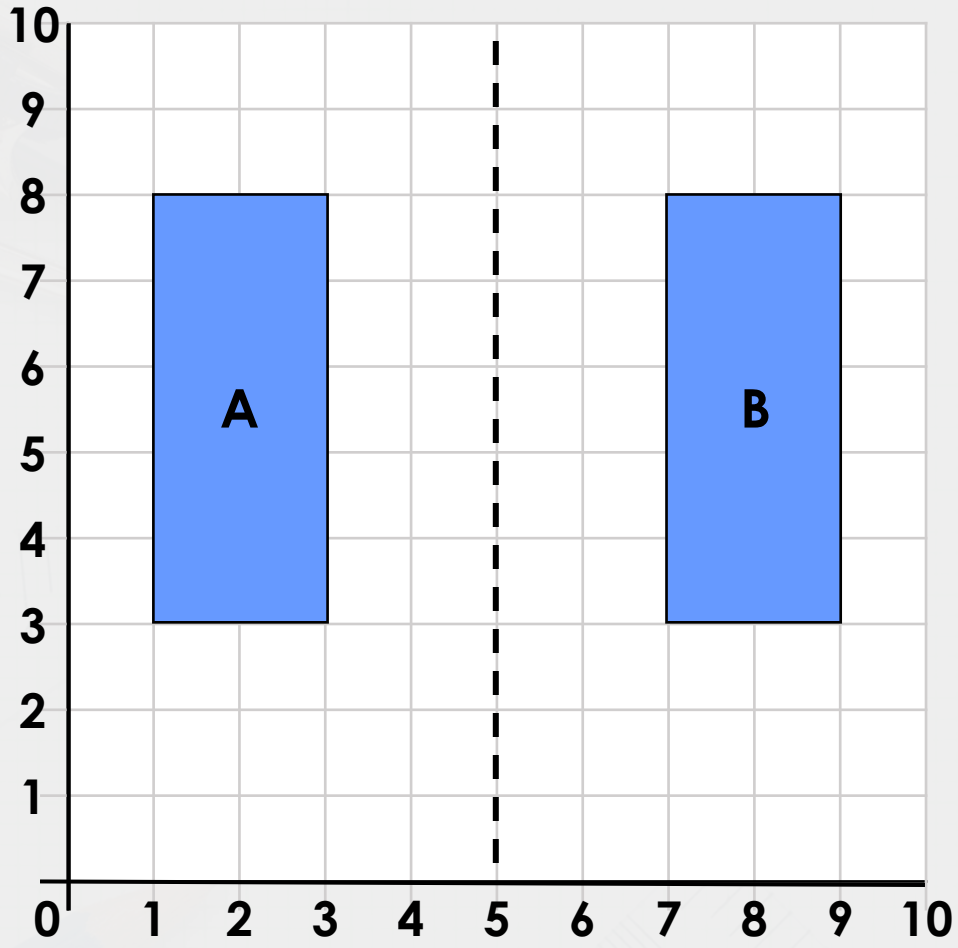
Wednesday 4th July

Year 5: Reflection with Coordinates

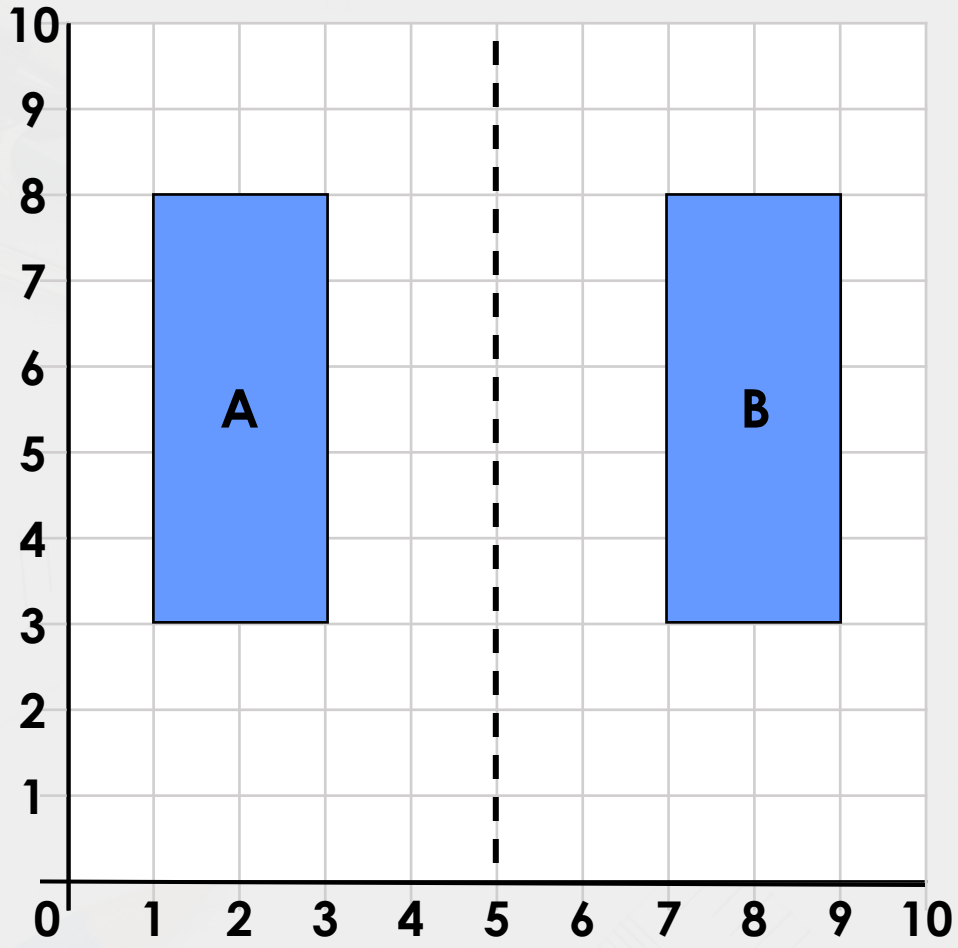
Introduction



- What are the coordinates of Shape A?
- What are the coordinates of the reflected shape (Shape B)?

Y5

Introduction



- What are the coordinates of Shape A?

  (1, 3) (1, 8) (3, 8) (3, 3)

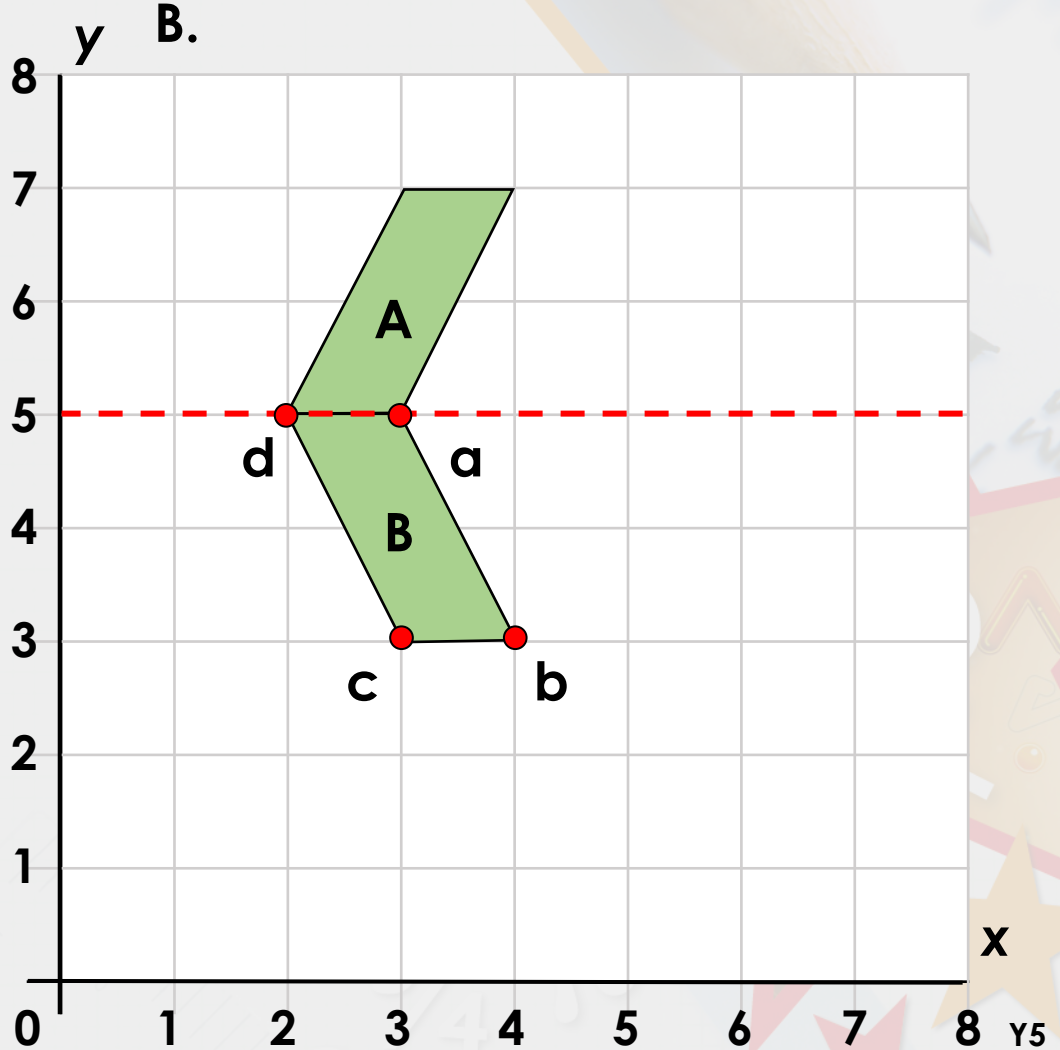
- What are the coordinates of the reflected shape (Shape B)?

