

INDEPENDENT VARIABLE

IDV WORKSHEETS

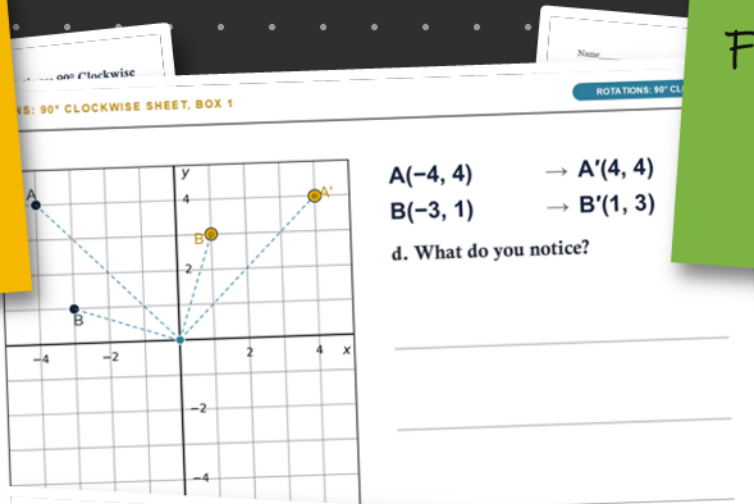


TRANSFORMING COORDINATE POINTS

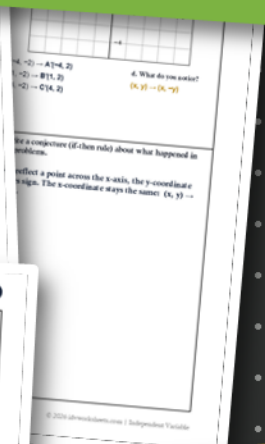
TRANSLATE | REFLECT | ROTATE | DISCOVER THE RULES

ANIMATED
POWERPOINT:
DOES THE WORK
FOR YOU!

FULL ANSWER
KEYS
INCLUDED



$A(-4, 4) \rightarrow A'(4, 4)$
 $B(-3, 1) \rightarrow B'(1, 3)$
d. What do you notice?



25 EXAMPLE
PROBLEMS
5 PRACTICE
SHEETS

4. Write a conjecture (if-then rule) about what happened in these problems.

If you translate a point LEFT, the x-value gets smaller (more negative). If you translate it UP, the y-value gets bigger. L and up 3.

$$(x, y) \rightarrow (x - 2, y + 3)$$

DISCOVERY
PAGES,
PRACTICE +
FIND THE
MISTAKE

MORE PRACTICE. LESS PREP. BETTER OUTCOMES.

Inside the Animated Lesson

INDEPENDENT VARIABLE

GRADE 8 • GEOMETRY

TRANSFORMING COORDINATE POINTS

TRANSLATE | REFLECT | ROTATE | DISCOVER THE RULES

Animated PowerPoint lesson
18 discovery problems, 6 conjectures
Practice sheets • full answer keys

MORE PRACTICE. LESS PREP. BETTER OUTCOMES.
idworksheets.com

TRANSLATIONS SHEET, BOX 1

TRANSLATIONS

1.

$A(-1, 0) \rightarrow A'(_, _)$
 $B(3, -2) \rightarrow B'(_, _)$

d. What do you notice?

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TRANSLATIONS SHEET, BOX 1

TRANSLATIONS

1.

$A(-1, 0) \rightarrow A'(-3, 3)$
 $B(3, -2) \rightarrow B'(1, 1)$

d. What do you notice?

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TRANSLATIONS • CONJECTURE • TRANSLATIONS SHEET, BOX 4

CONJECTURE

4. Write a conjecture (if-then rule) about what happened in these problems.

If you translate a point LEFT, the x-value gets smaller (more negative). If you translate it UP, the y-value gets bigger. Left 2 and up 3.

