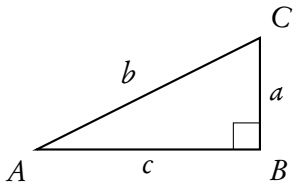
7. Use the diagram to solve each right-angled triangle. Give exact answers. Lengths are in cm.



7.a $a = 12, c = 24$

7.b $b = 9, A = 45°$

7.c $c = 4.5, B = 60°$

7.d $b = 6, c = 4\sqrt{3}$

7.e $a = 5\sqrt{2}, c = 10$

8. In the following questions, find the exact value of θ in degree measure ($0° < \theta < 90°$) and in radian measure ($0 < \theta < \frac{\pi}{2}$) without using your GDC.

8.a $\cos\theta = \frac{1}{2}$

8.b $\sin\theta = \frac{\sqrt{2}}{2}$

8.c $\tan\theta = \sqrt{3}$

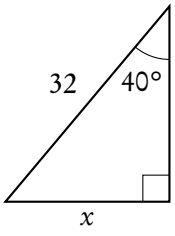
8.d $\sin\theta = \frac{\sqrt{3}}{2}$

8.e $\tan\theta = 1$

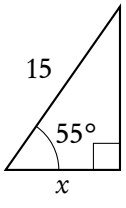
8.f $\cos\theta = \frac{\sqrt{3}}{2}$

9. In the following questions, solve for x. Give your answer to 3 s.f.

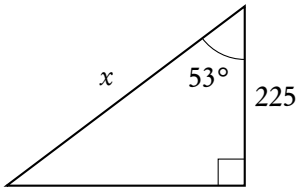
9.a



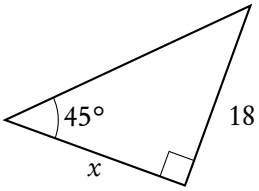
9.b



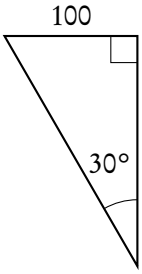
9.c



9.d



9.e



10. A 6 m ladder leaning against the side of a building makes a 72° angle with the ground. How far up the side of the house does the ladder reach? Tip: sketch the situation.

11. An isosceles triangle has sides of length 8 cm, 8 cm and 6 cm. Find the angle between the two equal sides.