

keep scrolling to get  
a sneak peek!

Help your Algebra 2 or  
PreCalculus students review  
**solving right triangles with  
trigonometry** with these soccer  
themed review stations!

Students will be eager to get  
the self-checking & student  
choice benefits from these  
activities!

# SOLVING RIGHT TRIANGLES REVIEW

## Trigonometry Stations

**ANSWER KEY**

**STATION 1: GOAL MATCH!**

Directions: Find the missing side length. Round your answer to the nearest hundredth. Start with any question and answer it. Draw a line to the answer. Then write the letter in the long box below.

1.  $x = 7.87$  (Goal L)

2.  $x = 9.17$  (Goal B)

3.  $x = 14.50$  (Goal F)

4.  $x = 8.53$  (Goal S)

5.  $x = 14.50$  (Goal F)

**STATION 2: GAME DAY PIXELS**

Directions: Solve each problem. Find your answer from the choices below the problem in the grid based on your answers.

A. A 16ft ladder leans against a wall and makes a  $65^\circ$  angle with the ground. How high up the wall does the ladder reach?

$$\sin(65) = \frac{x}{16}$$
$$16 \sin(65) = x$$
$$x = 14.50$$

B. A wheelchair ramp rises 3ft between the start of the ramp and the door 20ft away. What angle does the ramp make with the ground?

$$\tan^{-1}(3/20) = x$$
$$x = 8.53^\circ$$

14.50 ft  
BLACK  
6.76 ft  
RED  
17.66 ft  
81.47°  
RED  
0.15°  
GREEN  
8.53°  
BLUE

Solve the right triangle. Round your answer to the nearest hundredth.

1.  $x = 14.50$  (Goal F)

2.  $x = 9.17$  (Goal B)

3.  $x = 14.50$  (Goal F)

4.  $x = 8.53$  (Goal S)

5.  $x = 14.50$  (Goal F)



4 Station Activities & Answer Keys

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Why do you need this?

# Solving Right Triangles with Trigonometry Review Stations



There are a variety of activities that cover several topics.



Help your students practice these essential math skills.



The activities have self-checking components so students can receive feedback!

The collage features several worksheets for solving right triangles using trigonometry. The visible worksheets include:

- STATION 1: GOAL MATCH!**: A worksheet with directions to find missing side lengths and draw lines to match answers. It includes a grid of soccer ball icons and a list of words to be unscrambled: L, F, B, S, E, H, O, R, A, T. The words are connected to their corresponding numerical answers: L (7.87), F (9.80), B (9.1), S (11.37), E (6.93), H (4.52), O (9.57), R (13.24), A (16.44), T (3.91).
- RIGHT TRIANGLE TRIGONOMETRY: MISSING ANGLES CIRCUIT**: A circuit-style worksheet with multiple problems. For example, problem 5 asks to find a missing angle given two sides and one angle. Previous answers are provided for some problems, such as 23.58° and 35.94°.
- STATION 2: GAME DAY PIXELS**: A self-checking activity where students solve problems and color a grid based on their answers. Problems include: A 16ft ladder leaning against a wall at a 65° angle; a wheelchair ramp rising 8ft over 20ft; a drone flying at a 28° angle of elevation; and a wire attached to a tower.
- ANSWER KEY**: A key for the Game Day Pixels activity, showing the trigonometric steps and final answers for each problem.

# Solving Right Triangle Trig Review Stations *includes:*

Name: **Answer Key** Date: \_\_\_\_\_

### STATION 2: GAME DAY PIXELS

Directions: Solve each problem. Find your answer from the choices below the problem. Then color in the grid based on your answers.

A. A 16ft ladder leans against a wall and makes a  $65^\circ$  angle with the ground. How high up the wall does the ladder reach?

$$\sin(65) = \frac{x}{16}$$
$$16 \cdot \sin(65) = x$$
$$x = 14.50$$

B. A wheelchair ramp rises 3ft between the start of the ramp and the door 20ft away. What angle does the ramp make with the ground?

