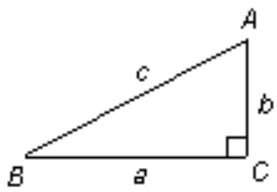
MCF3M In-Class trig assignment Name:

Multiple Choice: Clearly Circle your answer for each of the Multiple Choice Questions.

1. Which ratio gives the value of sin A for ΔABC?

a) $\frac{a}{b}$ b) $\frac{b}{c}$ c) $\frac{c}{b}$ d) $\frac{a}{c}$



2. Which value is equivalent to sin 45°?

a) 0.45 b) 0.707 c) 1 d) 0.5

3. Jim stood at the bottom of a hill and measured an angle of elevation of 40° to the top of the hill. He also measured the length a path on the hill to be 15m. What is the vertical distance from the top of the hill to the ground?

a) 11.5 m b) 12.6 m c) 7.5 m d) 9.6 m

4. A helicopter uses a flashlight for searching. The distance from the helicopter to the object is 60 m, and the angle of depression of the line of vision from the helicopter to the object is 65°. What is the horizontal distance from the helicopter to the object?

a) 54.4 m b) 128.7 m c) 25.4 m d) 30.0 m

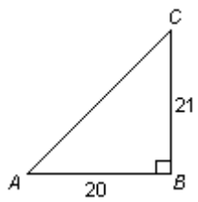
5. A ladder leaning against a wall reaches a height of 10 m up the wall and makes an angle of 75° with the ground. What is the length of the ladder?

a) 10.4 m b) 38.6 m c) 37.3 m d) 26 m

Short Answer – Answer each question in the space provided (1 mark each)

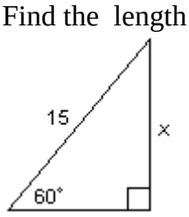
6. What is the value of tan 75°?

7. What is the value of sin A?

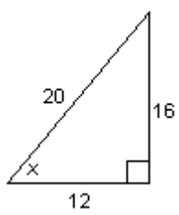


8. If $\cos p = \frac{3}{4}$ and p is acute, then the measure of angle p is _____.

9. Find the length of x.

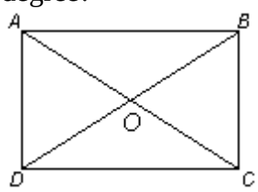


10. 8. What is the value of tan x?

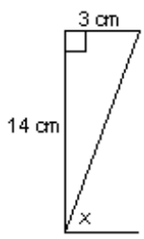


Long Answer – Answer each question in the space provide (2 marks each)

11. *ABCD* is a rectangle with *AB* = 15 cm and *BC* = 10 cm. What is the measure of $\angle BAC$ to the nearest degree?



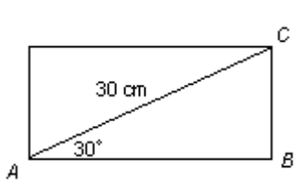
12. Find, to the nearest degree, the measure of angle *x*.



13. A cable is connected from the top of a vertical pole that is 10 m tall to a point on the ground that is 8 m away from the foot of the pole. Find, to the nearest degree, the angle of elevation of the cable.

14. A tree casts a 20.0 m shadow when the angle of elevation of the sun is 34°. Find the height of the tree to one decimal place. Show the steps of your solution.

15. A rectangular piece of paper has a diagonal length of 30 cm. Find the area of the paper to the nearest square centimetre. Show the steps of your solution.



16. Find the length of *AB*.