### Lesson 6 Practice Problems

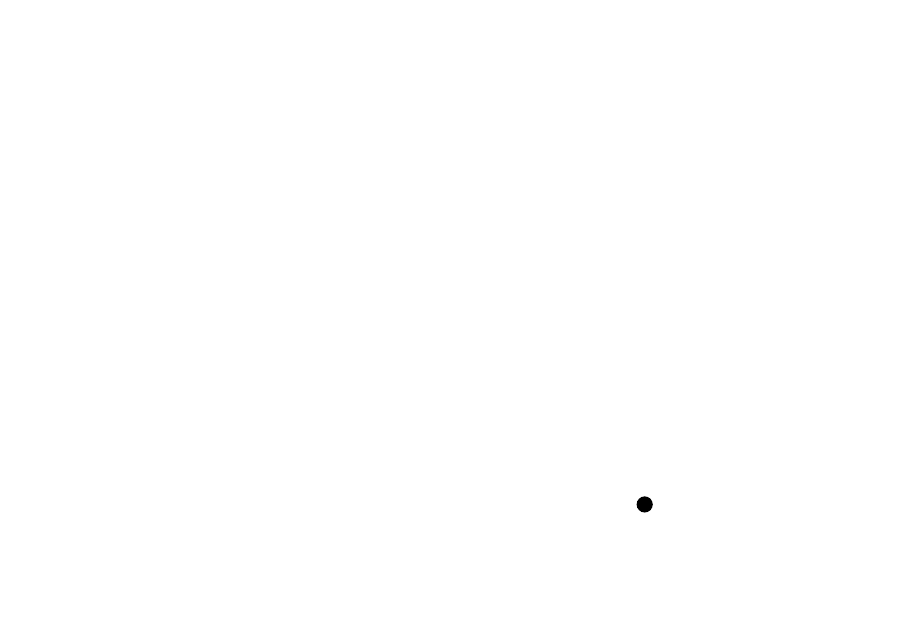
1. Find a sequence of rigid motions and dilations that takes square to square .

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1. Quadrilaterals and  are similar.
   1. What is the scale factor of the dilation that takes  to ?
   2. What is the scale factor of the dilation that takes to ?

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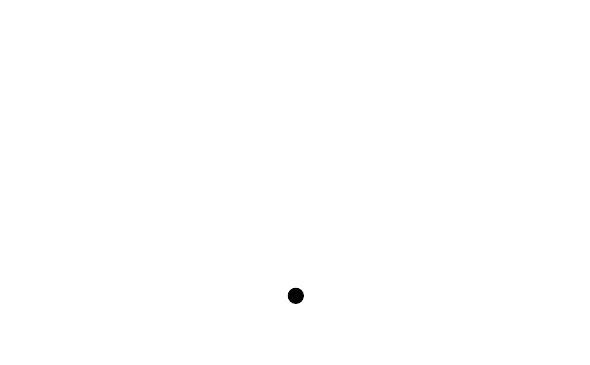
1. What is our definition of similarity?
   1. If 2 figures have the same angles, then they are similar.
   2. If 2 figures have proportional side lengths, then they are similar.
   3. If there is a sequence of rigid transformations taking one figure to another, then they are similar.
   4. If there is a sequence of rigid transformations and dilations that take one figure to the other, then they are similar.
2. Triangle is formed by connecting the midpoints of the sides of triangle . The lengths of the sides of are shown. What is the length of ?

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  1. 3 units
  2. 4 units
  3. 6 units
  4. 8 units
* (From Unit 3, Lesson 5.)

1. If is 12, what is the length of ?

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* (From Unit 3, Lesson 5.)

1. Right angle is taken by a dilation with center and scale factor  to angle . What is the measure of angle ?

* (From Unit 3, Lesson 4.)
  1. Dilate point using center and scale factor .
  2. Dilate segment  using center and scale factor .
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* (From Unit 3, Lesson 4.)

1. A polygon has perimeter 12. It is dilated with a scale factor of and the resulting image has a perimeter of 8. What is the scale factor?

* (From Unit 3, Lesson 3.)

1. Select **all** the statements that *must*be true.
   1. Parallelograms have four congruent sides.
   2. Both sets of opposite sides of a parallelogram are parallel and congruent.
   3. A trapezoid is a parallelogram.
   4. Diagonals of a parallelogram bisect each other.
   5. Diagonals of a parallelogram are congruent.

* (From Unit 2, Lesson 13.)



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