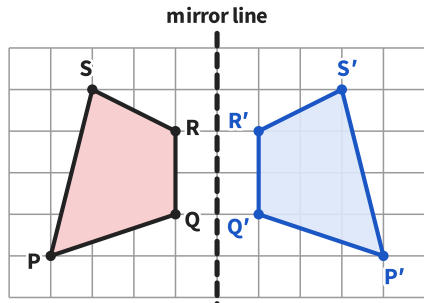


reflected / rotated / (translated)

5	(right) / left
3	up / (down)

9

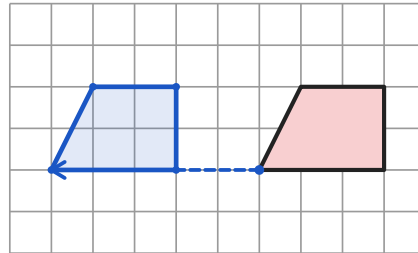
Reflect the shape in the mirror line.



	P	Q	R	S
squares to the line	4	1	1	3

10

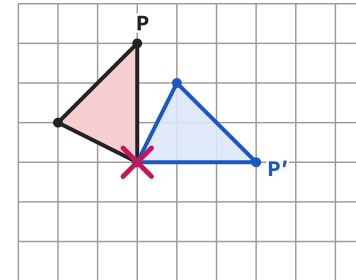
Translate the shape by $\begin{pmatrix} -5 \\ 0 \end{pmatrix}$.



5	right / left
0	up / down

11

Rotate the shape 90° clockwise about the cross.

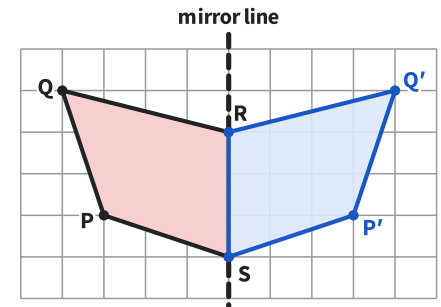


squares from the cross

P	3	up	down	left	right
P'	3	up	down	left	right

12

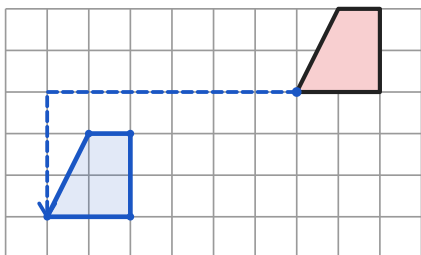
A butterfly has two wings. Reflect this wing in the mirror line.



	P	Q	R	S
squares to the line	3	4	0	0

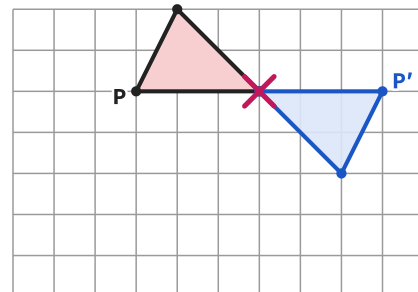
13

Translate the shape by $\begin{pmatrix} -6 \\ -3 \end{pmatrix}$.



14

Rotate the shape 180° about the cross.

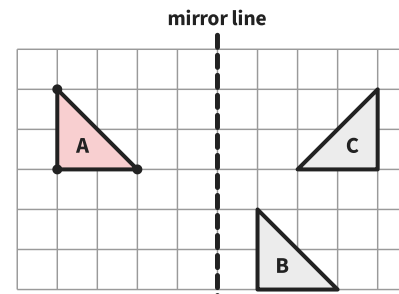


squares from the cross

P	3	left
P'	3	right

15

Which shape is a reflection of A in the mirror line? Which shape is a translation of A?

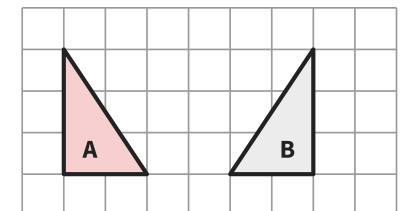


Reflection: shape C

Translation: shape B

16

Ravi was asked to translate shape A by $\begin{pmatrix} 4 \\ 0 \end{pmatrix}$. He drew B. What has he done wrong?



Ravi has flipped the shape.

He should slide it 4 squares right.