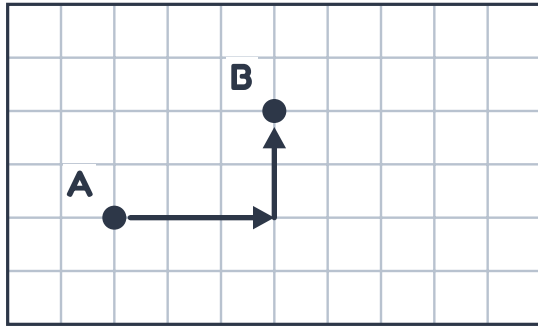


Translate and Reflect

Describe each move from A to B: left or right, then up or down.

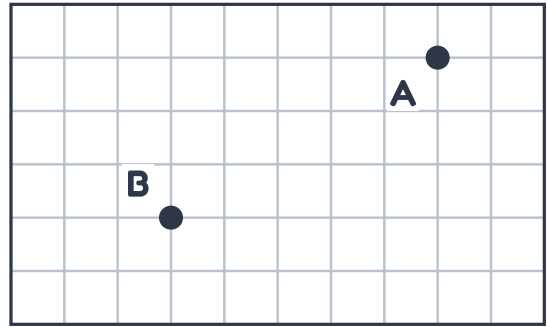
1.

Example



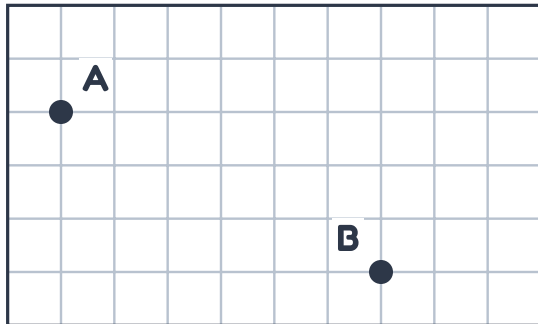
3 right , 2 up

2.



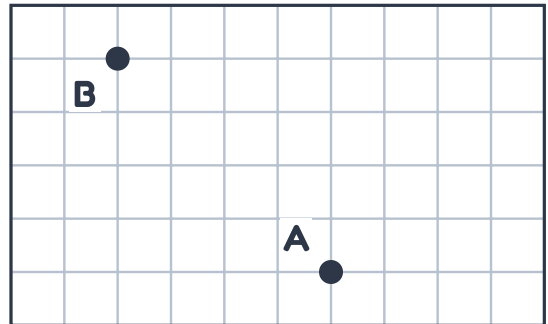
_____ , _____

3.



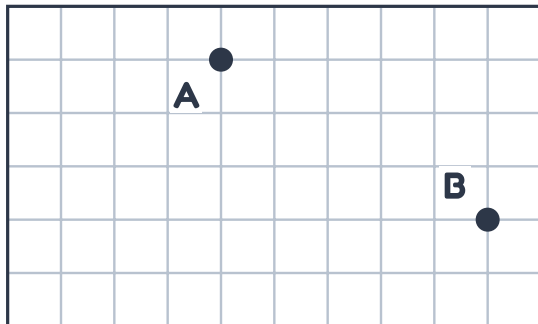
_____ , _____

4.



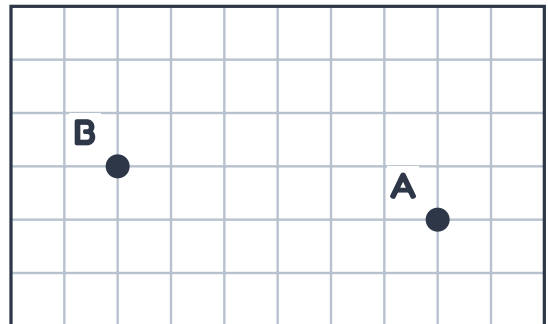
_____ , _____

5.



_____ , _____

6.

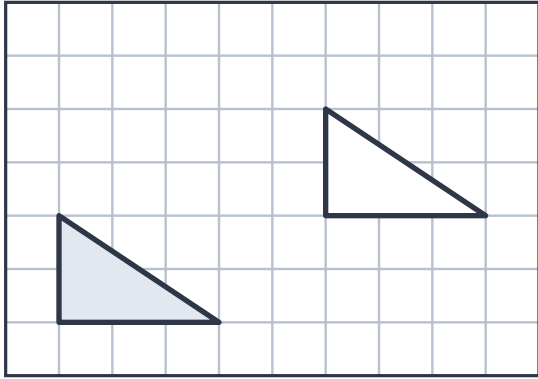


_____ , _____

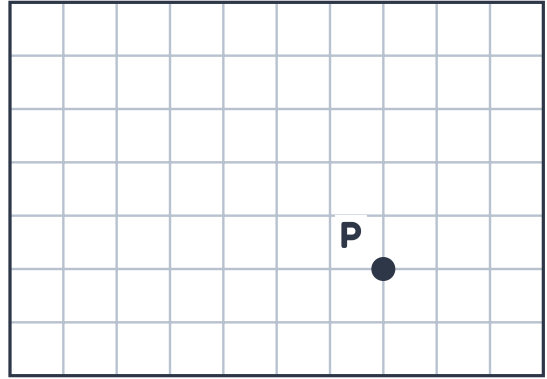
Translate and Reflect

Translate each shape or point by the move given. Draw where it ends up.