  (7, 3) (7, 8) (9, 8) (9, 3)

Varied Fluency 1

Shape A has been reflected. Fill in the missing coordinates for Shape B.

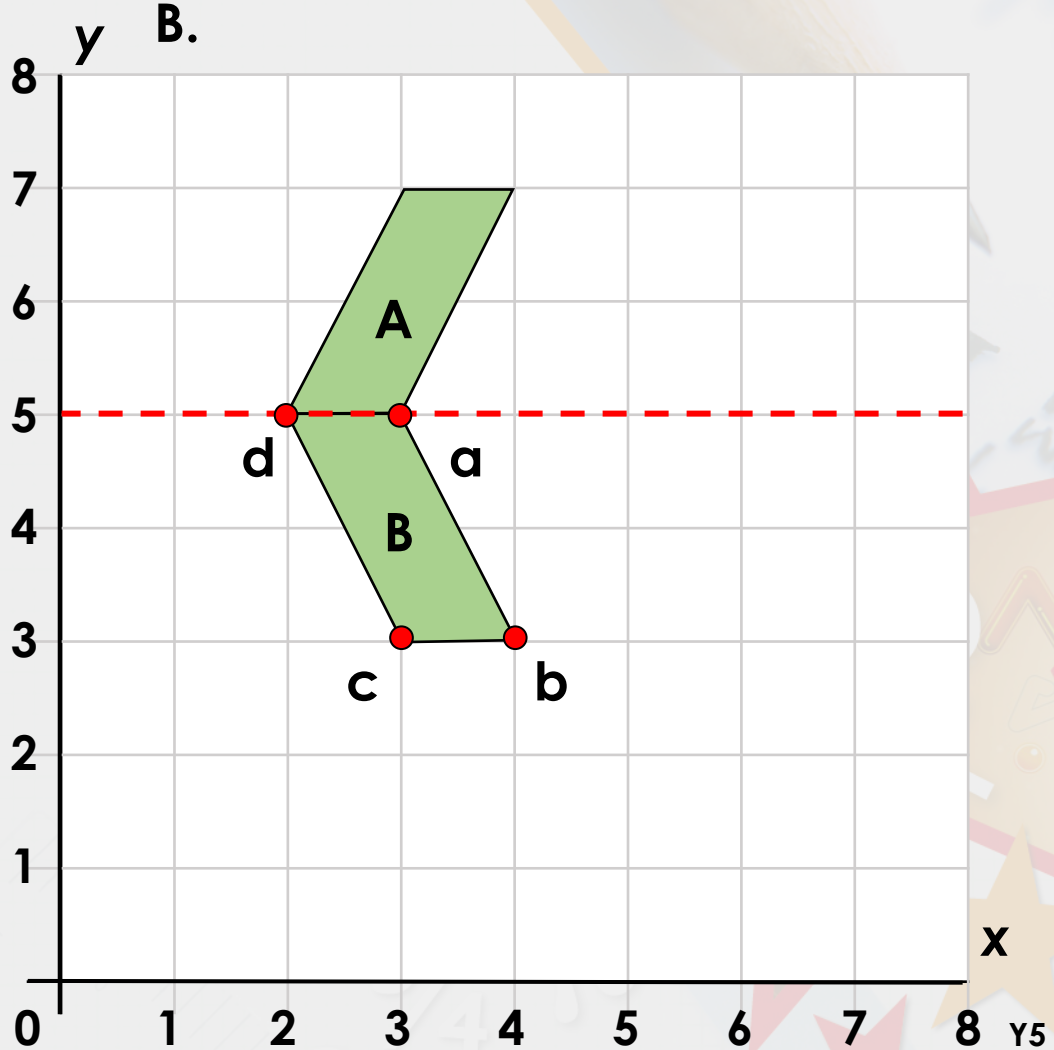
Point	Shape B
a	(3, 5)
b	(4, 3)
c	(,)
d	(,)



Varied Fluency 1

Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape B
a	(3, 5)
b	(4, 3)
c	(3, 3)
d	(2, 5)



Varied Fluency 2

Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

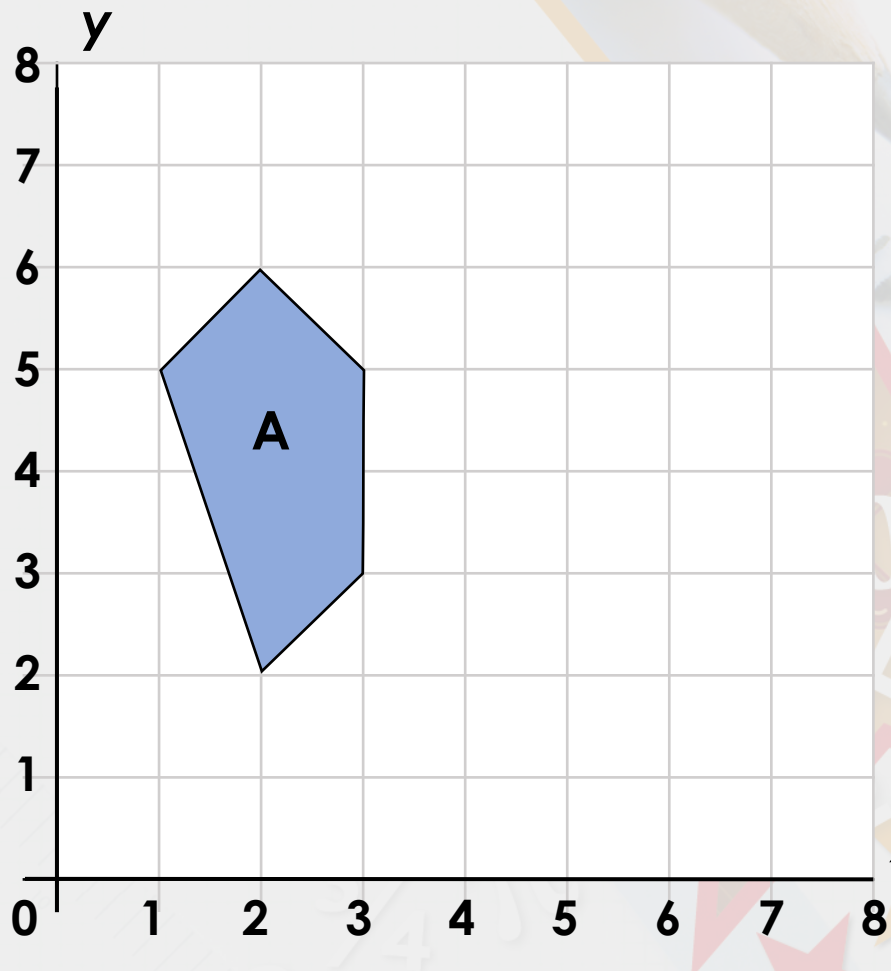
(5, 5)

(6, 6)

(7, 5)

(6, 2)

(5, 3)



