

# Foundations of Math 11 LG 17

## Proportional Reasoning

### INTRODUCTION:

Want to make sure you are not over spending at the Grocery Store? Comparing rates of different units can save you from over spending. Check out chapter 8 on page 449 to develop your spatial sense and proportional reasoning.

### LEARNING GUIDE EXPECTATIONS:


On the completion of this learning guide you will be able to develop your statistical reasoning ability by:

- 1) Solving Problems that involve rates.
- 2) Determining the relationships among scale factors, surface areas and volumes of similar objects and using these relationships to solve problems.

### 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 Foundations of Mathematics 11 Marks Record Sheet to determine the assessment.

### RESOURCES NEEDED:

 Foundations of Mathematics 11 Text and possible Internet access.

### LEARNING ACTIVITIES:

#### **Expectation #1: Solving Problems that involve rates.**

1.  [Watch and take notes on instructional video on Rates.](#)
2.  Read Investigate the Math on pages 452. Complete **Reflecting** on page 452-453 (A-H).
3. Work through Example 1 on pages 453-454. Complete **Your Turn** on page 454.
4. Work through Example 2 on pages 454-456.
5. Work through Example 3 on pages 456-457. Complete **Your Turn** on page 457.
6.  In your math journal, complete the journal entry for LG 17 Expectation #1 after you read the **In Summary** box on p. 458.
7. Complete 2, 4, 6, 8, 10 & 12 on pages 459.
8. Work through Example 1 on pages 462. Complete **Reflecting** on page 463.
9. Work through Example 2 on pages 463. Complete **Your Turn** on page 463.
10. Work through Example 3 on pages 464. Complete **Your Turn** on page 464.
11. Work through Example 4 on pages 464-466. Complete **Your Turn** on page 466.



12. In your math journal, complete the journal entry for LG 17 Expectation #1 after you read the **In Summary** box on p. 466.

13. Complete Questions 2, 4, 6 & 8 on page 467.



**Expectation #2: Determine the relationships among scale factors, surface areas and volumes of similar objects and using these relationships to solve problems.**



1. [Watch and take notes on instructional video on Scale Factors and Similarity.](#)



2. Work through Example 1 on pages 475-476. Complete **Your Turn** on page 476.

3. Work through Example 2 on pages 476-477. Complete **Your Turn (A&B)** on page 477.

4. Work through Example 3 on pages 478. Complete **Your Turn** page 478.



5. In your math journal, complete the journal entry for LG17 Expectation 2 after you read the **In Summary** box on p.479.

6. Complete #2, 4, 6, 8, 10 on pages 479-481.



7. Work through Example 1 on pages 484-485. Complete **Your Turn** on page 485.

8. Work through Example 2 on pages 485-486. Complete **Your Turn** on page 486.



9. In your math journal, complete the journal entry for LG17 Expectation 3 after you read the **In Summary** boxes on pages 486.

10. Complete 2, 4, 6 & 8 on pages 487-488.

11. Work through Example 1 on pages 492. Complete **Your Turn** on page 492.

12. Work through Example 2 on pages 493. Complete **Your Turn** on page 493.

13. Work through Example 3 on pages 494. Complete **Your Turn** on page 494.

14. Work through Example 4 on pages 495-496. Complete **Your Turn** on page 496.



15. In your math journal, complete the journal entry for LG 17 Expectation #3 after you read the **In Summary** box on p. 497.

16. Complete 2, 4, 6 & 8 on pages 498 to 499.

17. Work through Example 1 on pages 504. Complete **Your Turn** on page 505.

18. Work through Example 2 on pages 505-506. Complete **Your Turn (A&B)** on page 506.

19. Work through Example 3 on pages 507. Complete **Your Turn** on page 507.



20. In your math journal, complete the journal entry for LG 17 Expectation #3 after you read the **In Summary** box on p. 508.

21. Complete #2, 4, 6, 10 & 14 on pages 508-510.



## REVIEW AND CHALLENGE

### Important Terms For This Learning Guide

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|--|--|
| <input type="checkbox"/> rate<br><input type="checkbox"/> unit rate<br><input type="checkbox"/> scale<br><input type="checkbox"/> scale diagram<br><input type="checkbox"/> scale factor<br><input type="checkbox"/> similar objects |  |
|--|--|



1. Complete **PRACTISING** #1, 2, 4, 5, 7, 8, 9, 10 & 13 and 15 pages 515-516.



2. Complete #1, 2, 4, 6 Chapter Self-Test on page 512.

### PRACTICE QUIZZES

[Practice quiz #1](#)

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)

[Practice quiz #5](#)