C. A person stands 40yds away from the base of a building. The angle of elevation to the top is  $52^\circ$ . How tall is the building?

$$\tan(52) = \frac{x}{40}$$
$$40 \cdot \tan(52) = x$$
$$x = 51.20$$

D. A of ele of great dross

E. A wire attached to a tower is 45ft long and reaches 30ft up the tower. What angle does the wire make with the ground?

$$\sin^{-1}(30/45) = x$$
$$x = 41.81^\circ$$

F. A that l top of

14.50 ft	6.76 ft	17.66 ft	51.2
BLACK	RED	BLUE	RED

24.63 ft

62.23 ft	31.27 ft	120
GREEN	TAN	BLUE

48.19°

0.47°	14.81°	0.78
WHITE	TAN	BLACK

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

### STATION 4: PLAYER PRACTICE

Directions: Show your work from each question in the space below.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Solve the right triangle. Round your answer to the nearest hundredth.

Solve the right triangle. Round your answer to the nearest hundredth.

Solve the right triangle. Round your answer to the nearest hundredth.

Solve the right triangle. Round your answer to the nearest hundredth.

Solve the right triangle. Round your answer to the nearest hundredth.

Solve the right triangle. Round your answer to the nearest hundredth.

- ✔ 4 printable station activities
- ✔ answer keys
- ✔ teacher & student directions
- ✔ color & printer-friendly versions

# station 1 - Goal Match

**STATION 1: GOAL MATCH!**

Directions: Find the missing side length. Round your answer to the nearest hundredth. Start with any question and answer it. Draw a line to the answer box below.

1.  $x = 7.87$

2.  $x = 9.80$

3.  $x = 9.17$

4.  $x = 11.37$

5.  $x = 6.93$

6.  $x = 4.52$

7.  $x = 9.57$

8.  $x = 13.24$

Directions: Write down the letter from each correct answer in the space below. Use the hint to unscramble the word before moving on to the next station.

Hint: Another way to describe a soccer ball.

**L**  $x = 7.87$  **F**  $x = 9.80$   
**B**  $x = 9.17$  **S**  $x = 11.37$   
**E**  $x = 6.93$  **L**  $x = 4.52$   
**H**  $x = 9.57$  **O**  $x = 13.24$   
**R**  $x = 10.84$  **A**  $x = 16.44$   
**O**  $x = 10.19$  **T**  $x = 3.91$

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## Skill: Finding the Missing Side Length

Students will be given a right triangle with one side and one angle and must find the missing side length using trigonometry. Students will connect the question to the answer (goal) to identify a letter in the mystery word. This is **self-checking** since the word that is revealed must be spelled correctly.

### Includes:

- 8 questions
- recording sheet to show work
- detailed answer key

# station 2 - Game Day Pixels

## Skill: Right Triangle Trig Word Problems

Students will answer each question by using trigonometry to find the missing side or angle of the given word problem. They will match their answer with the answer choices below the question. Their answers will guide them to coloring in the pixel grid to reveal a mystery picture.

### Includes:

- 6 questions
- Space to show work
- Detailed answer key

Name: **Answer Key** Date: \_\_\_\_\_

### STATION 2: GAME DAY PIXELS

Directions: Solve each problem. Find your answer from the choices below the problem. Then color in the grid based on your answers.

A. A 16ft ladder leans against a wall and makes a  $65^\circ$  angle with the ground. How high up the wall does the ladder reach?

$$\sin(65) = \frac{x}{16}$$
$$16 \cdot \sin(65) = x$$
$$x = 14.50$$

B. A wheelchair ramp rises 3ft between the start of the ramp and the door 20ft away. What angle does the ramp make with the ground?

$$\tan^{-1}(3/20) = x$$
$$x = 8.53^\circ$$

14.50 ft	6.76 ft	37.66 ft	81.97°	0.26°
BLACK	RED	BLUE	RED	GREEN

C. A person stands 40yds away from the base of a building. The angle of elevation to the top is  $52^\circ$ . How tall is the building?

$$\tan(52) = \frac{x}{40}$$
$$40 \cdot \tan(52) = x$$
$$x = 51.20$$

D. A drone flies at a  $28^\circ$  angle of elevation and 120ft off the ground. How far away is the drone?

$$\tan(28) = \frac{120}{x}$$
$$x = \frac{120}{\tan(28)}$$
$$x = 225$$

24.63 ft	51.20 ft	31.27 ft	225.44 ft	63.81°
GREEN	TAN	BLUE	GREEN	PURPLE

E. A wire attached to a tower is 45ft long and reaches 30ft up the tower. What angle does the wire make with the ground?

$$\sin^{-1}(30/45) = x$$
$$x = 41.81^\circ$$

F. A 14ft tree casts a shadow that is 18ft long. What is the angle of depression from the top of the tree to the ground?

$$\tan^{-1}(\frac{14}{18}) = x$$
$$x = 37.87^\circ$$

48.19°	0.67°	41.81°	0.78°
WHITE	TAN	PURPLE	BLUE

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### STATION 2: GAME DAY PIXELS

Directions: Solve each problem. Find your answer from the choices below the problem. Then color in the grid based on your answers.