Varied Fluency 2

Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

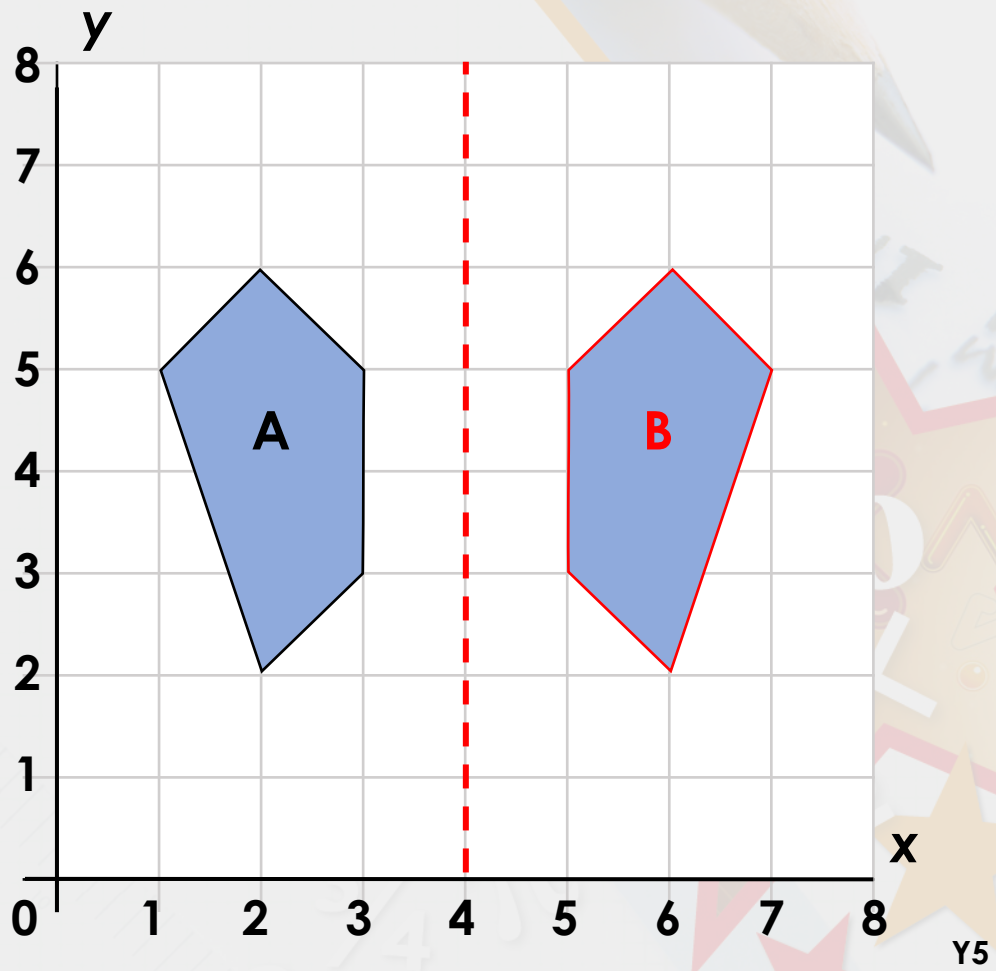
(5, 5)

(6, 6)

(7, 5)

(6, 2)

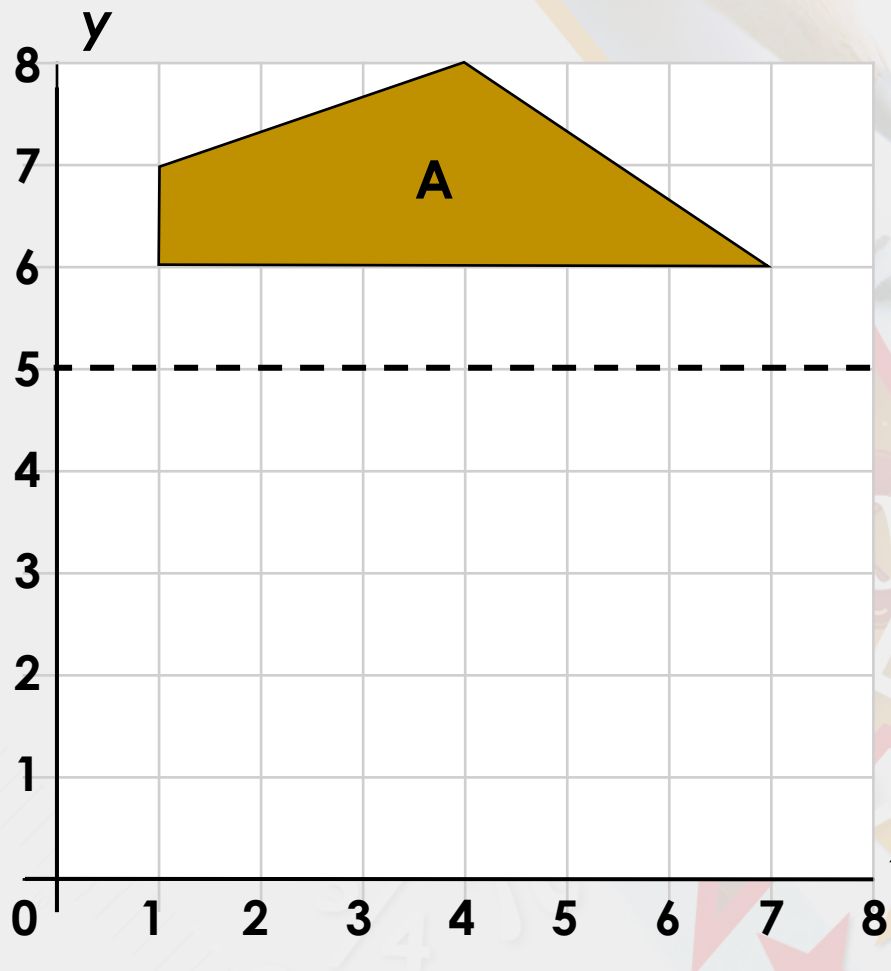
(5, 3)



Varied Fluency 3

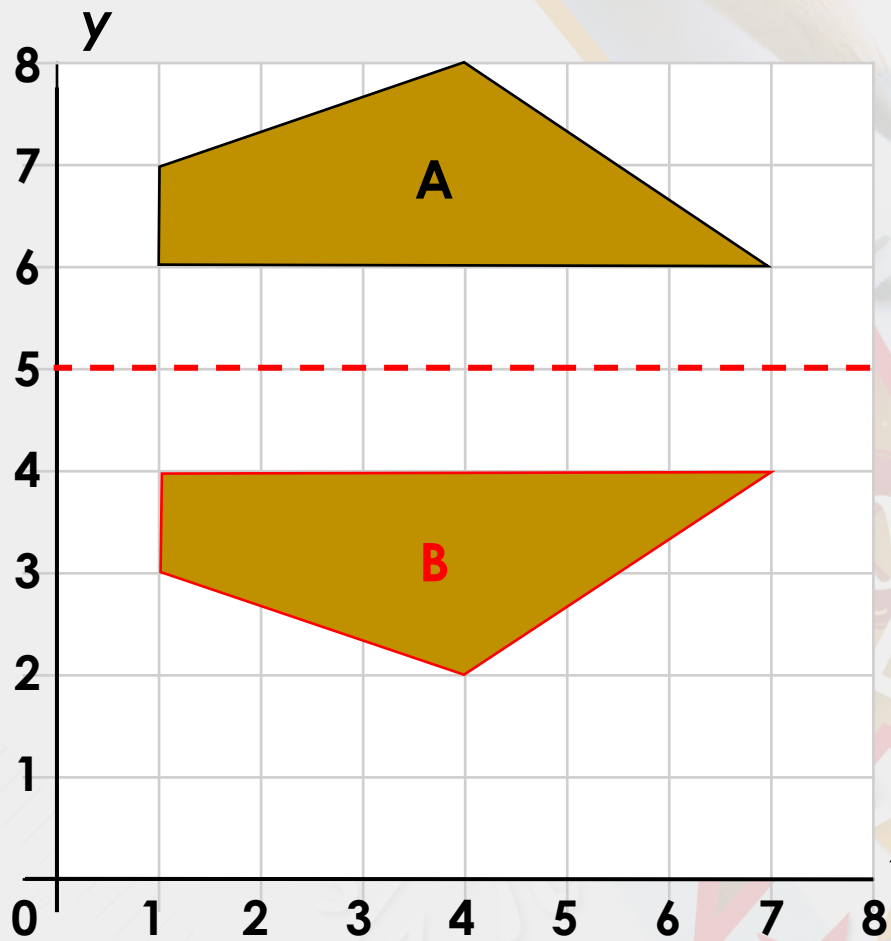
Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(1, 4)	(1, 4)
(1, 3)	(1, 3)
(2, 4)	(4, 2)
(7, 4)	(7, 4)



Circle the correct set of coordinates if Shape A is reflected.

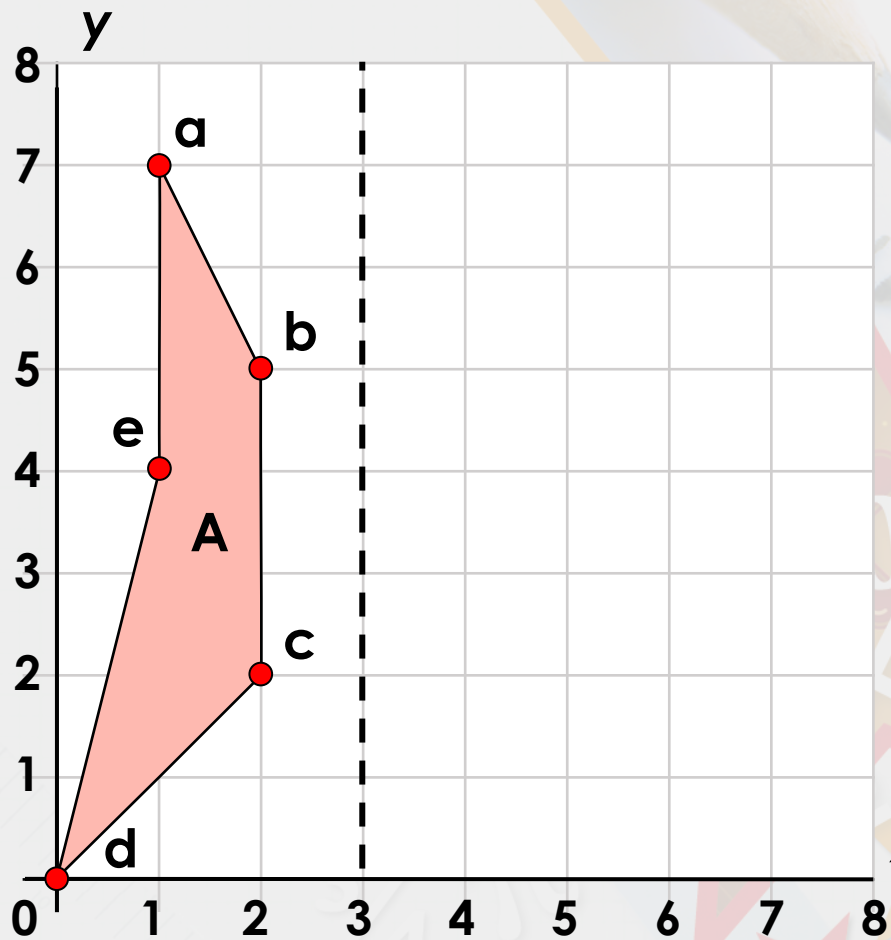
Set A	Set B
(1, 4)	(1, 4)
(1, 3)	(1, 3)
(2, 4)	(4, 2)
(7, 4)	(7, 4)



Varied Fluency 4

Reflect Shape A to create Shape B. Write the coordinates for both shapes.