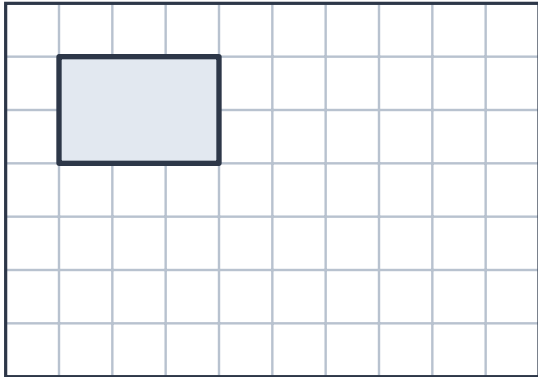
1. Translate 5 right, 2 up Example



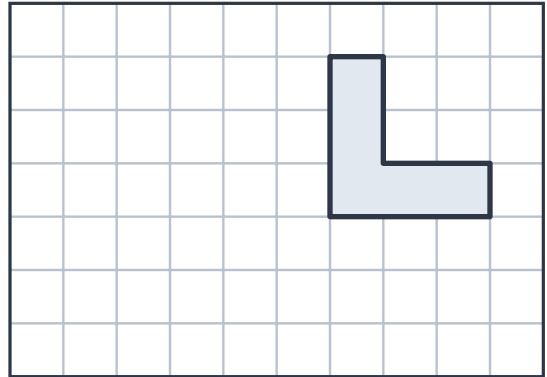
2. Move P 4 left, 3 up



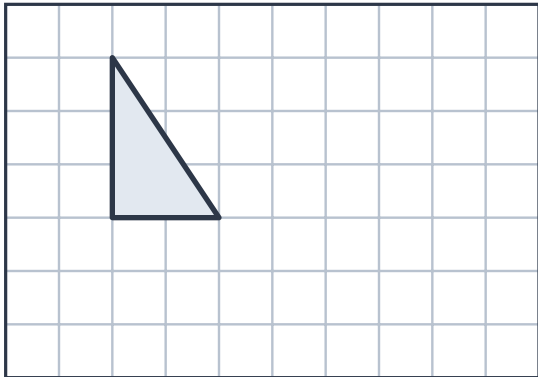
3. Translate 4 right, 3 down



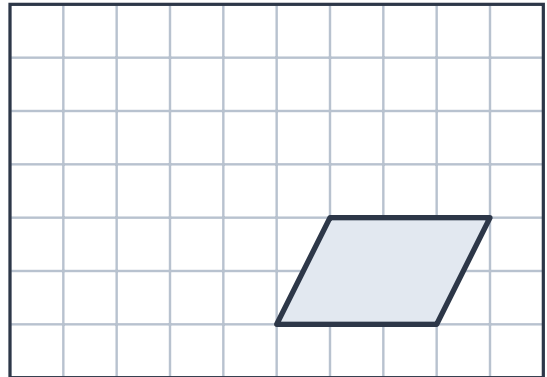
4. Translate 5 left, 2 down



5. Translate 5 right



6. Translate 3 left, 3 up

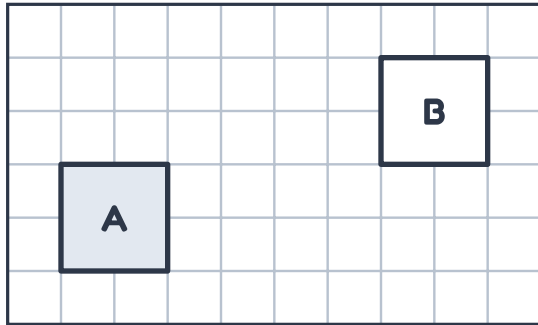


Translate and Reflect

Shape A was translated to B. Describe the move.

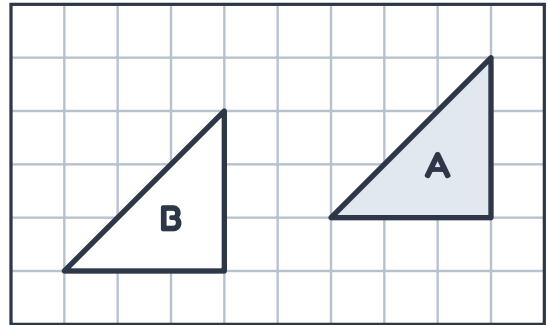
1.

Example



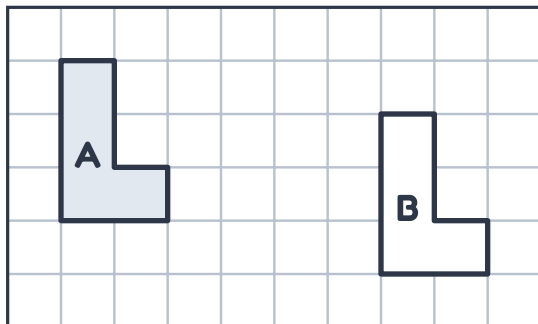
6 right , 2 up

2.



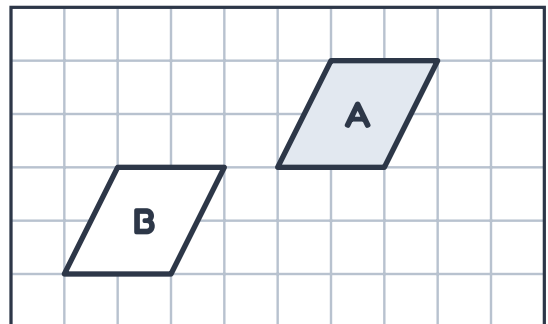
_____ , _____

3.



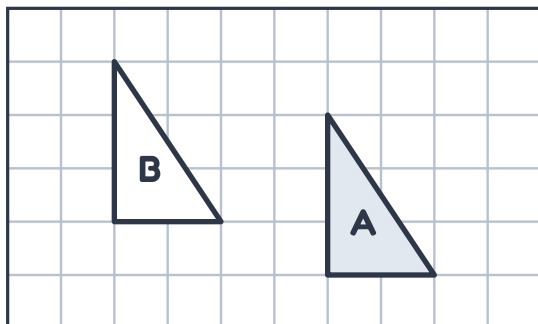
_____ , _____

4.



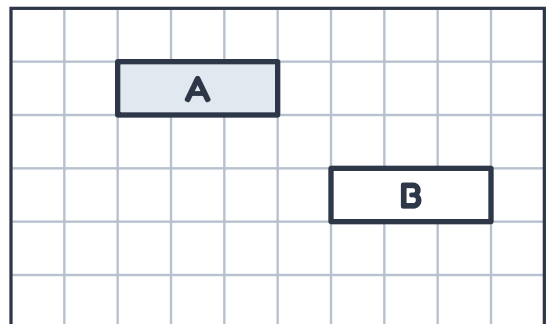
_____ , _____

5.



_____ , _____

6.



