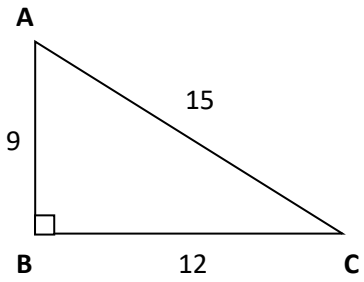
FMP10 Name_____

Unit 1 PreTest

1. State each ratio, in lowest terms, for the triangle below. (1 mark each)



a) sin A = _____

b) cos A = _____

c) tan C = _____

2. State each value to 4 decimal places. (1 mark each)

a) sin 65° = _____ b) cos 33° = _____ c) tan 6° = _____

3. For each given trig ratio, state the angle to 1 decimal place. (1 mark each)

a) cos A = 0.7832

$\angle$A = _____

b) tan B = 2.362

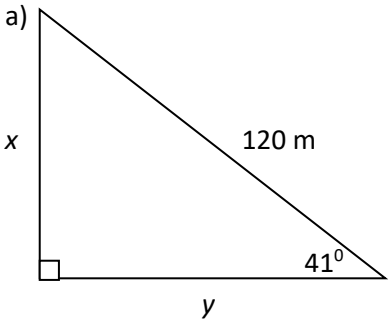
$\angle$B = _____

c) sin C = $\frac{5}{7}$

$\angle$C = _____

4. Find indicated unknown to 1 decimal place. Show work. (2 marks each)

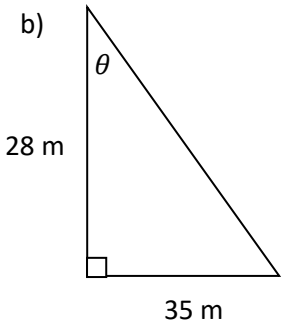
a)



x =_____

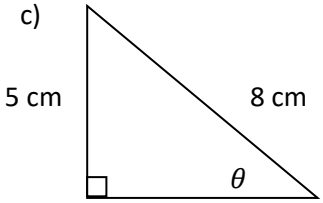
y = _____

b)



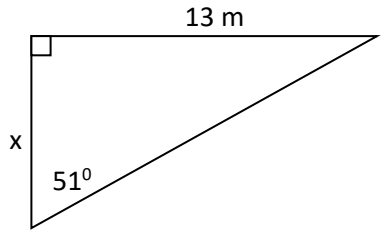
θ =_____

c)



θ =_____

d)



x =_____

5. Solve each triangle. Show work (including a diagram). Side lengths to 1 decimal place, angles to the nearest degree. (4 marks each)

a) $\Delta ABC, \angle B = 90^\circ, \angle A = 35^\circ, AB = 5cm$

$\angle C =$ _____

$AC =$ _____

$BC =$ _____

b) $\Delta PQR, \angle Q = 90^\circ, q = 12m, r = 7m$

$\angle P =$ _____

$\angle R =$ _____

$p =$ _____

6. Solve each problem. Include a diagram and show all work. Answers to the nearest tenth.

a) On a sunny day, the angle of elevation of the sun is 53^0. A tree, 18 m in height, casts a shadow. How long is the shadow? (3 marks)

_____

b) A wire 69.8 m in length is attached to the top of a tower. The wire makes an angle of 63^0 with the ground. How high is the tower? (3 marks)

_____

c) At a stadium concert, Tony is sitting 40 m horizontally away from the stage. He is 10 m vertically above stage level. At what angle of depression is he watching the concert? (3 marks)

_____

d) A ladder that is 8.5 m long leans against the wall. The ladder just reaches a window that is 7.8 m above the ground. What is the measure of the angle that the ladder makes with the wall? (3 marks)

_____

e) A forest ranger in a tower 35 m tall spots two fires on the ground. One is due North at an angle of depression of 20^0. The second is due East at an angle of depression of 25^0. How far apart, in a straight line, are the two fires? (5 marks)

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