Point	Shape A	Shape B
a	(,)	(,)
b	(,)	(,)
c	(,)	(,)
d	(,)	(,)
e	(,)	(,)

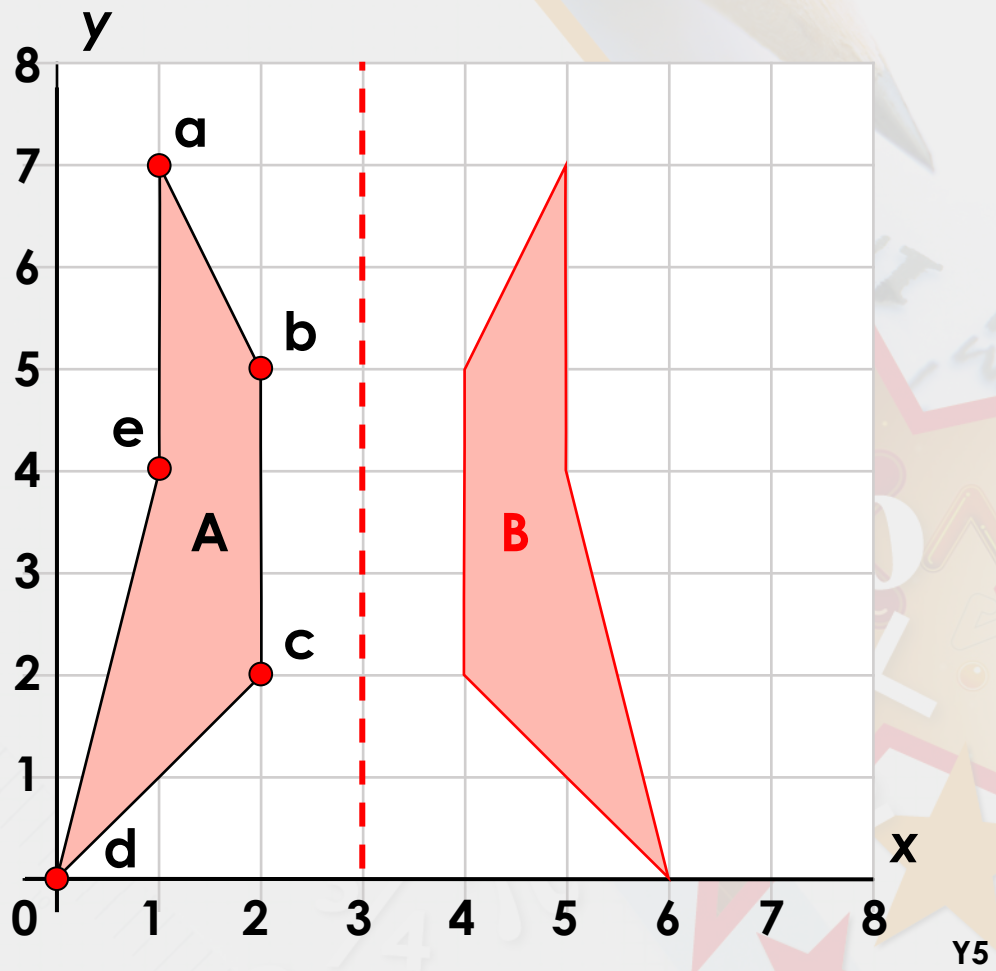


Y5

Varied Fluency 4

Reflect Shape A to create Shape B. Write the coordinates for both shapes.

Point	Shape A	Shape B
a	(1, 7)	(5, 7)
b	(2, 5)	(4, 5)
c	(2, 2)	(4, 2)
d	(0, 0)	(6, 0)
e	(1, 4)	(5, 4)



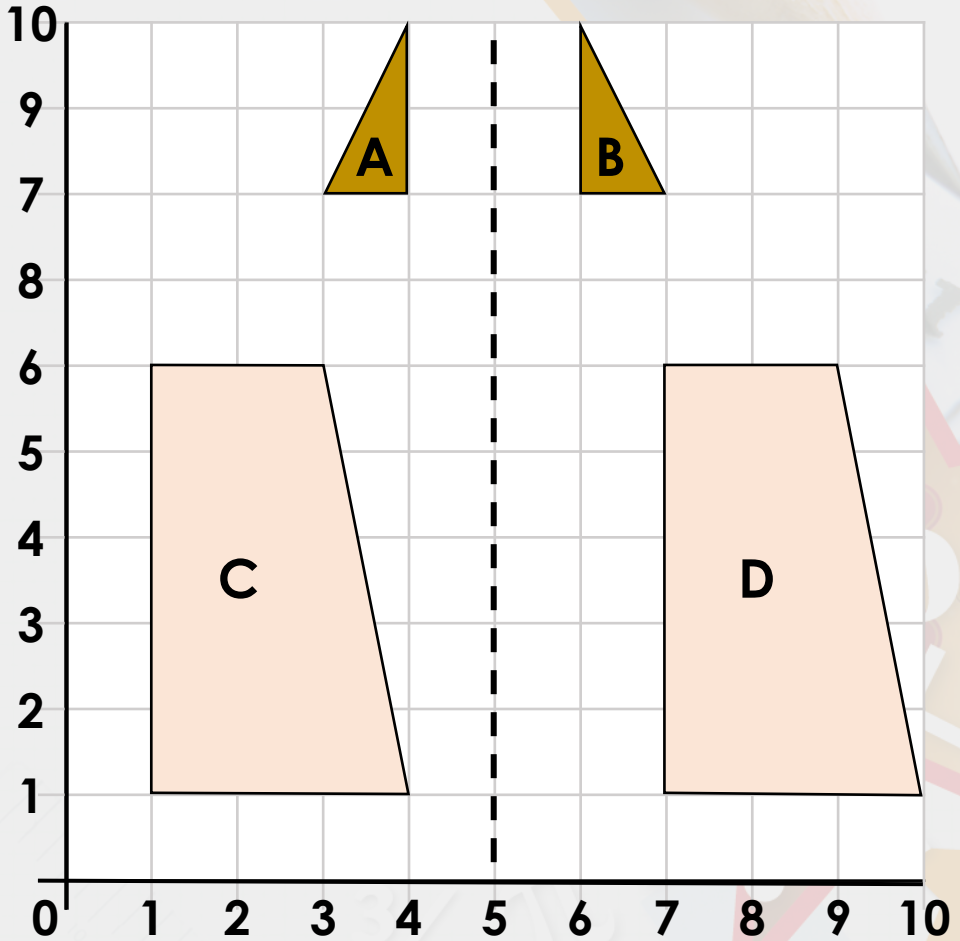
Explain the three mistakes below.