A. A 16ft ladder leans against a wall and makes a  $65^\circ$  angle with the ground. How high up the wall does the ladder reach?

B. A wheelchair ramp rises 3ft between the start of the ramp and the door 20ft away. What angle does the ramp make with the ground?

14.00 ft	6.76 ft	37.66 ft	81.97°	0.26°
BLACK	RED	BLUE	RED	GREEN

C. A person stands 40yds away from the base of a building. The angle of elevation to the top is  $52^\circ$ . How tall is the building?

D. A drone flies at a  $28^\circ$  angle of elevation and 120ft off the ground. How far away is the drone?

24.63 ft	51.20 ft	31.27 ft	225.44 ft	63.81°	136.91
GREEN	TAN	BLUE	GREEN	PURPLE	BLACK

E. A wire attached to a tower is 45ft long and reaches 30ft up the tower. What angle does the wire make with the ground?

F. A 14ft tree casts a shadow that is 18ft long. What is the angle of depression from the top of the tree to the ground?

48.19°	0.67°	41.81°	0.78°	37.87°	52.13°
WHITE	TAN	PURPLE	BLUE	BLACK	BROWN

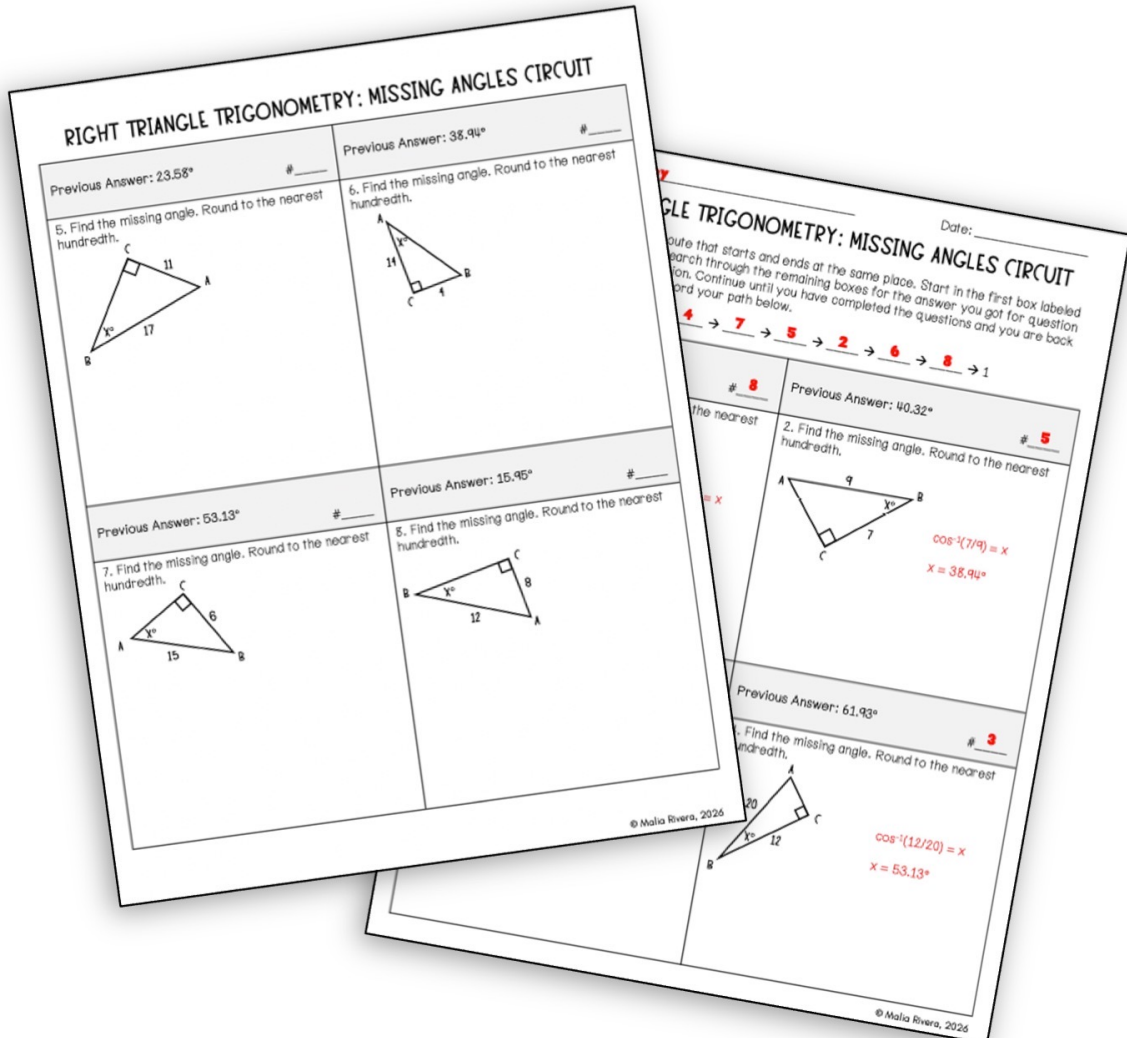
# station 3 - Playoff Circuit

## Skill: Finding the Missing Angle

With this self-checking circuit worksheet, students will start with question 1 and create use inverse trigonometry to find the missing angle measure. They search for the answer above their next problem to solve. They will have completed the circuit correctly if they answer all the problems and end back up at the first question to complete the loop.

