

Apprenticeship and Workplace Math 10

LG 14&15

SIMILARITY OF FIGURES



INTRODUCTION:

Do you like drawing? Need to create images smaller or larger than the originals? Check out pages 224-225.



LEARNING GUIDE EXPECTATIONS:

On the completion of this learning guide you will be able to:

- 1) Identify similar polygons.
- 2) Identify images that are *not* similar to the original diagrams.
- 3) Draw a polygon similar to another polygon.
- 4) Understand what characteristics make triangles similar.



EVALUATION:

You are ready to progress to the next learning guide when you can demonstrate your understanding of the above expectations. Please refer to your Mathematics 10 (A&W) Marks Record Sheet to determine the assessment.



RESOURCES NEEDED:



Math Works 10 Text

LEARNING ACTIVITIES:



Expectation #1: Identify similar polygons.



1. In the Math Works 10 text, read pages 226 – 231 and work through Examples 1, 2, 3, and ACTIVITY 6.1 ENLARGING BLUEPRINTS.



2. In your math journal, define the following terms: *similar figures*, *corresponding angles*, *congruent* and *corresponding sides*.



3. In the Math Works 10 text, complete questions #1-6, (#7 if you want a challenge) on pages 232-235.



Expectation #2: Identify images that are *not* similar to the original diagrams.



1. In the Math Works 10 text, read pages 236 – 242 and work through Examples 1 & 2, ACTIVITY 6.2 SCALING METIS SASHES, and ACTIVITY 6.3 APPLYING RATIOS TO DISTANCES.



2. In the Math Works 10 text, complete questions #1-8 (#9 if you want a challenge) on pages 243-245.



Expectation #3: Draw a polygon similar to another polygon.



1. In the Math Works 10 text, read pages 246-252 and work through ACTIVITY 6.4 ENLARGING A TRAPEZOID, Examples 1 & 2, ACTIVITY 6.5 THE RATIO METHOD, and ACTIVITY 6.6 THE PARALLEL METHOD.



2. In your math journal, define the following term: *regular pentagon*.



3. In the Math Works 10 text, complete questions #1-6 (#7 if you want a challenge) on pages 252-254.



Expectation #4: Understand what characteristics make triangles similar



1. In the Math Works 10 text, read pages 255-261 and work through Examples 1 & 2, ACTIVITY 6.7 PROVING SIMILARITY OF TRIANGLES, and ACTIVITY 6.8 REDUCING TRIANGLES.



2. In the Math Works 10 text, complete questions #1-5 (#6 if you want a challenge) on pages 261-263.

REVIEW AND CHALLENGE



1. In the Math Works 10 text, read page 264 and complete Chapter 6 Practice Your New Skills pages 265-269 #1-10.