

Apprenticeship and Workplace Math 10

LG 6&7

LENGTH, AREA, AND VOLUME



INTRODUCTION:

Do you like building projects? Need to calculate how much material you need for your project? Check out pages 92-93.



LEARNING GUIDE EXPECTATIONS:

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

- 1) Convert measurements from SI to imperial units and from imperial to SI units.
- 2) Calculate perimeter, circumference and area in imperial units.
- 3) Calculate the surface area and volume of three-dimensional objects in imperial units.



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: Convert measurements from SI to imperial units and from imperial to SI units.



1. In the Math Works 10 text, read pages 92 – 97 and work through Examples 1, 2 & 3 on pages 97-101.



2. In your math journal, define the terms *base unit*, *volume*, and *conversion factor* and give one example of each.



3. In the Math Works 10 text, complete questions #1-8, (#9 if you want a challenge) on pages 102-103.



Expectation #2: Calculate perimeter, circumference and area in imperial units.



1. In the Math Works 10 text, read pages 104 – 111 and work through Examples 1 & 2 on pages 108-109.



2. In the Math Works 10 text, complete questions #1-8, (#9 if you want a challenge) on pages 111-113.



Expectation #3: Calculate the surface area and volume of three-dimensional objects in imperial units.



1. In the Math Works 10 text, read pages 114-117 and work through Examples 1 & 2 and Activity 3.8 A REDECORATING PROJECT on pages 118-120.



2. In your math journal, define the following terms: *surface area*, *geometric net* and *scale factor*.



3. In the Math Works 10 text, complete questions #1-6 (#7 if you want a challenge) on pages 121-122



4. In the Math Works 10 text, read pages 124-127 and work through Examples 1, 2 & 3 and Activity 3.10 DRIVEWAY CONSTRUCTION on pages 127-131.



5. In your math journal, define the following term: *capacity*.



6. In the Math Works 10 text, complete questions #1-6 (#7 if you want a challenge) on page 132

REVIEW AND CHALLENGE



1. In the Math Works 10 text, complete Chapter 3 Practice Your New Skills pages 134-135 #1-9.