Putting it all together

1. Match the formula to what it is used for.

|  |  |
| --- | --- |
| Primary Trig Ratios for Right Angle Triangles  The Pythagorean Theorem  Sine Law: solving for a side | Sine Law: solving for an angle  Cosine Law: solving for a side  Cosine Law: solving for an angle |

|  |  |
| --- | --- |
|  |  |
|  |  |
| SOHCAHTOA |  |
|  |  |
|  |  |
|  |  |

2. Determine each value, correct to 4 decimal places.

1. sin 510 = \_\_\_\_\_\_\_\_\_\_\_b) tan 170 = \_\_\_\_\_\_\_\_\_\_\_ cos 250 = \_\_\_\_\_\_\_\_\_\_\_\_\_

3. Determine each angle, correct to the nearest degree.

1. sin A = 0.4226 b) cos B = 0.4384 tan C = 1.2568

A = \_\_\_\_\_\_\_ B = \_\_\_\_\_\_\_\_ C = \_\_\_\_\_\_\_

When solving for and ANGLE always use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

4. Use Pythagorean Theorem to solve for the unknown side to one decimal place.

3.7

2.3



|  |  |
| --- | --- |
| a) | 15  12 |

5. Use SohCahToa to solve for the unknown side to one decimal place.

|  |  |
| --- | --- |
| a)  12.1  320 | 680  4.7 |

6. Use SohCahToa - Inverses to solve for the unknown angle to the nearest degree.

|  |  |
| --- | --- |
| a)  9.4  5.1 | 17  11 |

7. Find the value of in the following oblique triangles to one decimal place using:

a) The Cosine Law b) The Sine Law

960



9.2 m

12.1 m

970



370

5.2 ft

**8.** Find the value of in the following oblique triangles to the nearest degree using:

a) The Sine Law b) The Cosine Law

12.5 ft

9.4 ft

13.6ft

B

A

C

B

12.5 cm

C

650

8.3 cm

A

9. For each of the triangles below, indicate what tool you would use to solve for:

|  |  |
| --- | --- |
| 1. The Pythagorean Theorem 2. SOHCAHTOA 3. Sine Law: Solving for a side | iv) Sine Law: Solving for an angle  v) Cosine Law: Solving for a side  vi) Cosine Law: Solving for an angle |

**NOTE: DO NOT SOLVE!**

15

12

470

A

B

C



a) b)

5

3



**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

850

7

370

A

B

C



B

c) d)



23

12

C

9

A

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

10. A slide leans against a play structure. The slide is 4m long and the bottom of the slide is 2.3m from the base of the structure. What is the angle between the bottom of the slide and the ground?

11. The angle of depression from the top of a cliff to a raft in the water is 330. If the cliff is 55m high, how for is the raft from the base of the cliff?

12. If a ship leaves port and travels 12 km north and then directly 9 km east. If the ship it to return directly to port what is the **TOTAL** distance travelled?

13. Determine the height of the flag (BC) in the diagram below.

