Name: _____

Reflections on the Coordinate Plane

Find the coordinates of the image of each triangle.

Learn: Over the x-axis: (x, y) → (x, −y). Over the y-axis: (x, y) → (−x, y).

Example: Triangle A(1, 1), B(4, −6), C(−6, −4) is reflected over the x-axis. Give the coordinates of the image.

A′B′C′: A′(1, −1), B′(4, 6), C′(−6, 4)

1. Triangle A(5, 1), B(4, −6), C(−5, −4) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: _____

2. Triangle A(1, −5), B(−2, 6), C(1, 4) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: _____

3. Triangle A(−2, 2), B(3, −4), C(−3, −5) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: _____

4. Triangle A(0, 4), B(−3, −3), C(−1, −1) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: _____

5. Triangle A(4, 6), B(1, −6), C(3, −1) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: _____

6. Triangle A(0, 6), B(0, 1), C(−2, 1) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: _____

7. Triangle A(−6, −1), B(−6, −6), C(−2, −6) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: _____

Name: **ANSWER KEY**

Reflections on the Coordinate Plane

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Example: Triangle A(1, 1), B(4, −6), C(−6, −4) is reflected over the x-axis. Give the coordinates of the image.

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1. Triangle A(5, 1), B(4, −6), C(−5, −4) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: A′(−5, 1), B′(−4, −6), C′(5, −4)

2. Triangle A(1, −5), B(−2, 6), C(1, 4) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: A′(−1, −5), B′(2, 6), C′(−1, 4)

3. Triangle A(−2, 2), B(3, −4), C(−3, −5) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: A′(−2, −2), B′(3, 4), C′(−3, 5)

4. Triangle A(0, 4), B(−3, −3), C(−1, −1) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: A′(0, 4), B′(3, −3), C′(1, −1)

5. Triangle A(4, 6), B(1, −6), C(3, −1) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: A′(4, −6), B′(1, 6), C′(3, 1)

6. Triangle A(0, 6), B(0, 1), C(−2, 1) is reflected over the x-axis. Give the coordinates of the image.

   A′B′C′: A′(0, −6), B′(0, −1), C′(−2, −1)

7. Triangle A(−6, −1), B(−6, −6), C(−2, −6) is reflected over the y-axis. Give the coordinates of the image.

   A′B′C′: A′(6, −1), B′(6, −6), C′(2, −6)