### Includes:

- 8 questions
- detailed answer key



# station 4 - Player Practice

## Skill: Solving Right Triangles with Trigonometry

Given right triangle diagram, students will find the missing side length(s) and angle measure(s) using trigonometry. Students will show their work on recording sheet for showing their thought process and accountability.

### Includes:

- 12 questions
- recording sheet
- Answer key

# Right Triangle Trigonometry Review Stations

standards covered:

**CCSS:** HSF-TF.B.7, HSG-SRT.C.8

**TEKs:** G.9.A, P.4.E

**VA SOLs:** T.G.8.c, ATF.T.8

**STATION 1: GOAL MATCH!**

Directions:  
At this station, you will solve right triangles for its missing side length. Each correct match will reveal a letter, which you will use to unscramble a secret word.

Instructions:

- Start with any problem on the worksheet. Make sure to show your work!
- Once you get your answer, find it on the answer side of the page and draw a line from the question to the correct answer.
- Write down the letters from each correct answer.
- Use the hint to unscramble the letters to reveal the secret word.

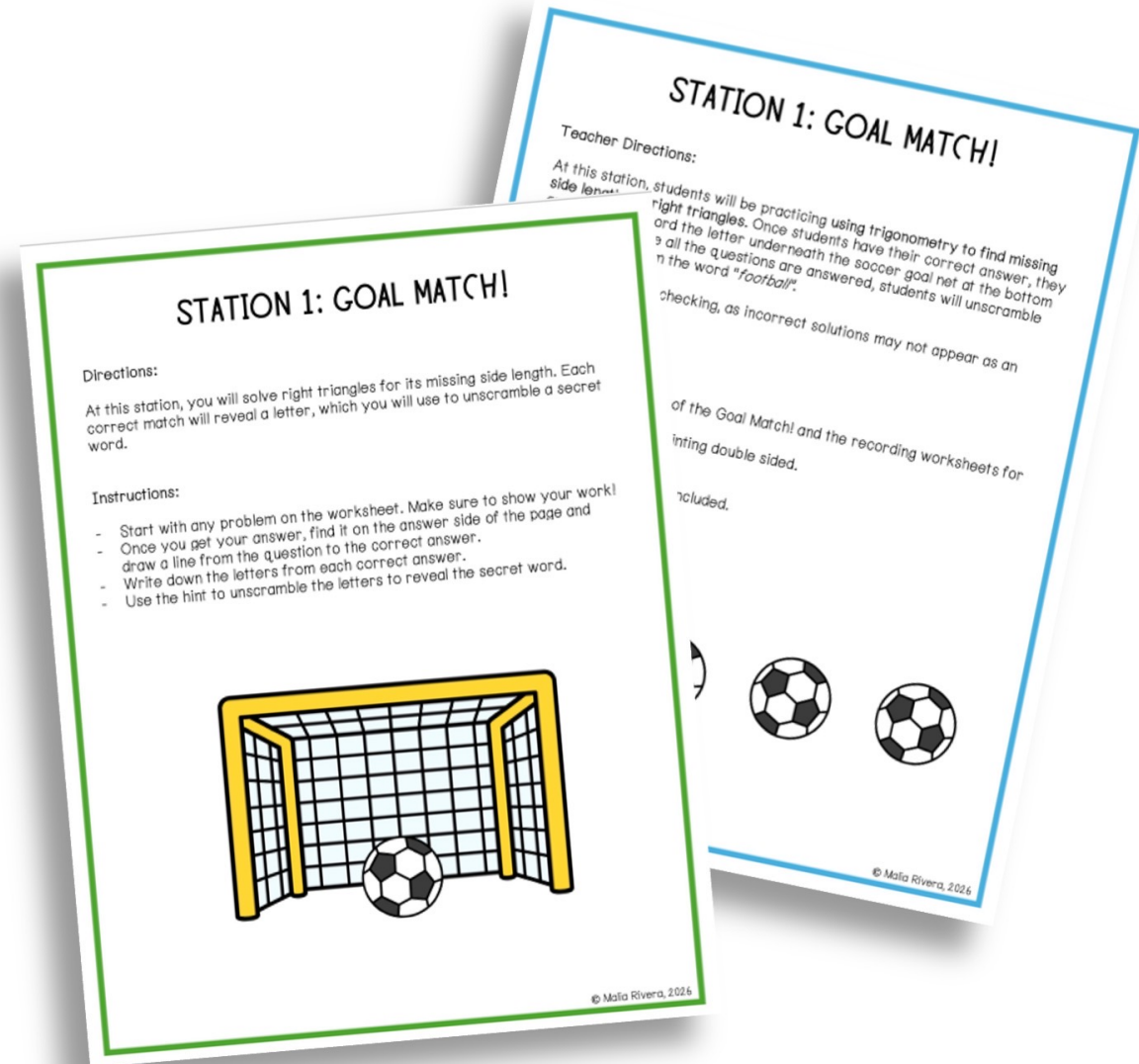
**7** Solve the right triangle. Round your answer to the nearest hundredth.