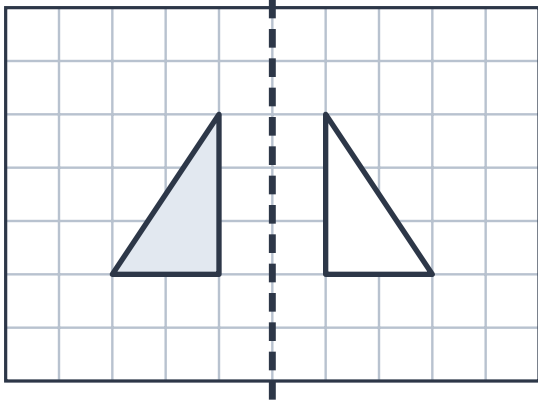
_____ , _____

Translate and Reflect

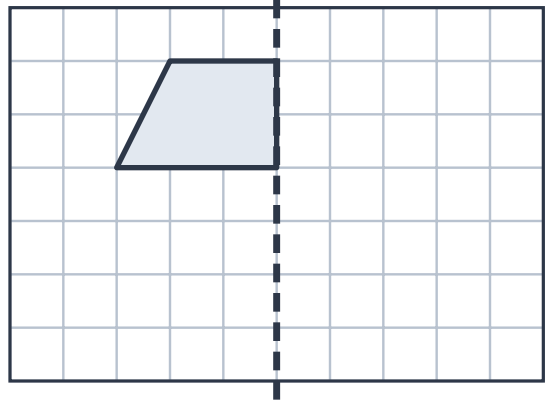
Reflect each shape in the mirror line. Draw its reflection.

1.

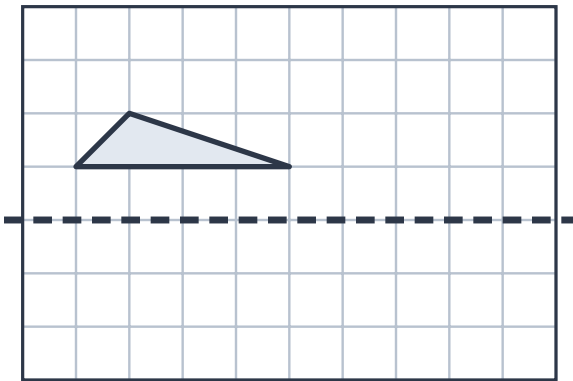
Example



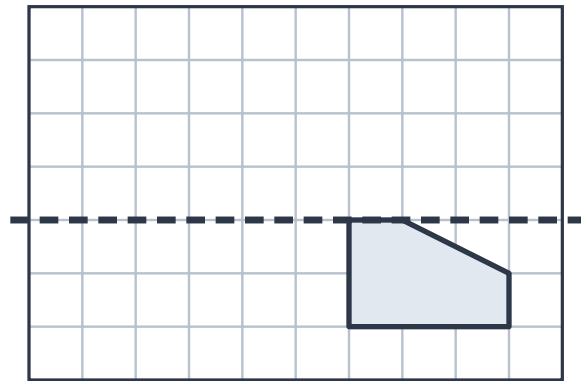
2.



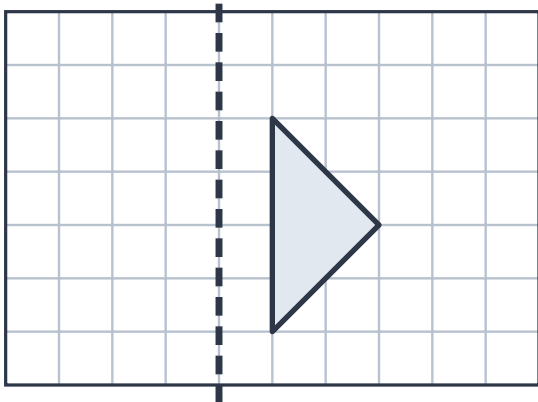
3.



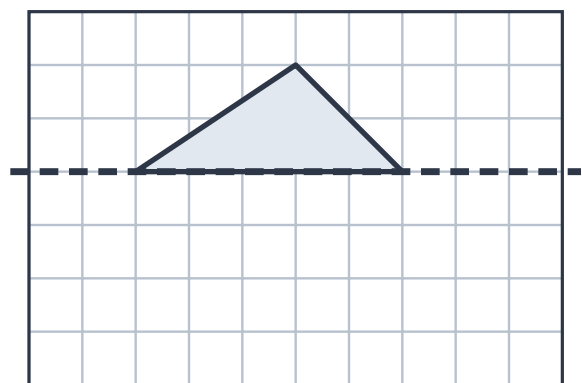
4.



5.



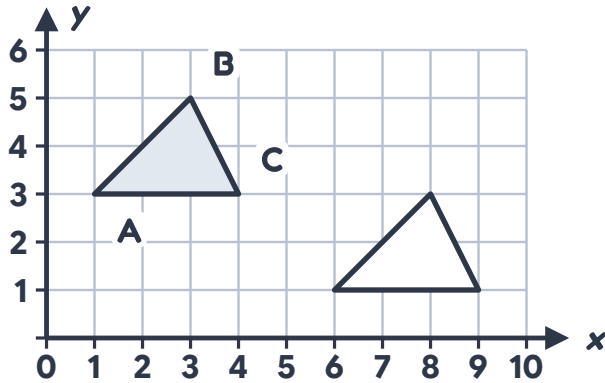
6.



Translate and Reflect

Draw the new shape. Write where each vertex ends up.

