

# Foundations of Math 10 LG 15

## TRIGONOMETRY



### INTRODUCTION:

Calculating angles and the lengths of the sides of a triangle are found in many different areas of the working world. Construction and architecture are the obvious fields, but other fields like interior and clothing design need to know something about triangles when they are putting together their designs for clients. To become a specialist in these various areas, these individuals had to spend some time working with triangles in different situations.



### LEARNING GUIDE EXPECTATIONS:

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

- 1) Use the sine, cosine and tangent ratio to solve problems in right triangles.



### 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 Marks Record Sheet to determine the assessment.



### RESOURCES NEEDED:



Math Links 10 Text



Geometry Set including a ruler, compass and protractor

### LEARNING ACTIVITIES:



**Expectation #1:** Use the sine, cosine and tangent ratio to solve problems in right triangles.



1. [Watch and take notes on instructional video on Intro to Trigonometry.](#)



2. Read pages 100-103.
3. Work through Examples 1, 2, 3 & 4 on pages 103-106.
4. Read Key Ideas on page 107.



5. In your math journal, draw a triangle and label the opposite, adjacent and hypotenuse sides of angle  $\theta$ . Then write down the equation of the tangent ratio.



6. Now complete #1, 3, 4, 6, 7, 9, 11-13, 14, 15 & 20 on pages 107-113.
7. Read Link the Ideas on page 115 then work through Examples 1, 2, 3 & 4 on pages 116-119.
8. Read Key Ideas on page 119.



9. In your math journal, include the sine and cosine equations along with the tangent ratio in your previous entry,



10. Now complete #1-6, 8-10, 12, 14 & 15 on pages 120-123.
11. For extra practice on sections 3.1 (tangent) click [here](#) and for section 3.2 (sine and cosine) click [here](#). For the answers to the extra practice, click [here](#).



12. [Watch and take notes on instructional video on Trig Problems.](#)



13. In the Math Links 10 text, work through Examples 1, 2, 3 & 4 on pages 127-130. Now complete #1-4, 6-8, 10-12, 14 & 15 on pages 131-135.



14. Read Key Ideas on page 131. In your math journal, use a diagram to explain the difference between the **angle of elevation** and the **angle of depression**.
15. For extra practice to section 3.3, click [here](#). For the answers to the extra practice, click [here](#).

## REVIEW AND CHALLENGE



1. In the Math Links 10 text, complete Chapter Review #1-9 on pages 136-137.
2. In the Math Links 10 text, complete Practice Test #1-9 on pages 138-139.
3. In the Math Links 10 text, complete Unit Connections #10-14 on pages 142-143.

## PRACTICE QUIZZES

[Practice quiz #1](#)

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)

[Practice quiz #5](#)