

Math 3 Advanced

Write a simplified trigonometric expression that solves the problem. Then use DESMOS to approximate the solution to three decimal places.

1. A ramp has a slant length of 12 ft and rises to a height of 3 ft. What is the angle that the ramp makes with the ground?
2. A ramp has a horizontal length of 12 ft and rises to a height of 3 ft. What is the angle that the ramp makes with the ground?
3. A ramp has a slant length of 15 ft and rises to a height of 2 ft. What is the angle that the ramp makes with the ground?
4. A ramp has a horizontal length of 15 ft and rises to a height of 2 ft. What is the angle that the ramp makes with the ground?
5. A ramp has a slant length of 20 ft and rises to a height of 4 ft. What is the angle that the ramp makes with the ground?
6. A ramp has a horizontal length of 20 ft and rises to a height of 4 ft. What is the angle that the ramp makes with the ground?
7. A ramp with a horizontal length of 15 ft makes a 30° angle with the ground. How high does the ramp go?
8. A ramp with a horizontal length of 15 ft makes a 30° angle with the ground. What is the slant length of the ramp?
9. A ramp with a horizontal length of 21 ft makes a 15° angle with the ground. How high does the ramp go?
10. A ramp with a horizontal length of 21 ft makes a 15° angle with the ground. What is the slant length of the ramp?