1. Translate 5 right, 2 down Example

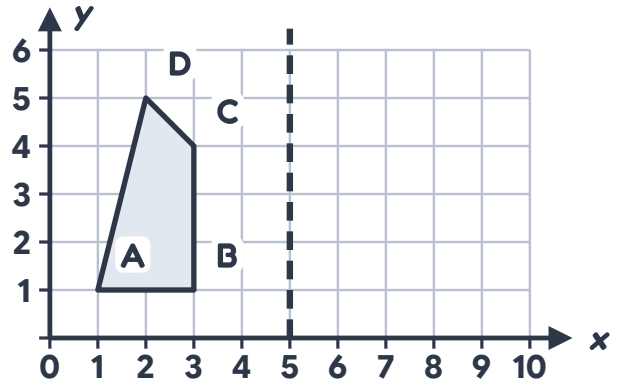


$$A (1, 3) \longrightarrow (\underline{6} , \underline{1})$$

$$B (3, 5) \longrightarrow (\underline{8} , \underline{3})$$

$$C (4, 3) \longrightarrow (\underline{9} , \underline{1})$$

2. Reflect in the mirror line



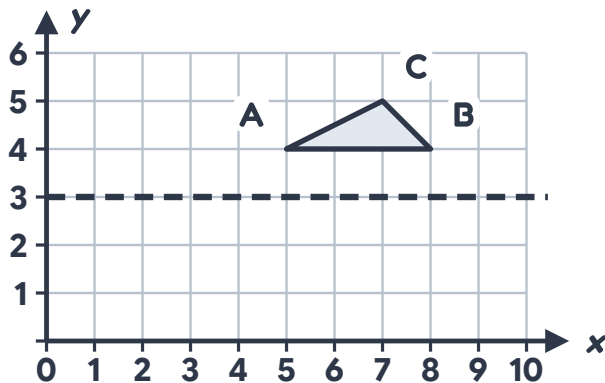
$$A (1, 1) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$B (3, 1) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$C (3, 4) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$D (2, 5) \longrightarrow (\underline{\quad} , \underline{\quad})$$

3. Reflect in the mirror line

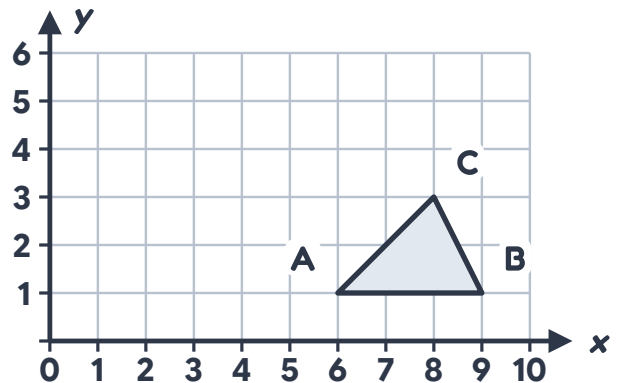


$$A (5, 4) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$B (8, 4) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$C (7, 5) \longrightarrow (\underline{\quad} , \underline{\quad})$$

4. Translate 5 left, 2 up



$$A (6, 1) \longrightarrow (\underline{\quad} , \underline{\quad})$$

$$B (9, 1) \longrightarrow (\underline{\quad} , \underline{\quad})$$

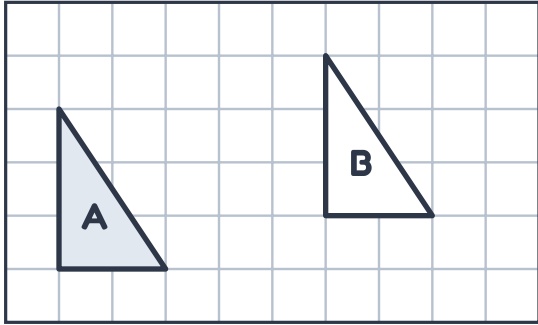
$$C (8, 3) \longrightarrow (\underline{\quad} , \underline{\quad})$$

Translate and Reflect

Is shape B a translation of A, a reflection, or neither? Circle.

1.

Example

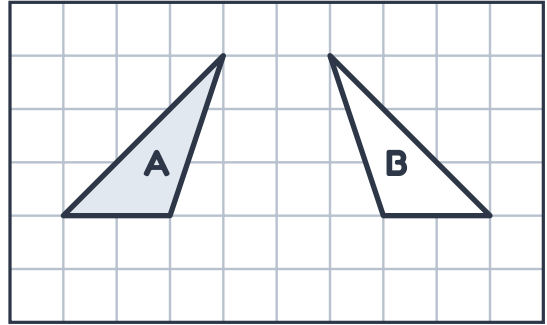


translation

reflection

neither

2.

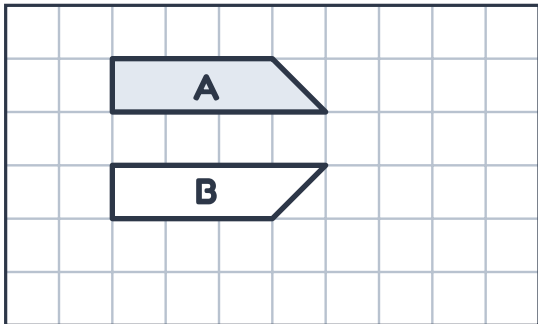


translation

reflection

neither

3.

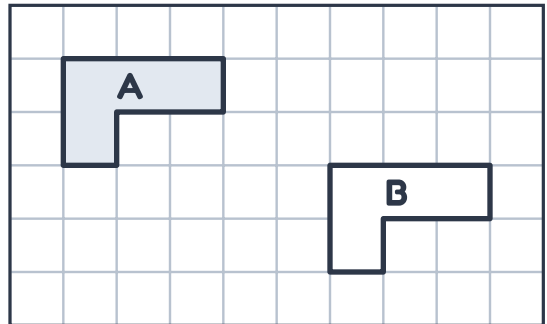


translation

reflection

neither

4.

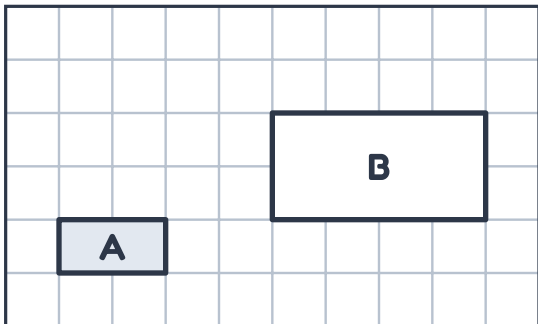


translation

reflection

neither

5.