A (3, 8) (4, 10) (4, 8)

B (7, 8) (7, 10) (6, 8)

C (1, 1) (1, 6) (3, 6) (1, 4)

D (7, 1) (6, 6) (9, 6) (9, 1)



Y5

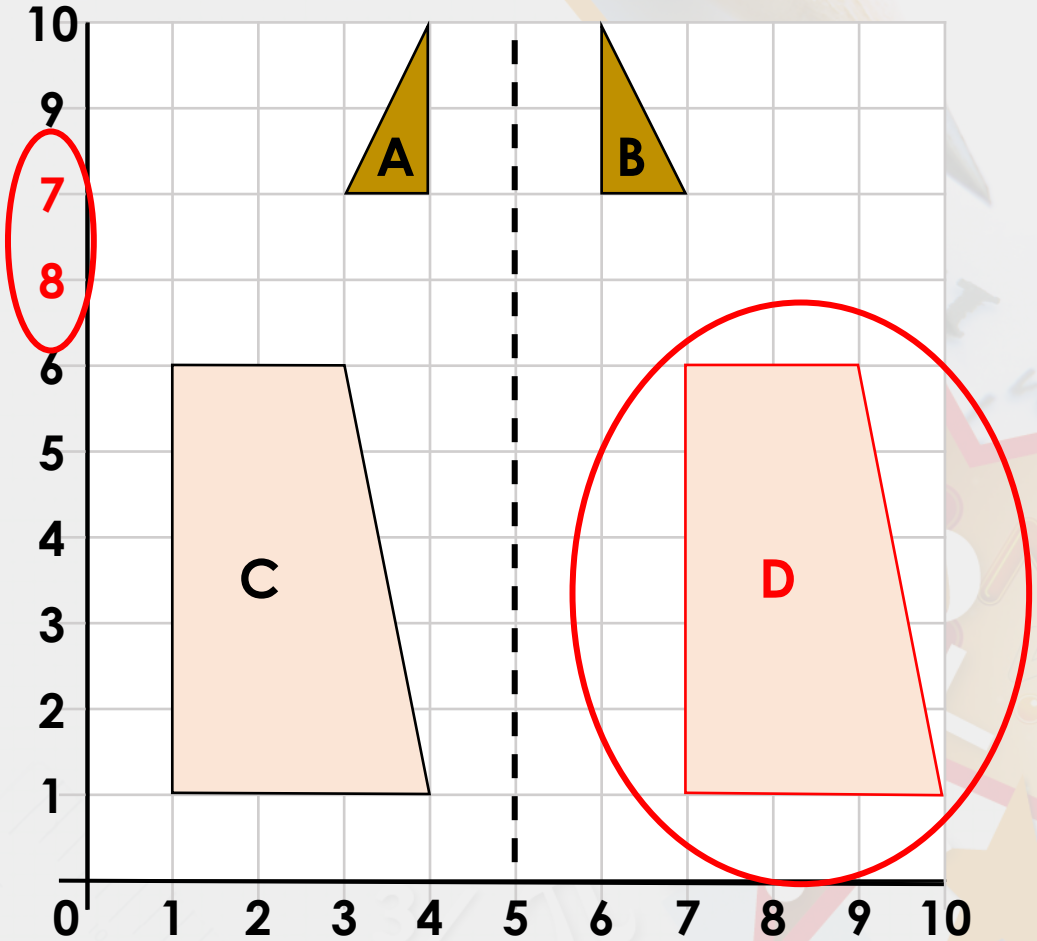
Explain the three mistakes below.

A (3, 8) (4, 10) (4, 8)

B (7, 8) (7, 10) (6, 8)

C (1, 1) (1, 6) (3, 6) (1, 4)

D (7, 1) (6, 6) (9, 6) (9, 1)



Y5

Explain the three mistakes below.

1. The last coordinate for Shape C is incorrect; it should be (4, 1) not (1, 4).

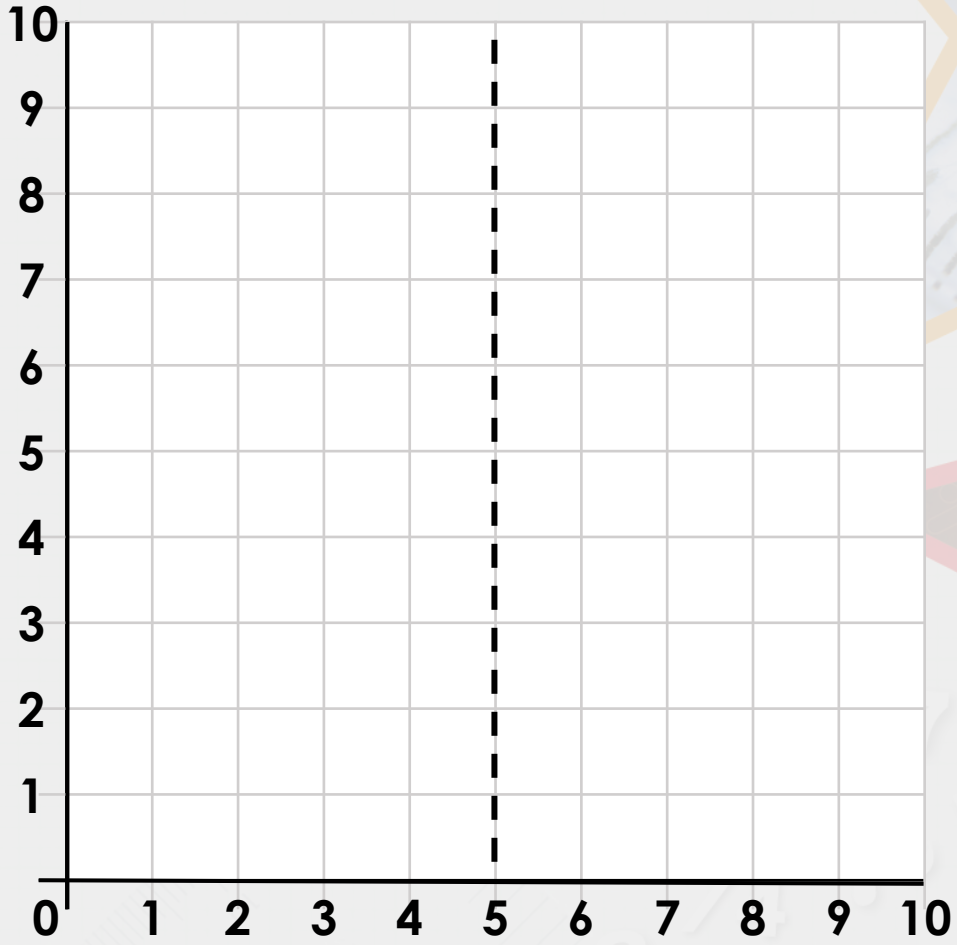
2. The *y* axis is incorrectly labelled. It has the 7 and 8 the wrong way round.

3. Shape D is not the correct reflection for Shape C.

Problem Solving 1

Plot these coordinates and join them in order.
Reflect it. What have you drawn?

(5, 8)
(4, 8)
(4, 6)
(2, 6)
(2, 4)
(4, 4)
(4, 2)
(5, 2)

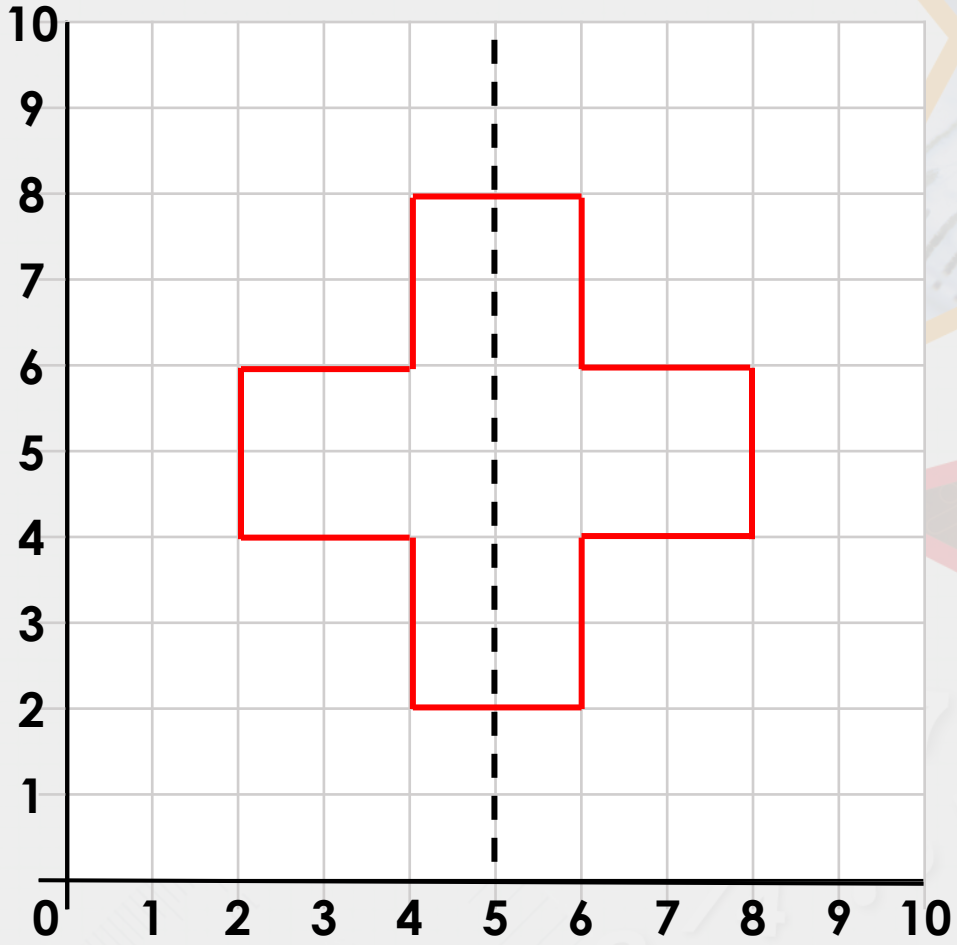


Y5

Plot these coordinates and join them in order.
Reflect it. What have you drawn?

