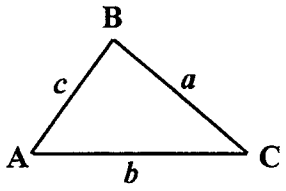
The Cosine Rule: $a^2 = b^2 + c^2 - 2bc\cos A$

or $\cos A = \dfrac{b^2 + c^2 - a^2}{2bc}$



1.	Given	$b = 2$ cm	$c = 3$ cm	A = 60°	find a
2.	Given	$a = 4$ cm	$b = 6$ cm	C = 35°	find c
3.	Given	$b = 7$ cm	$c = 9$ cm	A = 50°	find a
4.	Given	$a = 5$ cm	$c = 8$ cm	B = 40°	find b
5.	Given	$a = 6$ cm	$b = 7$ cm	c = 8 cm	find **A**
6.	Given	$a = 3$ cm	$b = 5$ cm	c = 7 cm	find **B**
7.	Given	$a = 4$ cm	$b = 2$ cm	c = 3 cm	find **C**
8.	Given	$a = 12$ cm	$b = 5$ cm	C = 90°	find c
9.	Given	$b = 3.5$ cm	$c = 4.7$ cm	A = 130°	find a
10.	Given	$a = 7.8$ cm	$c = 5.3$ cm	B = 146°	find b
11.	Given	$a = 10.2$ cm	$b = 6.4$ cm	c = 5.5 cm	find **A**
12.	Given	$a = 7.4$ cm	$b = 9.6$ cm	c = 16.2 cm	find **C**
13.	Given	$a = 8$ cm	$b = 10$ cm	c = 6 cm	find the size of the **smallest** angle
14.	Given	$a = 4.8$ cm	$b = 7.1$ cm	c = 5.5 cm	find the size of the **largest** angle
15.	Given	$a = 8.5$ cm	$b = 13.2$ cm	c = 14.8 cm	find the sizes of all 3 angles
16.	Given	$a = 17.1$ cm	$b = 28.6$ cm	c = 15.3 cm	find the sizes of all 3 angles

17. The goal-posts in football are 7.32 metres apart. A ball is placed on the ground 8 metres from one goal-post and 6 metres from the other. Within what angle must the ball be kicked along the ground in order to score?

18. Two people start walking from the same place at the same time.
They are walking on level ground. One walks at 4 kilometres an hour going due North, and the other walks at a speed of 3.5 kilometres an hour going North-east.
After 3 hours, how far apart will they be?

19. The principal 'legs' of a step-ladder are usually of two different lengths. In one case, the front leg (with the steps in it) is 2.8 metres long and the back (supporting) leg is 2.5 metres long. When in the working position, the angle between the legs is 40 degrees. What is the distance apart of the two legs on the floor?

20. A rhombus has all its edges 12.7 cm long. Its acute angle is 64°.
Find the length of its shorter diagonal