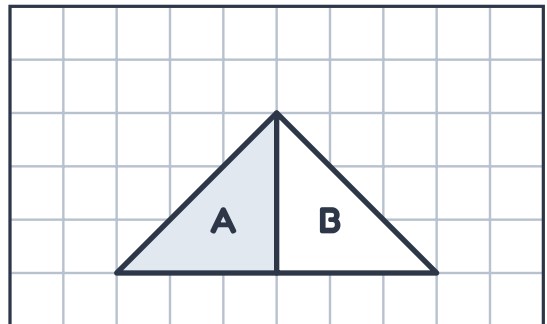


translation

reflection

neither

6.



translation

reflection

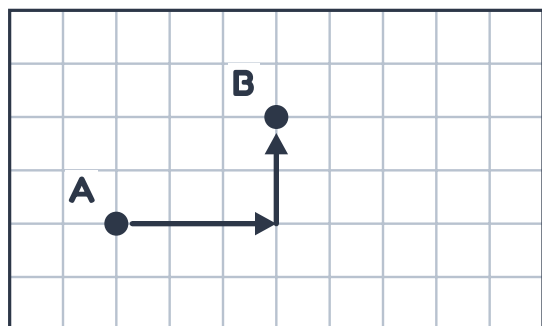
neither

Translate and Reflect

Describe each move from A to B: left or right, then up or down.

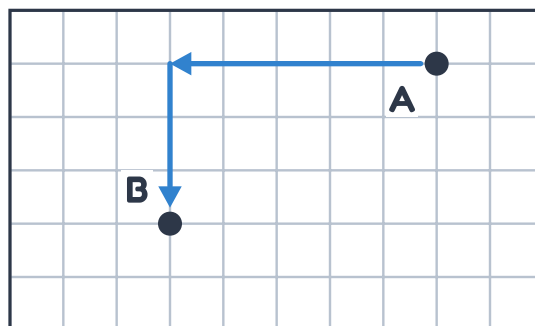
1.

Example



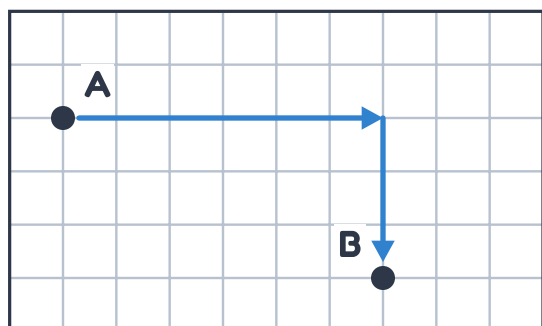
2 right , 2 up

2.



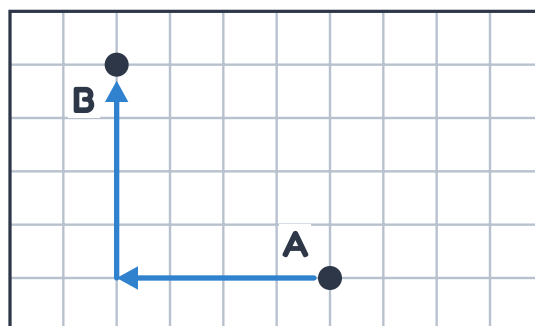
5 left , 3 down

3.



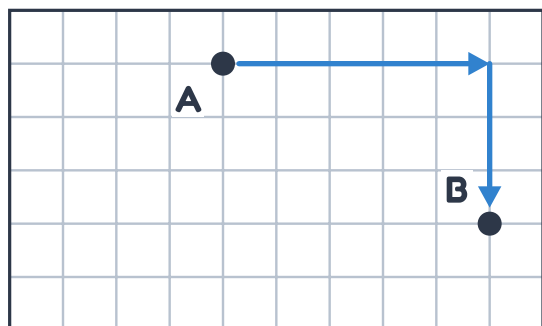
6 right , 3 down

4.



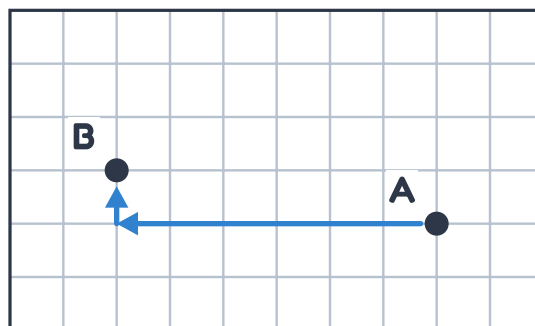
4 left , 4 up

5.



5 right , 3 down

6.

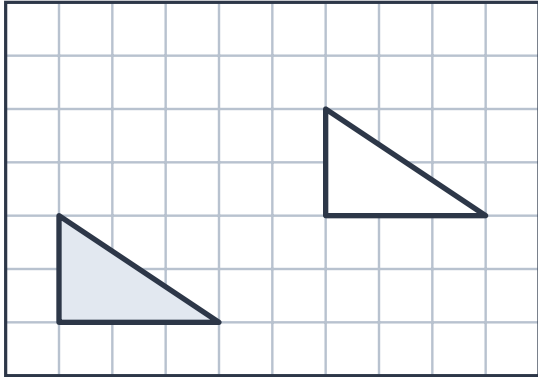


6 left , 1 up

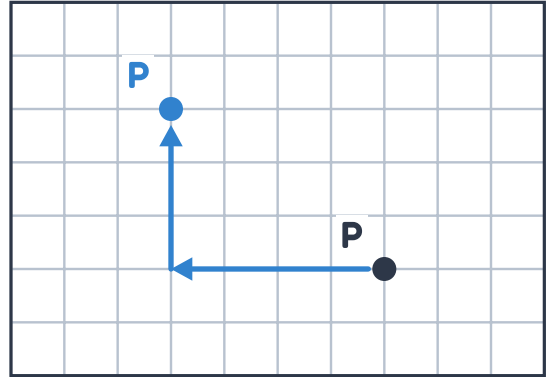
Translate and Reflect

Translate each shape or point by the move given. Draw where it ends up.