A cross

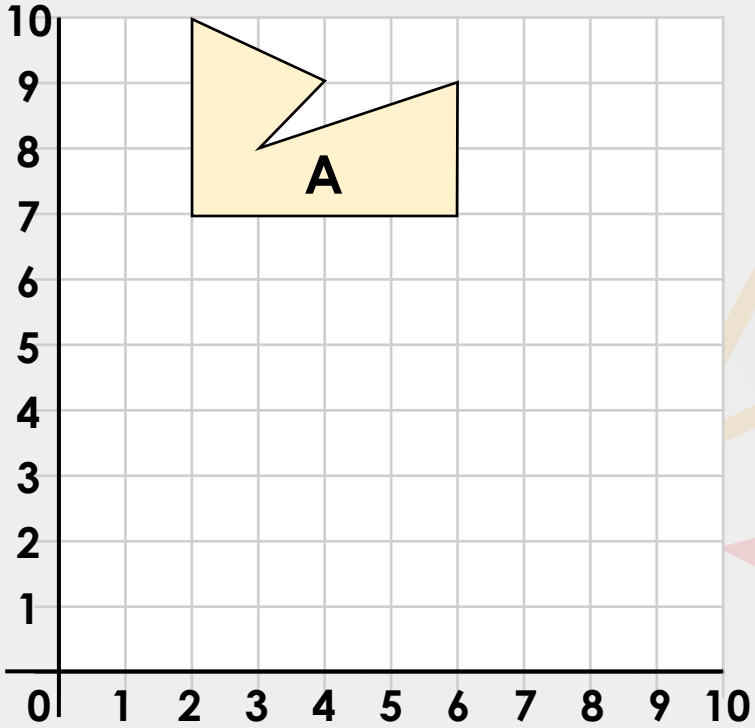
(5, 8)
(4, 8)
(4, 6)
(2, 6)
(2, 4)
(4, 4)
(4, 2)
(5, 2)



Y5

Reasoning 2

Shara says it is impossible to reflect this shape so that it has a coordinate of (2, 0).

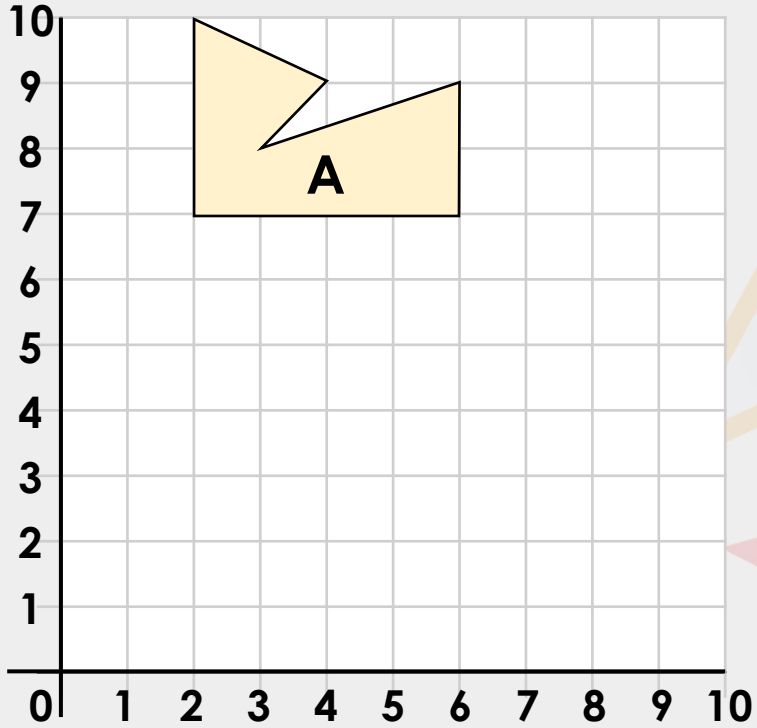


Do you agree? Prove it.

Y5

Reasoning 2

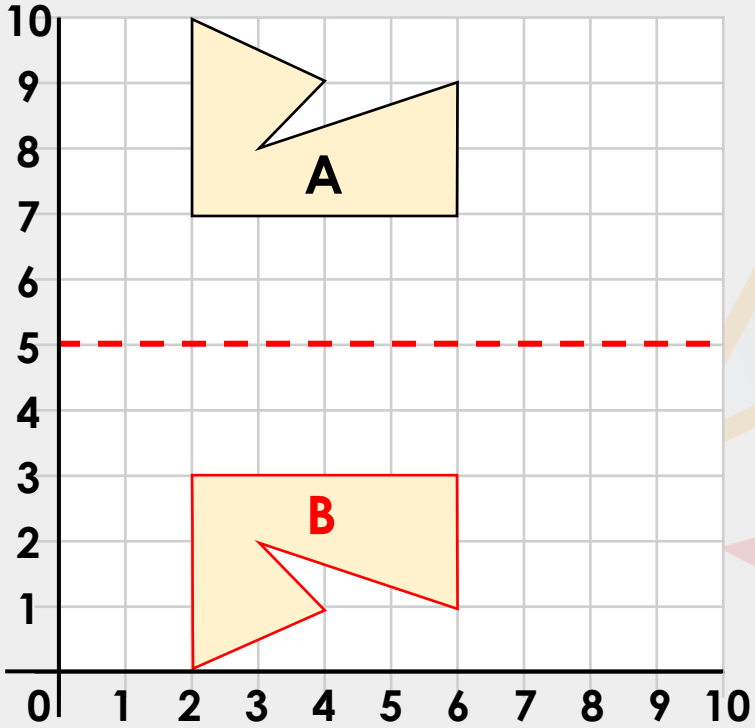
Shara says it is impossible to reflect this shape so that it has a coordinate of (2, 0).



Do you agree? Prove it.
Shara is incorrect because…

Y5

Shara says it is impossible to reflect this shape so that it has a coordinate of (2, 0).



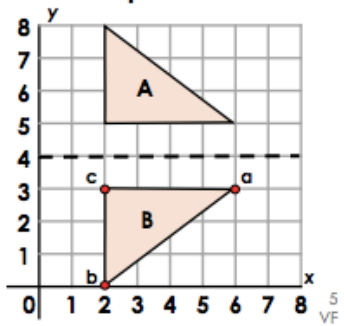
Do you agree? Prove it.

Shara is incorrect because you can reflect Shape A in order to use the coordinate (2, 0) as shown above.

Year 5 Developing

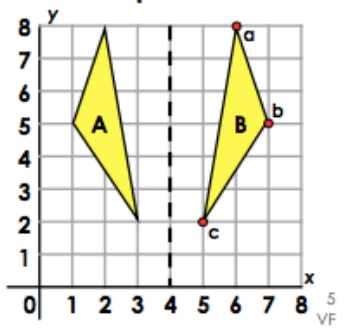
1a. Shape A has been reflected. Fill in the missing coordinate for Shape B.

Point	Shape B
a	(6, 3)
b	(2, 0)
c	(,)



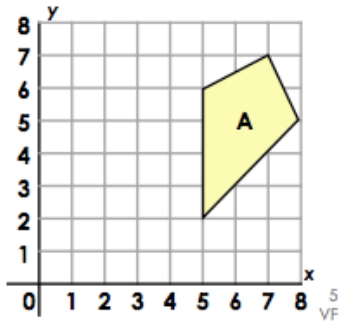
1b. Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape B
a	(6, 8)
b	(,)
c	(,)



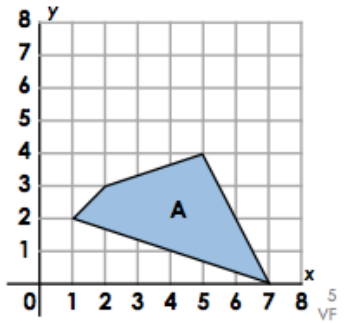
2a. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(3, 6)
(3, 2)
(0, 5)
(1, 7)



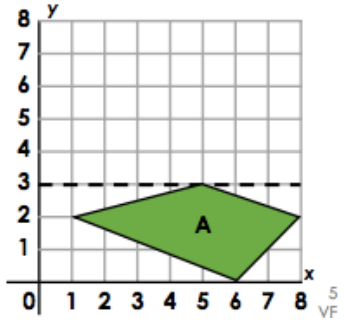
2b. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(5, 4)
(7, 8)
(1, 6)
(2, 5)



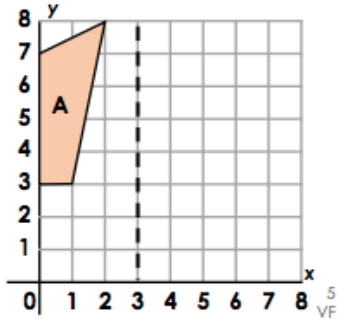
3a. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(5, 3)	(5, 3)
(8, 4)	(8, 4)
(6, 6)	(6, 6)
(4, 1)	(1, 4)



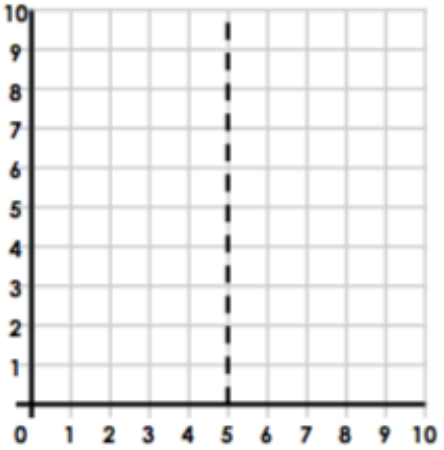
3b. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(4, 8)	(4, 8)
(5, 3)	(5, 3)
(6, 3)	(6, 3)
(6, 7)	(7, 6)



2a. Plot these coordinates and join them in order. Reflect it. What letter have you made?

