## Unit 2 Lesson 11: Similarity

### 1 Equivalent Expressions (Warm up)

#### Student Task Statement

Use what you know about operations and their properties to write three expressions equivalent to the expression shown.

$10\left(2+3\right)−8⋅3$

### 2 Similarity Transformations (Part 1)

#### Images for Launch



#### Student Task Statement

1. Triangle $EGH$ and triangle $LME$ are **similar**. Find a sequence of translations, rotations, reflections, and dilations that shows this.
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1. Hexagon $ABCDEF$ and hexagon $HGLKJI$ are similar. Find a sequence of translations, rotations, reflections, and dilations that shows this.
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### 3 Similarity Transformations (Part 2)

#### Student Task Statement

Sketch figures similar to Figure A that use only the transformations listed to show similarity.



1. A translation and a reflection. Label your sketch Figure B.
Pause here so your teacher can review your work.
2. A reflection and a dilation with scale factor greater than 1. Label your sketch Figure C.
3. A rotation and a reflection. Label your sketch Figure D.
4. A dilation with scale factor less than 1 and a translation. Label your sketch Figure E.

### 4 Methods for Translations and Dilations (Optional)

#### Student Task Statement

Your teacher will give you a set of five cards and your partner a different set of five cards. Using only the cards you were given, find at least one way to show that triangle $ABC$ and triangle $DEF$ are similar. Compare your method with your partner’s method. What is the same about your methods? What is different?





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