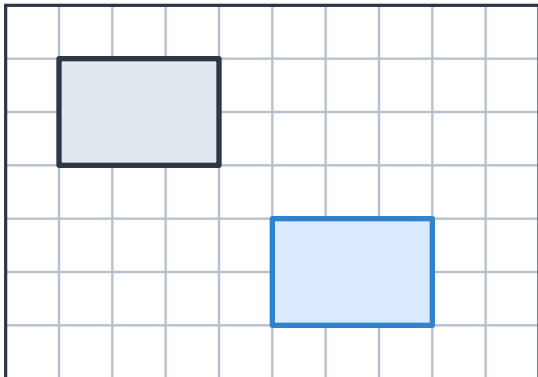
1. Translate 5 right, 2 up Example



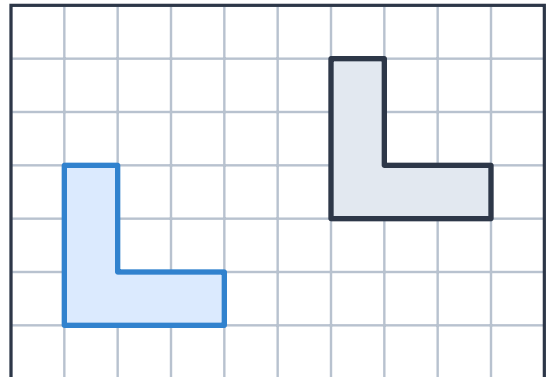
2. Move P 4 left, 3 up



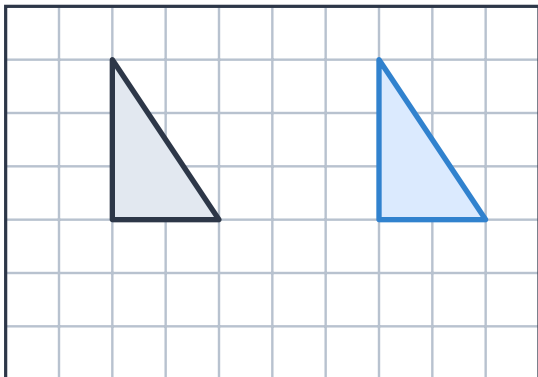
3. Translate 4 right, 3 down



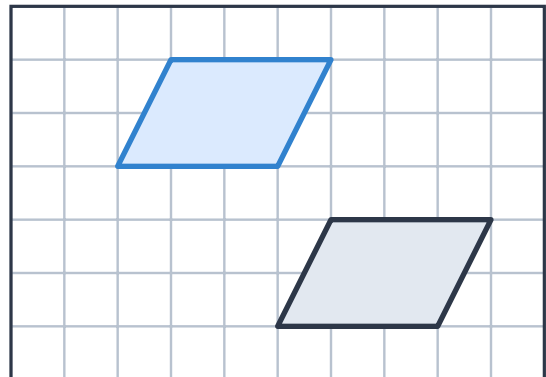
4. Translate 5 left, 2 down



5. Translate 5 right



6. Translate 3 left, 3 up

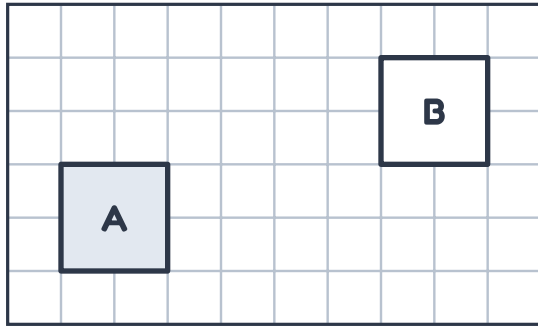


Translate and Reflect

Shape A was translated to B. Describe the move.

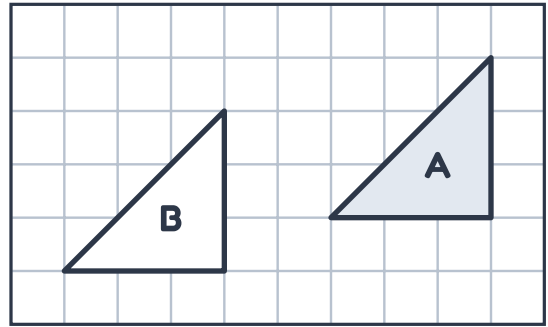
1.

Example



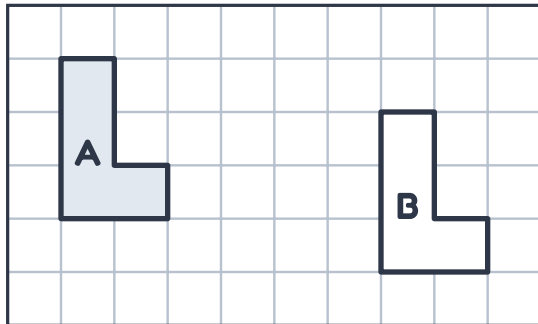
6 right , 2 up

2.



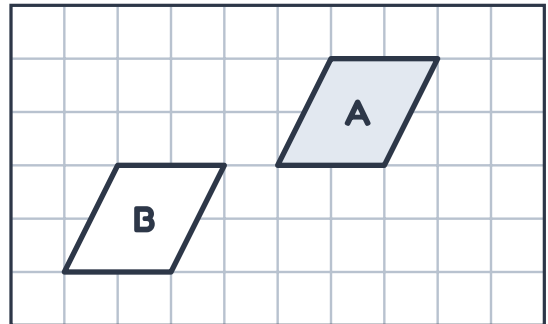
5 left , 1 down

3.



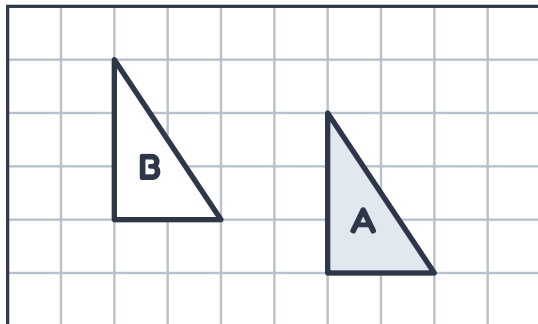
6 right , 1 down

4.



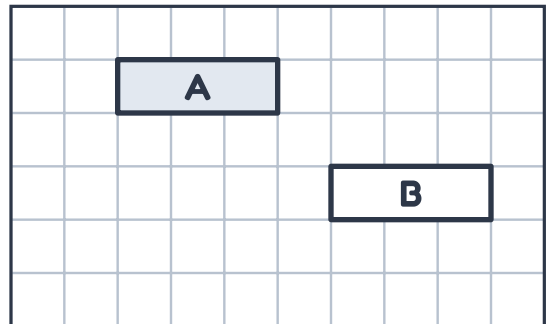
4 left , 2 down

5.