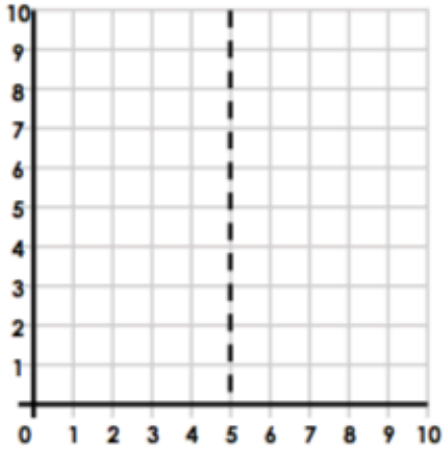
(5, 5)
(3, 5)
(3, 9)
(3, 1)



5 PS

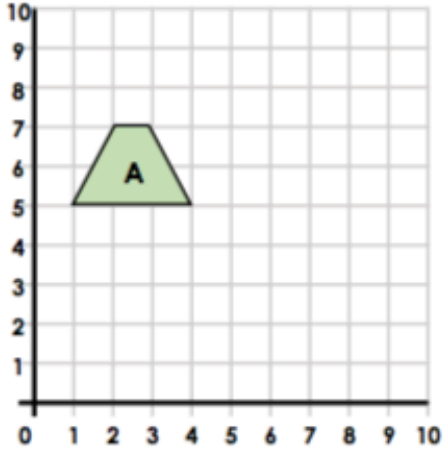
2b. Plot these coordinates and join them in order. Reflect it. What letter have you made?

(5, 5)
(3, 7)
(2, 9)
(2, 1)



5 P

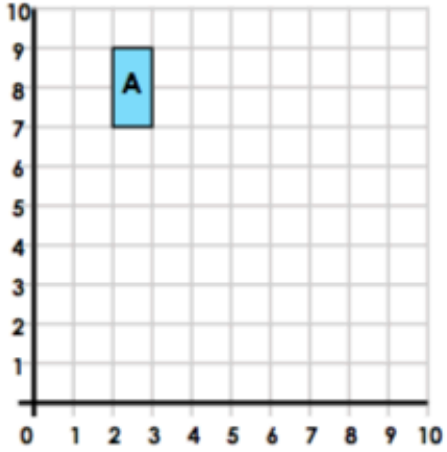
3a. Nolan says it is impossible to reflect this shape with a coordinate of (8, 7).



Do you agree? Prove it.

5 R

3b. Shania says it is impossible to reflect this shape with a coordinate of (2, 5).



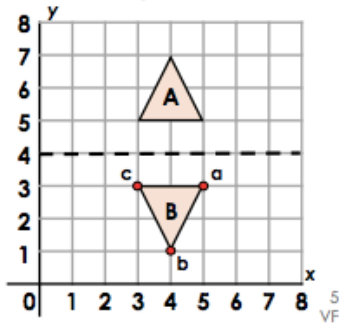
Do you agree? Prove it.

5

Year 5 Expected

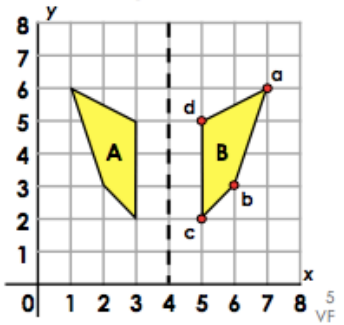
5a. Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape B
a	(5, 3)
b	(,)
c	(,)



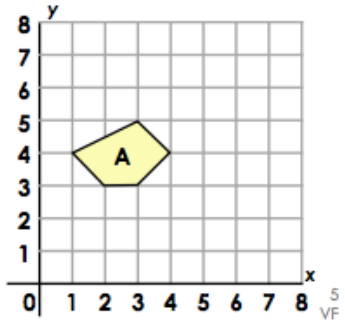
5b. Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape B
a	(7, 6)
b	(,)
c	(,)
d	(,)



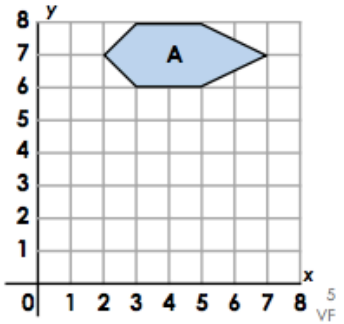
6a. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(4, 4)
(5, 5)
(7, 4)
(6, 3)
(5, 3)



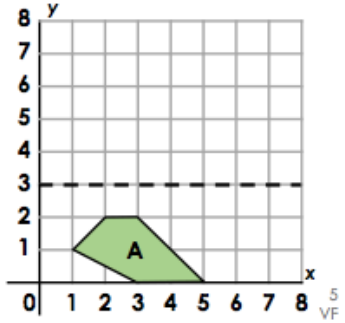
6b. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(3, 2)
(2, 1)
(3, 0)
(5, 0)
(7, 1)
(5, 2)



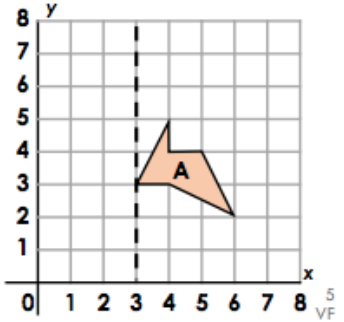
7a. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(2, 4)	(2, 4)
(3, 4)	(3, 4)
(5, 6)	(5, 6)
(3, 6)	(3, 6)
(1, 6)	(1, 5)



7b. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(3, 3)	(3, 3)
(2, 3)	(2, 3)
(0, 2)	(0, 2)
(1, 4)	(1, 4)
(2, 4)	(2, 4)
(2, 5)	(2, 4)



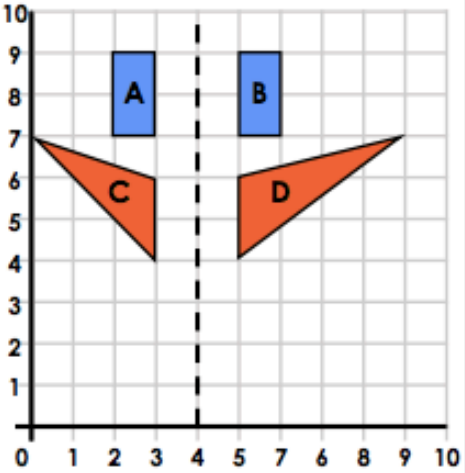
4a. Explain the three mistakes below.

A (2, 7) (2, 9) (3, 9) (3, 7)

B (5, 7) (5, 8) (6, 9) (6, 7)

C (0, 7) (3, 6) (3, 4)

D (8, 7) (5, 6) (5, 4



E

5 R

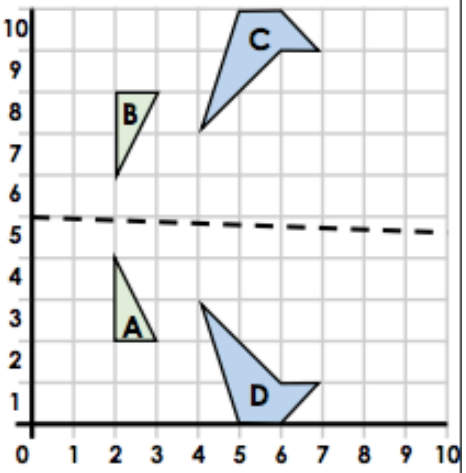
4b. Explain the three mistakes below.

A (2, 2) (2, 4) (3, 2)

B (2, 6) (2, 8) (3, 8)

C (4, 7) (5, 10) (6, 10) (7, 9) (6, 9)

D (4, 3) (6, 1) (7, 1) (6, 0) (0, 5)

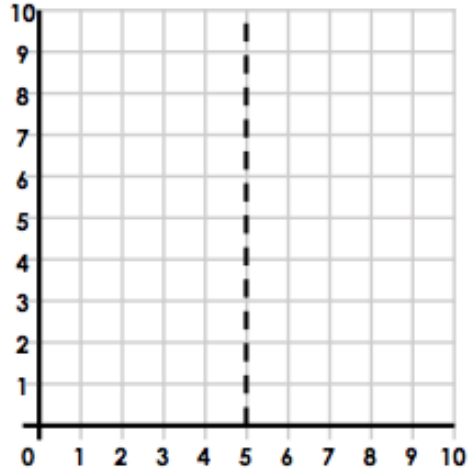


E

5 R

5a. Plot these coordinates and join them in order. Reflect it. What have you drawn?

