Questions: Trigonometry (degrees)

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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.

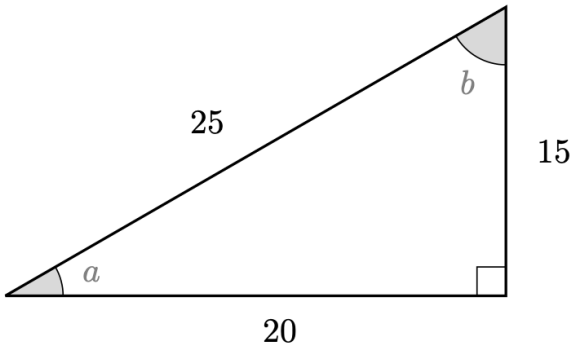

Figure 1: Q1. Triangle

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

Q2

Using the triangle below, solve the following equations.

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?

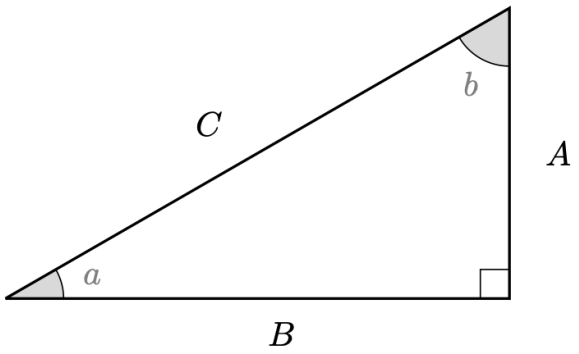

Figure 2: Q2. Triangle

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.