4 left , 1 up

6.



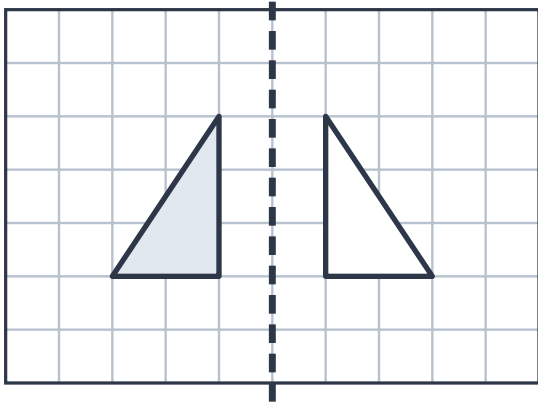
4 right , 2 down

Translate and Reflect

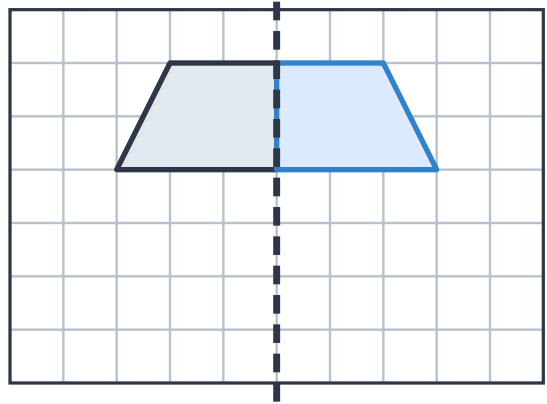
Reflect each shape in the mirror line. Draw its reflection.

1.

Example



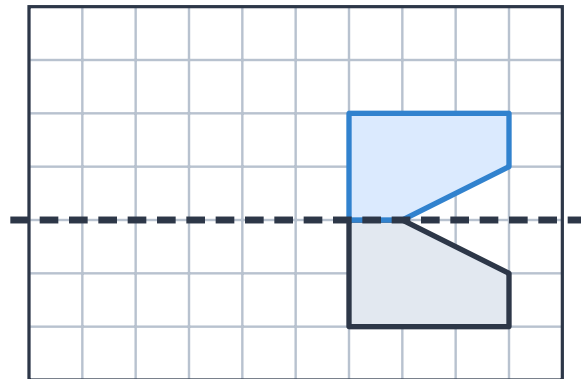
2.



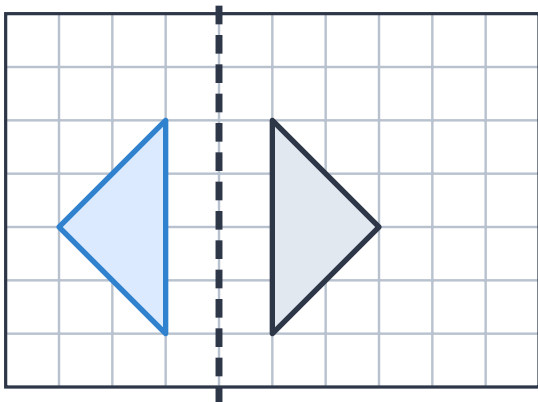
3.



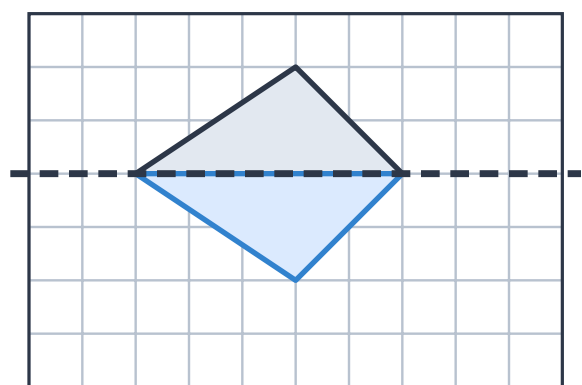
4.



5.



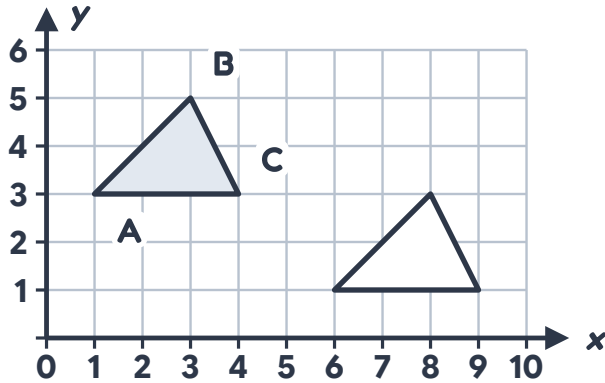
6.



Translate and Reflect

Draw the new shape. Write where each vertex ends up.

1. Translate 5 right, 2 down Example

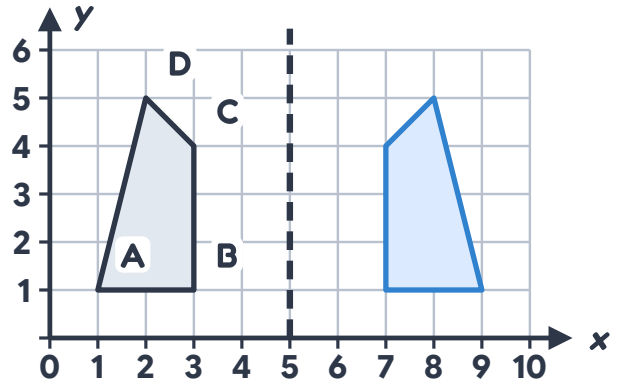


$$A (1, 3) \longrightarrow (\underline{6} , \underline{1})$$

$$B (3, 5) \longrightarrow (\underline{8} , \underline{3})$$

$$C (4, 3) \longrightarrow (\underline{9} , \underline{1})$$

2. Reflect in the mirror line



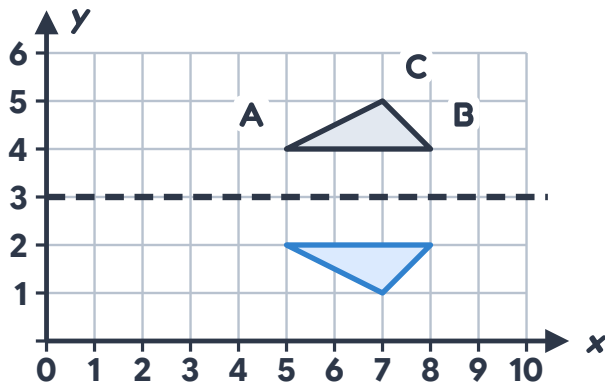
$$A (1, 1) \longrightarrow (\underline{9} , \underline{1})$$