(5, 9)
(4, 6)
(1, 6)
(3, 4)
(2, 1)
(5, 3)

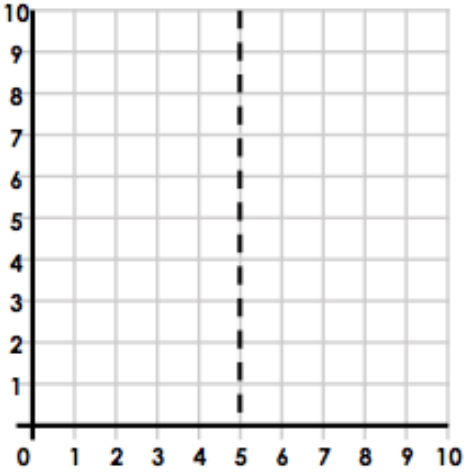


E

5 PS

5b. Plot these coordinates and join them in order. Reflect it. What have you drawn?

(5, 1)
(1, 5)
(1, 7)
(2, 9)
(3, 9)
(5, 7)



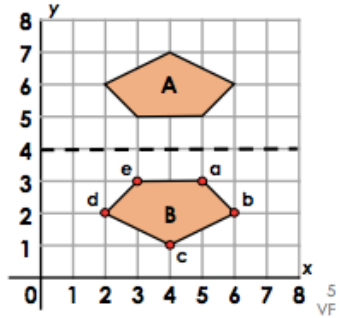
E

5 PS

Year 5 Greater Depth

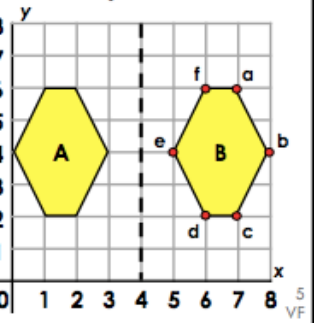
9a. Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape b
a	(5, 3)
b	(6, 2)
c	(4, 1)
d	(,)
e	(,)



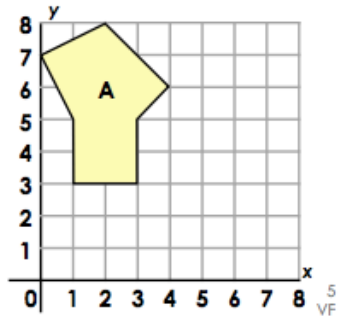
9b. Shape A has been reflected. Fill in the missing coordinates for Shape B.

Point	Shape b
a	(7, 6)
b	(8, 4)
c	(,)
d	(,)
e	(,)
f	(,)



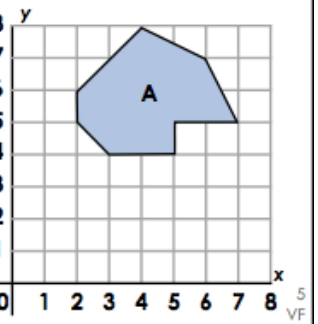
10a. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(6, 8)
(4, 6)
(5, 5)
(5, 3)
(7, 3)
(7, 5)
(8, 7)



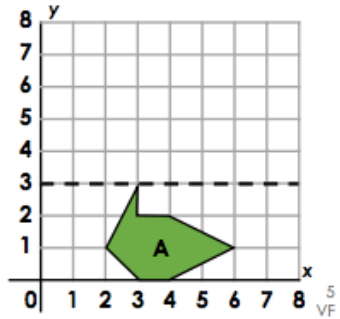
10b. Draw a line of symmetry so that the below coordinates show a reflection of Shape A:

(4, 0)
(6, 1)
(7, 3)
(5, 3)
(5, 4)
(3, 4)
(2, 3)
(2, 2)



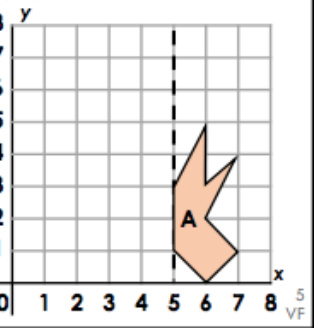
11a. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(3, 3)	(3, 3)
(2, 5)	(2, 5)
(3, 6)	(3, 6)
(4, 6)	(4, 6)
(6, 6)	(6, 5)
(4, 4)	(4, 4)
(3, 4)	(3, 4)



11b. Circle the correct set of coordinates if Shape A is reflected.

Set A	Set B
(4, 5)	(4, 5)
(5, 3)	(5, 3)
(5, 1)	(5, 1)
(4, 0)	(4, 0)
(3, 1)	(3, 1)
(4, 2)	(4, 2)
(3, 4)	(3, 4)
(4, 4)	(4, 3)



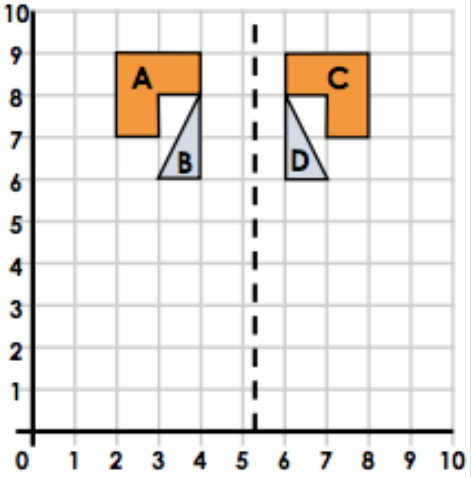
7a. Explain the five mistakes below.

A (2, 7) (2, 9) (4, 9) (4, 8) (3, 8) (3, 7)

B (8, 4) (6, 4) (6, 3)

C (6, 9) (6, 8) (7, 8) (7, 7) (8, 7) (8, 8)

D (6, 8) (7, 6) (6, 6)



GD

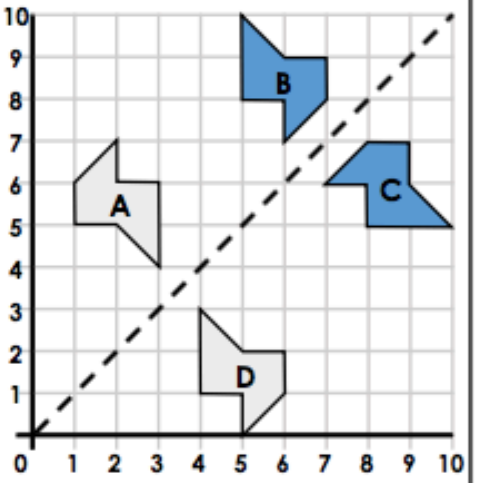
5 R

7b. Explain the five mistakes below.

A (1, 5) (1, 6) (2, 7) (2, 6) (3, 6) (3, 4) (5, 2)

B (5, 8) (5, 10) (6, 9) (7, 9) (7, 8) (6, 7) (8, 6)

D (4, 3) (6, 3) (6, 2) (7, 2) (6, 1) (5, 1) (2, 5)

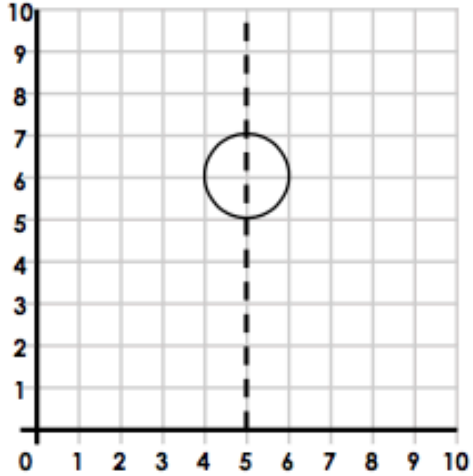


GD

5 R

8a. Plot these coordinates and join them in order. Reflect it. What have you drawn?

(5, 8) (4, 9) (3, 9) (2, 8) (2, 7) (3, 6) (2, 5) (2, 4) (3, 3) (4, 3) (5, 4) (5, 0) (4, 2) (1, 3) (5, 0)

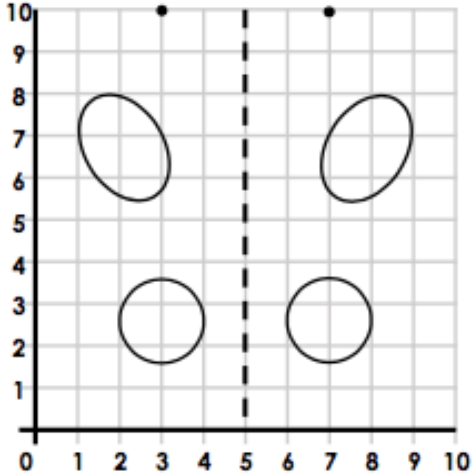


GD

5 PS

8b. Plot these coordinates and join them in order. Reflect it. What have you drawn?

(3, 10) (4, 8) (5, 8) (4, 8) (4, 7) (2, 9) (1, 9) (0, 8) (0, 7) (1, 5) (2, 4) (1, 3) (1, 2) (2, 1) (4, 1) (5, 3)



GD

5 PS