

Questions: Trigonometry (degrees)

Dzhemma Ruseva, Ellie Gurini, Ciara Cormican

Summary

A selection of questions on trigonometry, where angles are measured in degrees.

Before attempting these questions, it is recommended that you read [Guide: Trigonometry](#)

Q1

You are given the triangle below.

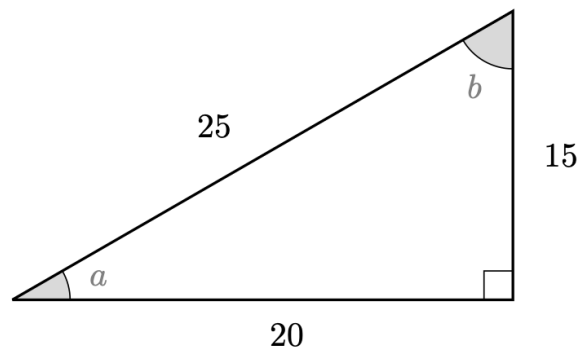


Figure 1: Q1. Triangle

Find \cos , \sin and \tan of both a and b .

Q2

Using the triangle below, solve the following equations.

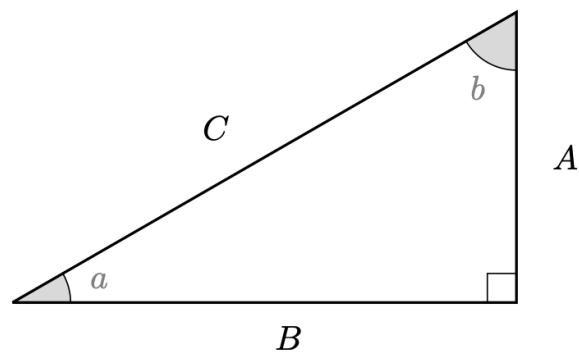


Figure 2: Q2. Triangle

- 2.1. If angle a is 30° and $B = 6$, what length is C ?
- 2.2. If angle b is 45° and $C = 2\sqrt{2}$, what length is A ?
- 2.3. If angle a is 15° and $C = 7$, what length is A ?
- 2.4. If angle b is 30° and $C = 2\sqrt{2}$, what length is A ?
- 2.5. If angle a is 45° and $B = 8$, what length is A ?
- 2.6. If angle a is 45° and $A = 8$, what length is B ?

Q3

Without using a calculator if possible, give the values of the following expressions.

- 3.1. $\cos(30)$
 - 3.2. $\tan(30)$
 - 3.3. $\csc(45)$
 - 3.4. $\cot(30) - \sin(60)$
 - 3.5. $\sin(90) + \cos(180)$
 - 3.6. $\tan(30) - \cot(30)$
 - 3.7. $\cos(0) \sin(90)$
 - 3.8. $\cos(30) \sec(30) - \sin(45) \csc(45)$
 - 3.9. $\cot(90)$
-

[After attempting the questions above, please click this link to find the answers.](#)

Version history and licensing

v1.0: initial version created 08/23 by Dzhemma Ruseva, Ellie Gurini, Ciara Cormican as part of a University of St Andrews STEP project.

- v1.1: edited 05/24 by tdhc, and split into versions for both degrees and radians.

[This work is licensed under CC BY-NC-SA 4.0.](#)