MYP3 Math 8 Practice Test/ Study Guide
Unit 2: Dilations Similarity and Introducing Slope

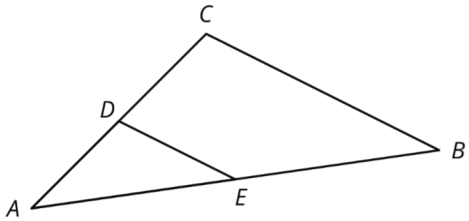
Problem 1

a. In your own words, explain what a dilation is. Include what happens to the side lengths and angles.

b. In your own words, explain how to determine if two triangles are similar.

Problem 2

Lin drew a triangle and a dilation of the triangle with a scale factor ½:



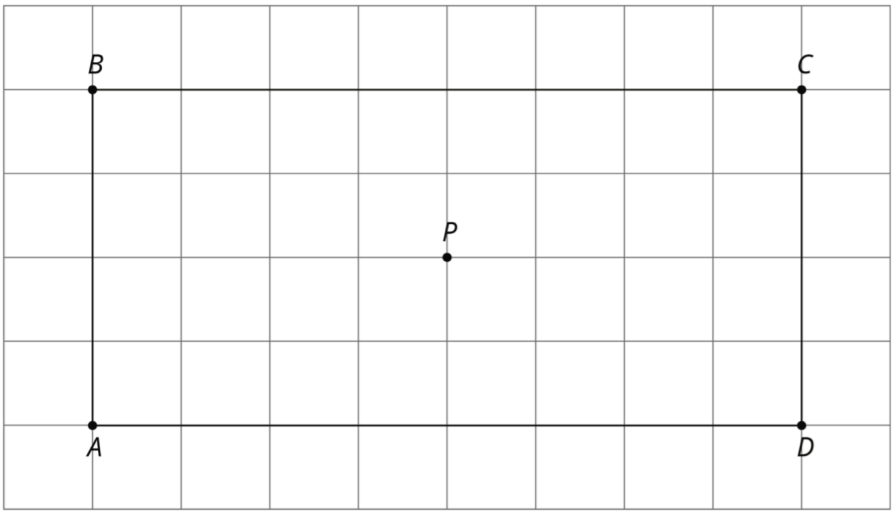
a. What is the center of the dilation? Explain how you know.

b. Which triangle is the original and which triangle is the image after dilation? Explain how you know.

Problem 3

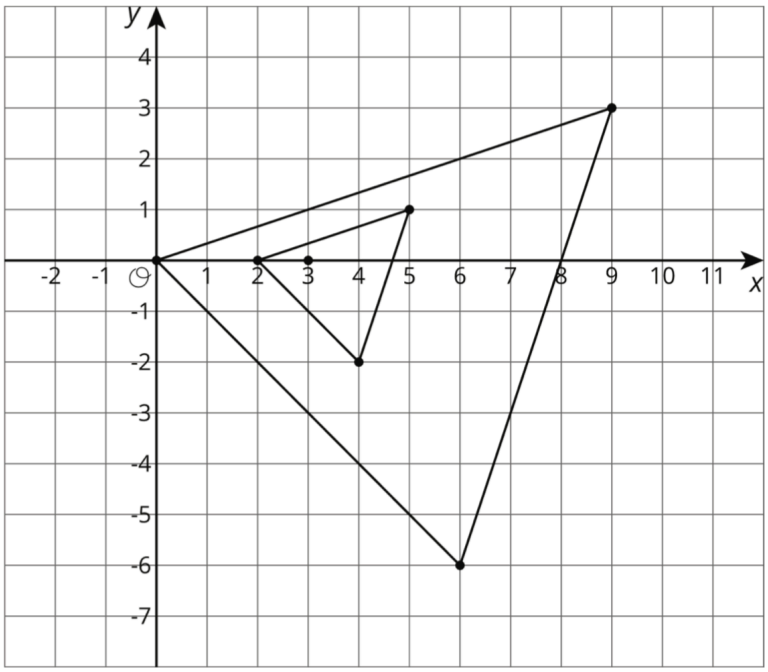
Draw the image of rectangle ABCD under a dilation using ***center A*** and scale factor ¼, then…

Draw the image of rectangle $ABCD$ under dilation using center P and scale factor $\frac{1}{2}$.



Problem 4

The smaller triangle is dilated to create the larger triangle. **Describe** this dilation.

