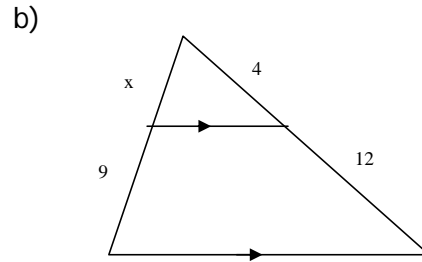
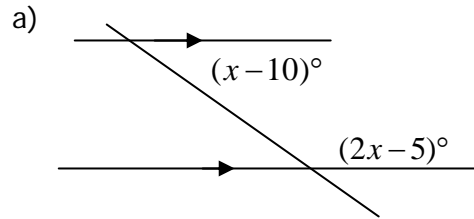
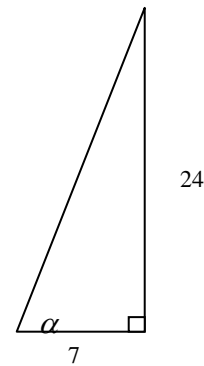
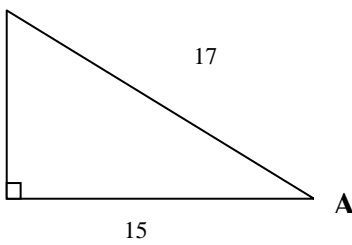


1. In the given diagrams, determine the values of the unknowns. Show your work.

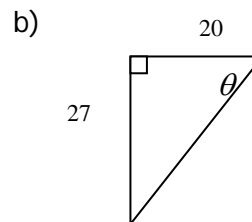
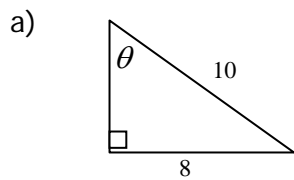


2. Determine the length of the unknown side and state the primary trigonometric ratios for the marked acute angles:

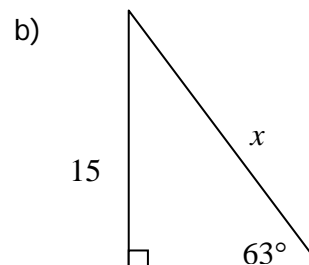
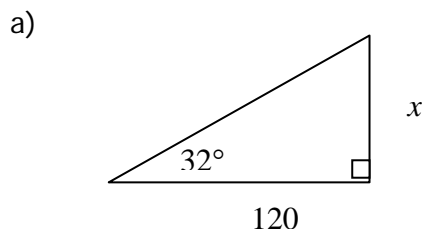


3. If $\cos \theta = \frac{5}{13}$ and θ is an acute angle, determine the other 2 trig ratios for θ .

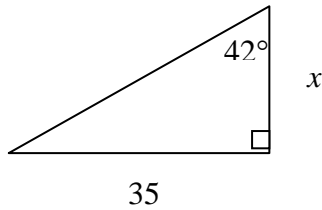
4. Find the measure of the indicated angle accurate to the nearest tenth:



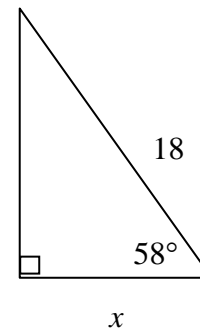
5. Find the length of the indicated side accurate to the nearest tenth:



c)



d)



6. Solve for θ , (to the nearest degree), given that:

a) $\sin \theta = 0.468$

b) $\tan \theta = 1.897$

c) $\cos \theta = 0.263$

d) $\tan \theta = 0.263$

7. Solve the following triangles: (all answers expressed to the nearest tenth)

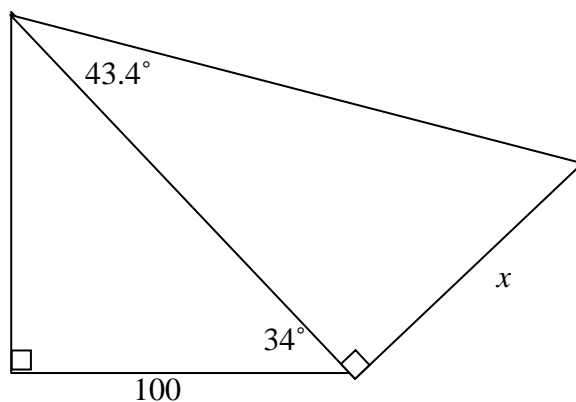
a) $\triangle ABC, \angle A = 90^\circ, a = 153, b = 107$

b) $\triangle DEF, \angle E = 90^\circ, \angle D = 35.1^\circ, f = 100$

c) $\triangle ABC, \angle A = 90^\circ, \angle B = 25^\circ, a = 5.65$

d) $\triangle ABC, \angle A = 90^\circ, b = 12, c = 18$

8. Determine the value of x in the following diagram: (accurate to 1 decimal place)



9. A flagpole casts a shadow of 300 m when the angle of elevation of the sun is 55° . Determine the height of the flagpole to the nearest metre.

10. From a point 120 m from the base of a building, the angles of elevation of the top and bottom of a flagpole attached to the roof of the building are 40° and 35° respectively. Calculate the height of the flagpole.