GRADE 8 IM INTERIM RUBRICS

3 Points:

Student response includes the following:

- Reasoning: complete and correct work
- Reasoning: complete and correct justification
- Computation: correct equation, $y = \frac{3}{16}x - 12$ or equivalent

Sample Student Response:

$$y = \frac{3}{16}x - 6 - 6$$
$$y = \frac{3}{16}x - 12$$

The equation does not represent a proportional relationship because the graph of the line representing the equation does not go through the origin.

Note: Credit should be given for a valid justification based on an incorrect equation.

2 Points:

2 elements correct.

1 Point:

1 element correct.

0 Points:

Incorrect or irrelevant response.

3 Points:

Student response includes the following:

Modeling component

- Complete and correct answer and justification about the distance relation
- Correct number of degrees, 45
- Complete and correct justification for the number of degrees

Sample Student Response:

The distance from location A to Main Street would be the same distance as from location B to Main Street because those segments are reflections of each other across Main Street. Segments that undergo reflections preserve distance.

The person would have to turn 45 degrees to their left (counterclockwise) to be facing location D. I can draw a line from the intersection of Main and Central Street through point D. That line would also form a 45-degree angle with Central Street because point D is a reflection of point C across Central Street. The two 45-degree angles would be reflections across Central Street.

2 Points:

2 elements correct.

1 Point:

1 element correct.

0 Points:

Incorrect or irrelevant response.

3 Points:

Student response includes the following:

- Reasoning: complete and correct explanation of how to use transformations to justify Alex's statement
- Reasoning: complete and correct description of one transformation as a reflection across the x-axis
- Reasoning: complete and correct description of one transformation as a translation to the right

Sample Student Response:

To justify Alex's statement, map one of the triangles onto the other using reflections, translations, and/or rotations.

Reflect triangle P across the x-axis. Then translate the triangle to the right. (Or vice versa)

2 Points:

2 elements correct.

1 Point:

1 element correct.

0 Points:

Incorrect or irrelevant response.

2 Points:

Student response includes the following:

- Modeling: complete and correct comparison
- Modeling: complete and correct work
- Computation: correct answer

Sample Student Response:

The speed of the car is 55 miles per hour and the speed of the train is 45 miles per hour.

Car: $231 \div 55 = 4.2$
Train: $231 \div 45 = 5.13$
Amount of time saved: $5.13 - 4.2 = 0.93$

Lisa would travel 0.93 hour less if she travels by car rather than train.

Note: Accept a rounded answer to the tenths place when determining the time traveling by train. For example, $5.1 - 4.2 = 0.9$ should be accepted. Also, if students convert from hours to minutes, then a range of $54 - 56$ minutes would be acceptable answers.

1 Point:

1 or 2 elements correct.

0 Points:

Incorrect or irrelevant response.

4 Points:

Student response includes the following:

- Reasoning: correct and complete description of single transformation in Part A
- Reasoning: correct and complete description of two transformations in Part B
- Reasoning: correct and complete description of a transformation(s) that creates a similar image such that all vertices have positive *x*-coordinates and negative *y*-coordinates in Part C
- Reasoning: correct and complete description of a transformation(s) that creates a similar image with a smaller perimeter in Part C

Sample Student Response:

Part A

Rotate rectangle EFGH 180 degrees about the origin.

Part B

Perform a reflection of rectangle EFGH over the x-axis followed by a reflection over the *y*-axis (or vice versa).

Part C

Perform a translation of rectangle STUV 10 units to the right followed by a dilation about the origin by a scale factor less than 1.

Note: Accept other correct descriptions of transformations. For example in Part C: perform a reflection of rectangle STUV across the *y*-axis followed by a dilation about the origin by a scale factor less than 1.

3 Points:

3 elements correct.

2 Points:

2 elements correct.

1 Point:

1 element correct.

0 Points:

Incorrect or irrelevant response.

3 Points:

Student response includes the following:

- Modeling: complete and correct explanation of how to determine the distance from Pier 1 to Pier 2
- Modeling: complete and correct work to determine the distance from Pier 1 to Pier 2
- Computation: correct answer

Sample Student Response:

The shape of the lake is approximately a right triangle so you can use the Pythagorean Theorem to approximate the distance from Pier 1 to Pier 2.

$$360^2 + 425^2 = c^2$$

$$310,225 = c^2$$

$$\sqrt{310,225} = \sqrt{c^2}$$

$$c \approx 556.98$$

The distance from Pier 1 to Pier 2 is approximately 557 feet.

2 Points:

2 elements correct.

1 Point:

1 element correct.

0 Points:

Incorrect or irrelevant response.