$$B (3, 1) \longrightarrow (\underline{7} , \underline{1})$$

$$C (3, 4) \longrightarrow (\underline{7} , \underline{4})$$

$$D (2, 5) \longrightarrow (\underline{8} , \underline{5})$$

3. Reflect in the mirror line

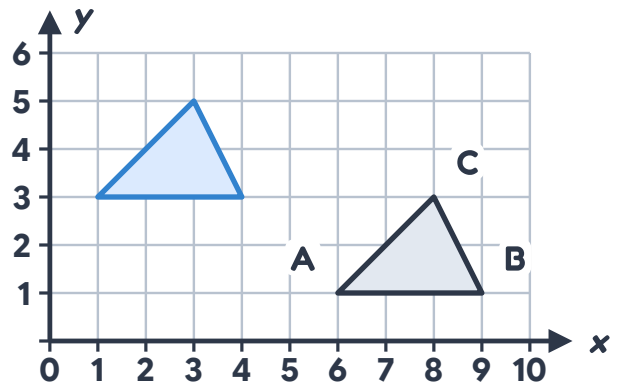


$$A (5, 4) \longrightarrow (\underline{5} , \underline{2})$$

$$B (8, 4) \longrightarrow (\underline{8} , \underline{2})$$

$$C (7, 5) \longrightarrow (\underline{7} , \underline{1})$$

4. Translate 5 left, 2 up



$$A (6, 1) \longrightarrow (\underline{1} , \underline{3})$$

$$B (9, 1) \longrightarrow (\underline{4} , \underline{3})$$

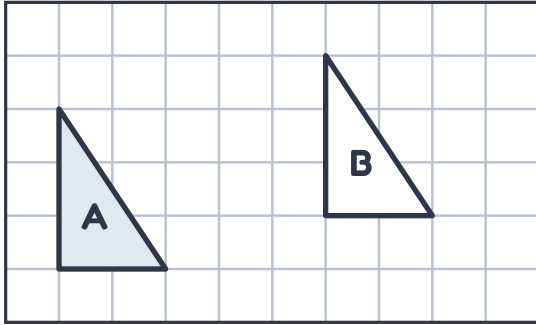
$$C (8, 3) \longrightarrow (\underline{3} , \underline{5})$$

Translate and Reflect

Is shape B a translation of A, a reflection, or neither? Circle.

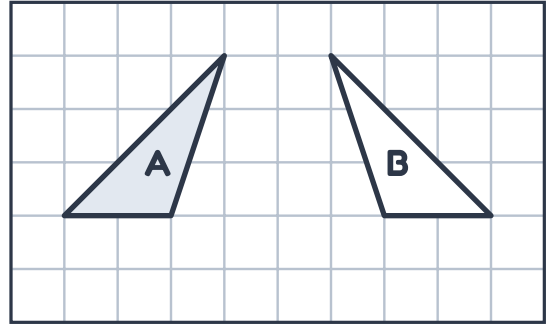
1.

Example



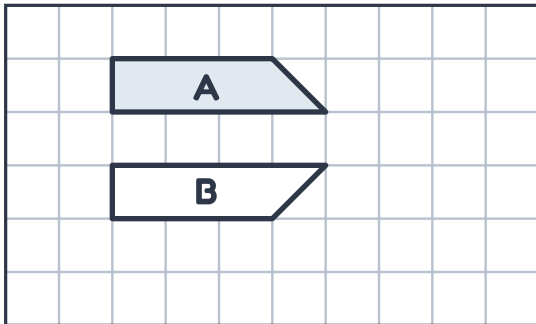
translation reflection neither

2.



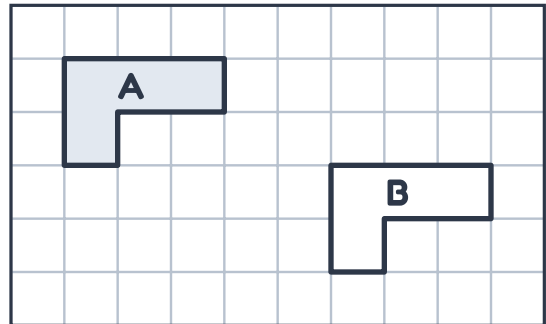
translation reflection neither

3.



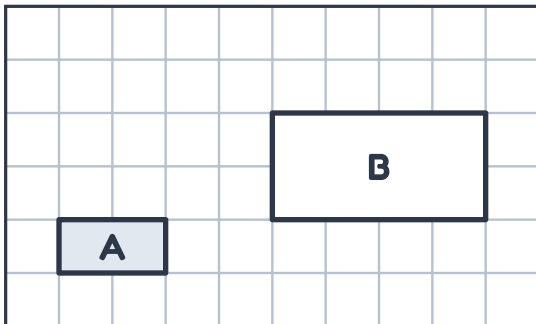
translation reflection neither

4.



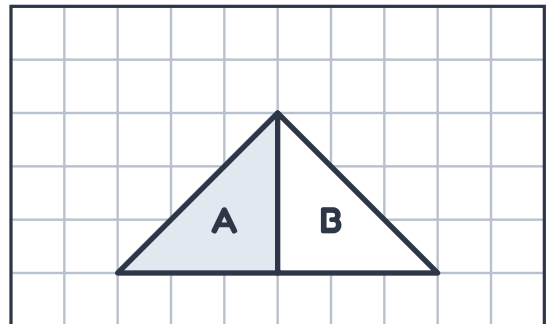
translation reflection neither

5.



translation reflection neither

6.



translation reflection neither