$(x, y) \rightarrow (x - 2, y + 3)$

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REFLECTIONS ACROSS THE Y-AXIS SHEET, BOX 1

REFLECTIONS ACROSS THE Y-AXIS

1.

$A(4, 4) \rightarrow A'(-4, 4)$
 $B(4, 1) \rightarrow B'(-4, 1)$
 $C(4, -3) \rightarrow C'(-4, -3)$

d. What do you notice?

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ROTATIONS: 90° CLOCKWISE SHEET, BOX 1

ROTATIONS: 90° CLOCKWISE

1.

$A(-4, 4) \rightarrow A'(4, 4)$
 $B(-3, 1) \rightarrow B'(1, 3)$

d. What do you notice?

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ROTATIONS: 90° COUNTERCLOCKWISE SHEET, BOX 1

ROTATIONS: 90° COUNTERCLOCKWISE

1.

$A(4, 3) \rightarrow A'(-3, 4)$
 $B(1, -2) \rightarrow B'(2, 1)$

d. What do you notice?

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FOLLOW ALONG • FOLLOW-ALONG: TRANSFORM THE POINTS, BOX 5

FOLLOW ALONG

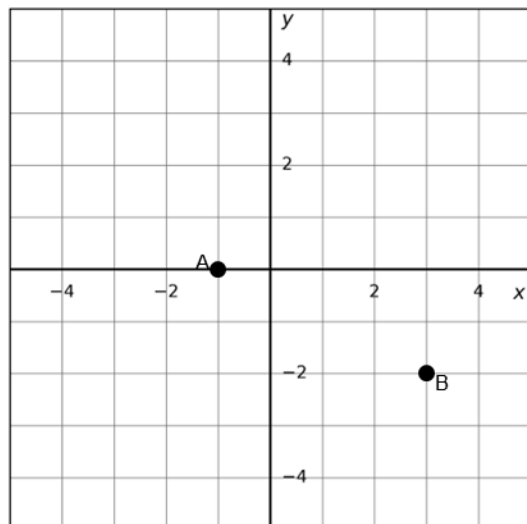
5. Move: Rotate 180° about the origin

$A(2, -1) \rightarrow A'(_, _)$
 $B(3, -3) \rightarrow B'(_, _)$
 $C(0, -4) \rightarrow C'(_, _)$

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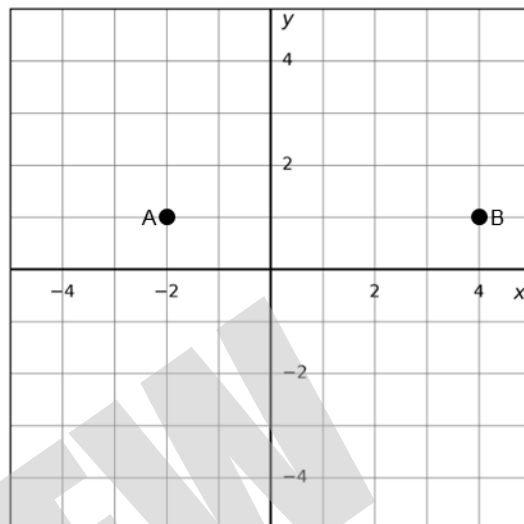
Directions: a. Label each point with its coordinates. b. Translate each point 2 units to the left, then 3 units up. c. Label each image with its coordinates and letter (A goes to A').

1.

 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

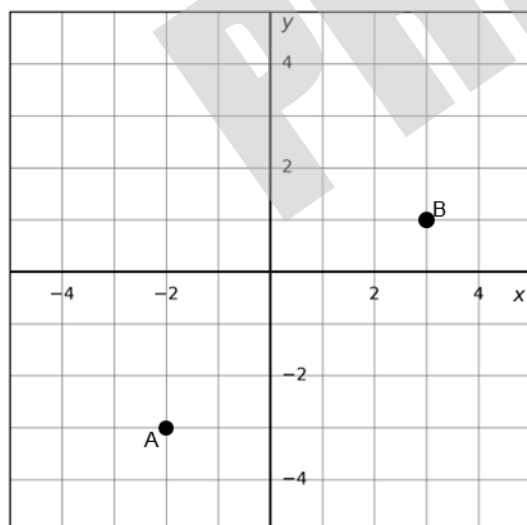
d. What do you notice?

