

Name _____

Date _____

Final Exam Review E (Transformations)

Math 8

1. Define and determine which transformation preserves isometry.

- a) reflection -
- b) translation -
- c) dilation -
- d) rotation -

2. Find the coordinates of rectangle ABCD after a reflection through the x-axis.

- | | |
|--------|---------|
| A(2,4) | A'(,) |
| B(6,4) | B'(,) |
| C(6,7) | C'(,) |
| D(2,7) | D'(,) |

3. Find the coordinates of triangle GHI after it has been dilated by a scale factor of 5.

- | | |
|--------|---------|
| G(2,8) | G'(,) |
| H(6,8) | H'(,) |
| I(4,5) | I'(,) |

a) Graph the following points, rectangle DEFG on the coordinate plane.

- D(2,8) E(10,8) F(10,2) G(2,2)

b) Dilate rectangle DEFG by a scale factor of $\frac{1}{2}$.
Graph the new rectangle D'E'F'G' on the same coordinate plane.

State the coordinates of D'E'F'G' below.

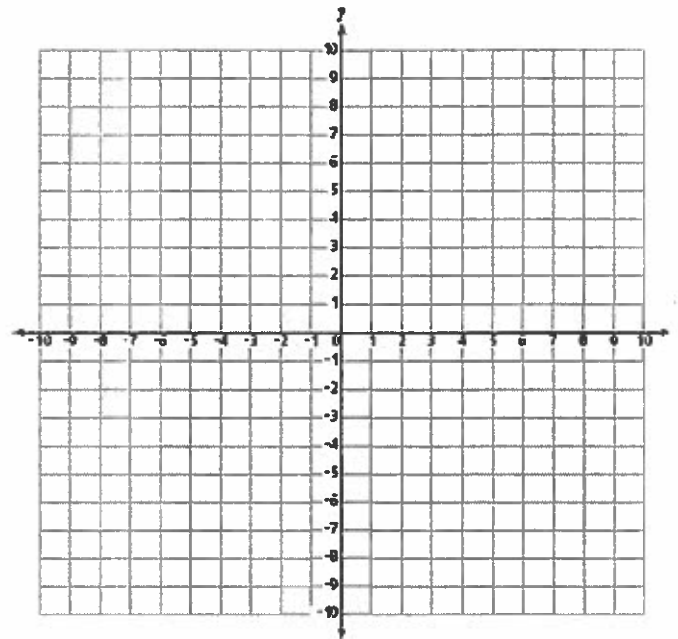
- | |
|---------|
| D'(,) |
| E'(,) |
| F'(,) |
| G'(,) |

c) Reflect rectangle D'E'F'G' over the x-axis.
Label this new image D''E''F''G''.

State the coordinates of D''E''F''G'' below.

- | |
|----------|
| D''(,) |
| E''(,) |
| F''(,) |
| G''(,) |

d) Explain whether the resulting image D''E''F''G'' is congruent to the original figure DEFG.

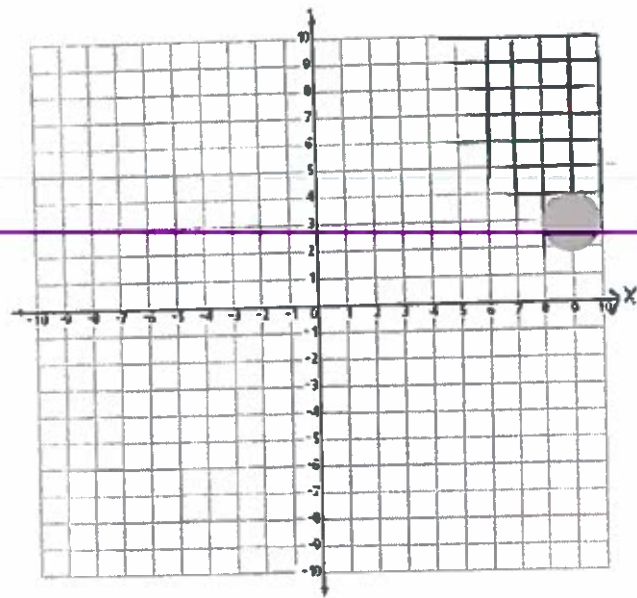


5a) Graph $\triangle JKL$ and $\triangle J'K'L'$ on the same coordinate plane.

$J(-3,7)$	$J'(7,7)$
$K(-3,3)$	$K'(7,3)$
$L(-6,5)$	$L'(10,5)$

b) Draw a line of reflection on the coordinate plane.

c) Write an equation for this line of reflection.

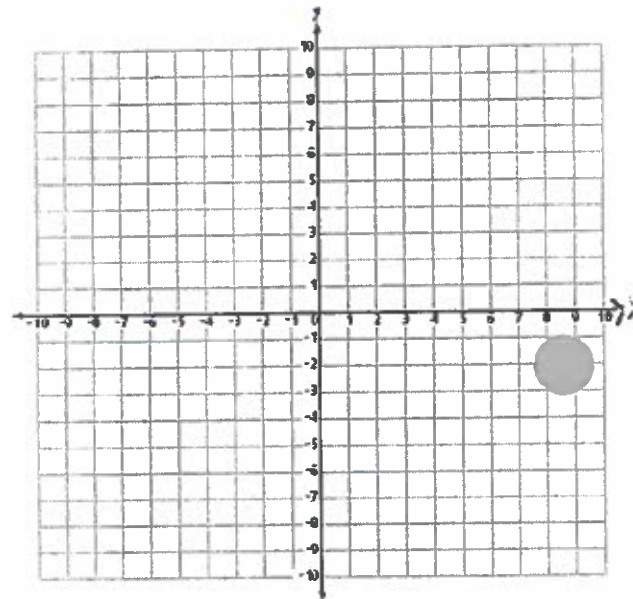


6a) Graph $\triangle MNO$ and $\triangle M'N'O'$ on the same coordinate plane.

$M(-2,-3)$	$M'(-2,5)$
$N(-5,-5)$	$N'(-5,7)$
$O(-8,-3)$	$O'(-8,5)$

b) Draw a line of reflection on the coordinate plane.

c) Write an equation for this line of reflection.



7a) Graph the following points, rectangle DEFG on the coordinate plane.

$D(6,4)$	$E(10,4)$	$F(10,10)$	$G(6,10)$
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b) Translate the rectangle 7 units left and 8 units down

c) State the coordinates of the new image.

D'	(,)
E'	(,)
F'	(,)
G'	(,)

d) Express this translation:

$$(x,y) \rightarrow (\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$$