**12** Solve the right triangle. Round your answer to the nearest hundredth.

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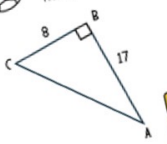
# Solving Right Triangles with Trig Review Stations

Teacher and printing directions included. Student directions to be printed at each station are also included!




# how to use this resource

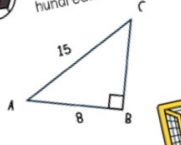
**7** Solve the right triangle. Round your answer to the nearest hundredth.



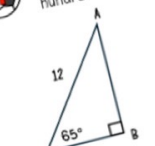
**8** Solve the right triangle. Round your answer to the nearest hundredth.



**9** Solve the right triangle. Round your answer to the nearest hundredth.

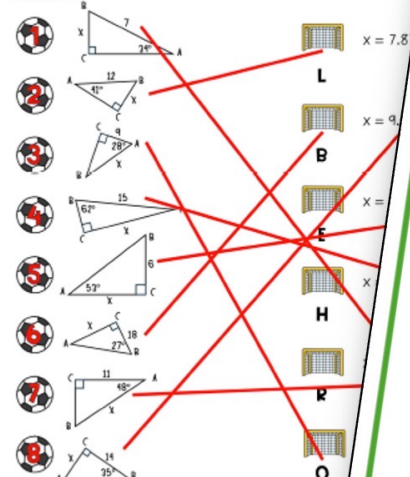


**10** Solve the right triangle. Round your answer to the nearest hundredth.



**STATION 1: GOAL MATCH!**

Directions: Find the missing side length. Round your answer to the nearest hundredth with any question and answer it. Draw a line to the answer. Then write the letter in the box below.



Directions: Write down the letter from each correct answer in the box below. Unscramble the word before moving on to the next station.

**FOOTBALL**

Hint: Another way to describe a soccer ball.

**F O O T B A L L**


**STATION 1: GOAL MATCH!**

Directions:

At this station, you will solve right triangles for its missing side length. Each correct match will reveal a letter, which you will use to unscramble a secret word.

Instructions:

- Start with any problem on the worksheet. Make sure to show your work!
- Once you get your answer, find it on the answer side of the page and draw a line from the question to the correct answer.
- Write down the letters from each correct answer.
- Use the hint to unscramble the letters to reveal the secret word.



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This is a great activity to use when reviewing for a **right triangle trig** assessment or as an end of year review.



hey there!

My name is Malia and I'm passionate about making learning and practicing math fun. I love creating engaging math resources for my students and I hope your students enjoy this activity too!

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