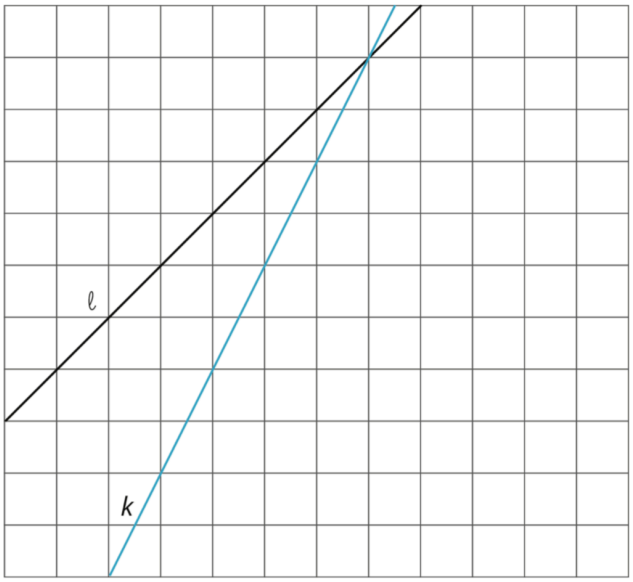


Problem 5

Find the slope of each line.

Slope of ℓ = _____

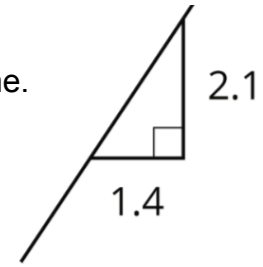
Slope of k = _____



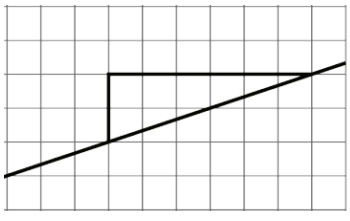
Problem 6

Find the slope of the line.

Slope = ____



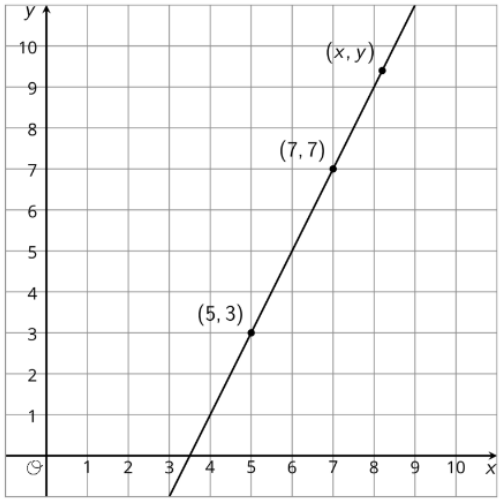
Slope = ____



Problem 7

a. Find the slope of the line. Explain or show your reasoning.

b.Write an equation for the line.

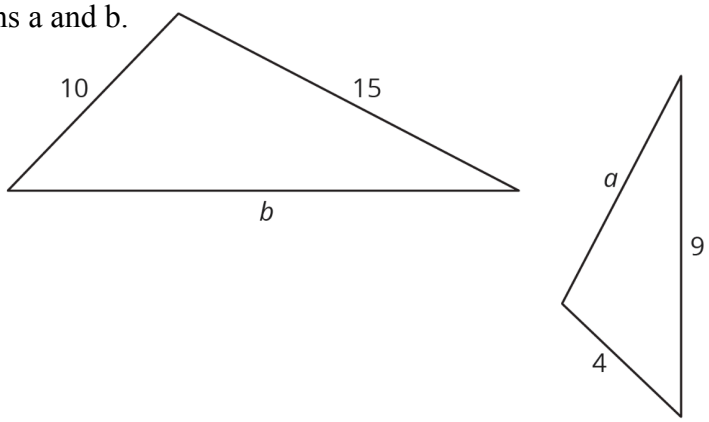


Problem 8 (Lesson 9, pp 1)

These two triangles are similar. Find side lengths a and b.

a = _____

b = _____



Problem 9

Label the vertical and horizontal sides of the triangle.

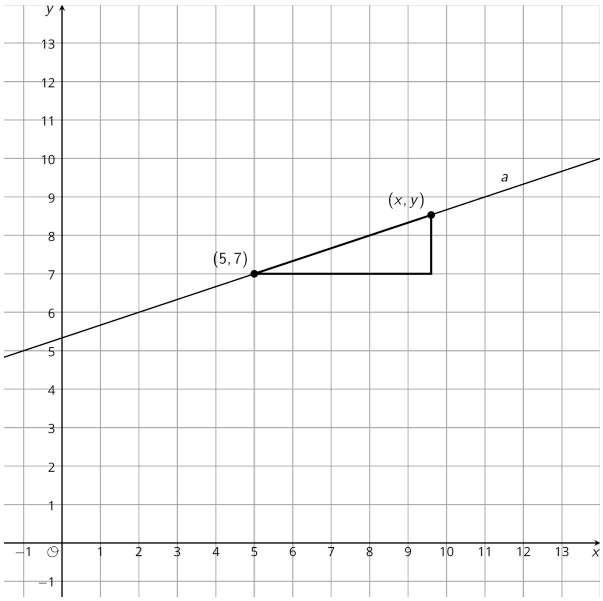
a. Find the slope of the line. _____

b. Draw a similar triangle with a scale factor of 2 and center of dilation at (5,7).

c. Write a rule/equation for the line.

y - ___ = ___(x - ___)

d. Is point (16, 11) on the line?



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