

Name \_\_\_\_\_

## Triumphant Triangulation: Navigating Oblique Triangles with Trigonometry

### Short Answer Key

1. Trigonometric principles such as sine, cosine, and tangent are used to solve oblique triangles.
2. The law of sines and the law of cosines are used to relate the lengths of sides and the measures of angles in oblique triangles.
3. To use the law of cosines to find the lengths of the sides of an oblique triangle, you can rearrange the formula  $c^2 = a^2 + b^2 - 2ab \times \cos(C)$  to solve for the desired side length.
4. Once you have the lengths of all three sides of an oblique triangle, you can find the measures of all three angles using trigonometric functions.
5. An example of a real-world problem that could be solved using trigonometry with an oblique triangle is determining the height of a mountain or building using angle measurements and distances from known points.