2.

 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

d. What do you notice?

3.

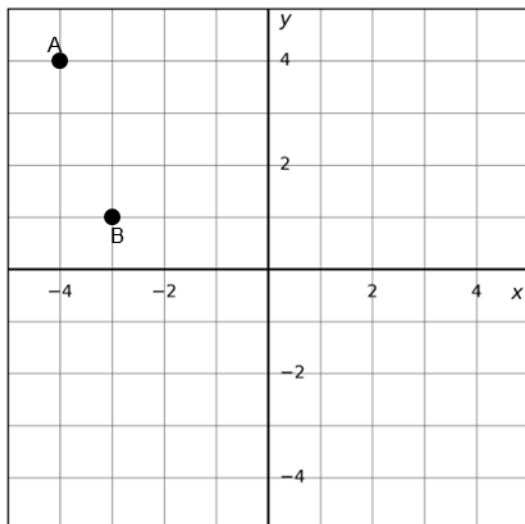
 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

d. What do you notice?

4. Write a conjecture (if-then rule) about what happened in these problems.

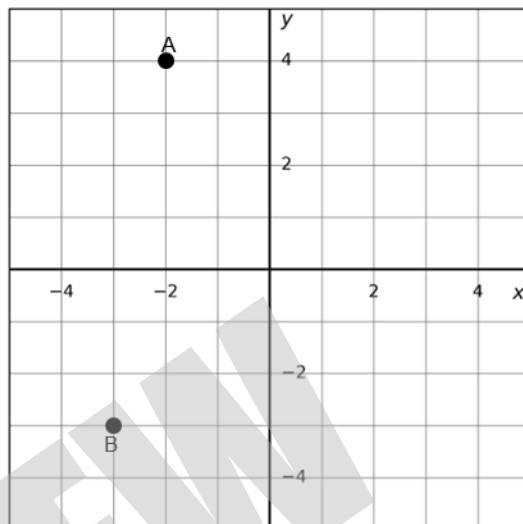
Directions: a. Label each point with its coordinates. b. Using (0, 0) as the center of rotation, rotate each point 90° clockwise. c. Label each image with its coordinates and letter (A goes to A').

1.

 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

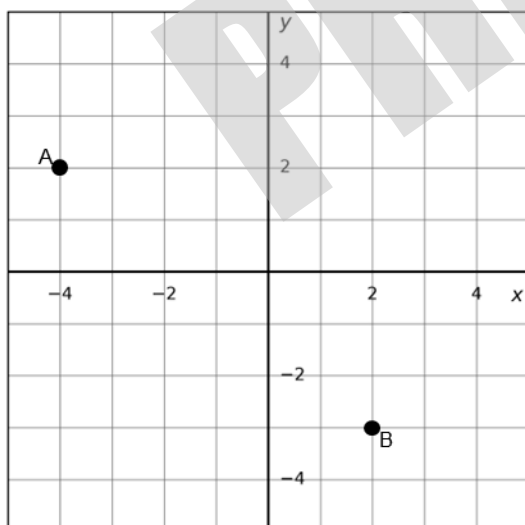
d. What do you notice?

2.

 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

d. What do you notice?

3.

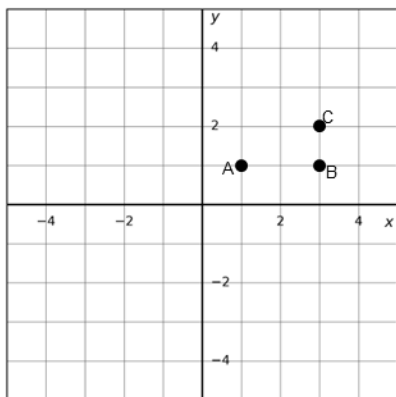
 $A(_, _) \rightarrow A'(_, _)$ $B(_, _) \rightarrow B'(_, _)$

d. What do you notice?

4. Write a conjecture (if-then rule) about what happened in these problems.

Directions: Write the move your teacher shows. Plot each image point and write its coordinates.

1. Move: _____

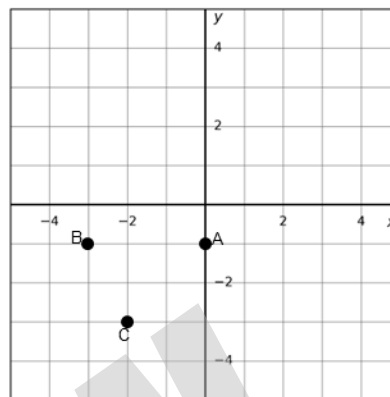


A' (____, ____)

B' (____, ____)

C' (____, ____)

2. Move: _____

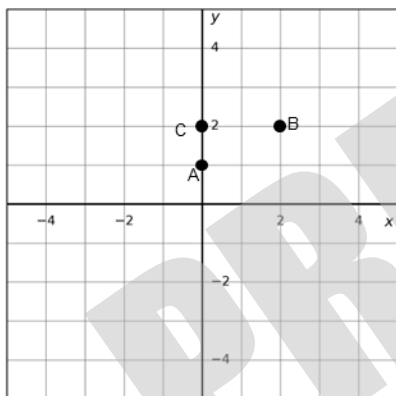


A' (____, ____)

B' (____, ____)

C' (____, ____)

3. Move: _____

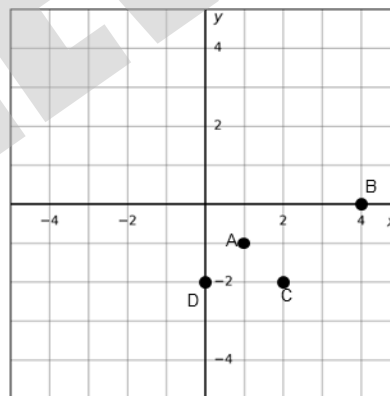


A' (____, ____)

B' (____, ____)

C' (____, ____)

4. Move: _____



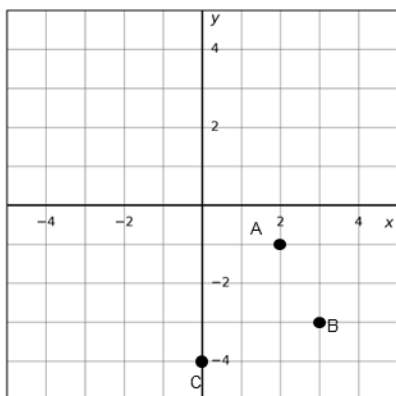
A' (____, ____)

B' (____, ____)

C' (____, ____)

D' (____, ____)

5. Move: _____

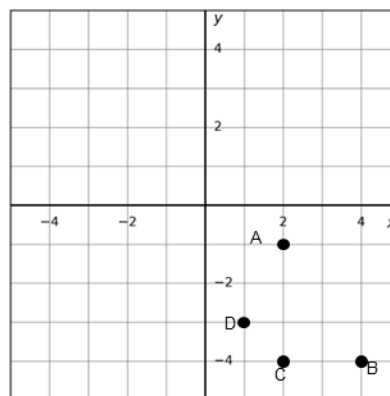


A' (____, ____)

B' (____, ____)

C' (____, ____)

6. Move: _____

CHALLENGE

A' (____, ____)

B' (____, ____)

C' (____, ____)

D' (____, ____)