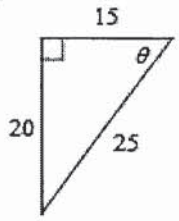
Name: _____ **Chapter 2 Practice Test – Trigonometry**

$$\sin\theta = \frac{O}{H} \qquad \cos\theta = \frac{A}{H} \qquad \tan\theta = \frac{O}{A} \qquad a^2 + b^2 = c^2$$

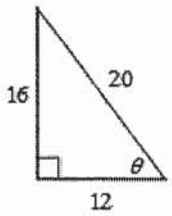
Show all of your work for full marks.

1. Find the value of the **trig ratio** indicated. Express your answer as a fraction (simplified, if necessary).

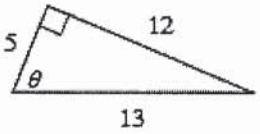
a) $\cos\theta$



b) $\sin\theta$

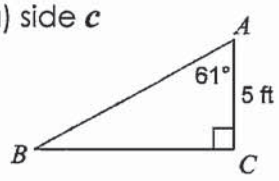


c) $\tan\theta$

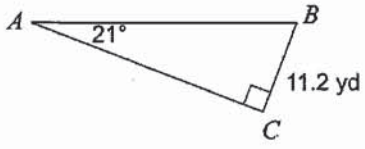


2. Find the measure of the indicated **side**. Round your final answer to the nearest tenth.

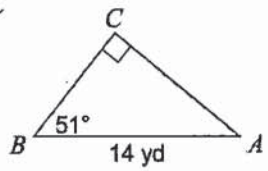
a) side ***c***



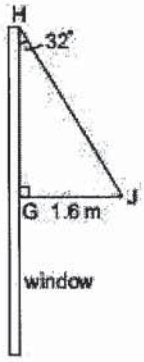
b) side ***b***



c) side ***BC***

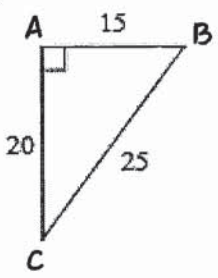


3. This diagram shows an awning over the window of a house. Find the height of the awning, ***GH***, to the nearest tenth of a meter.

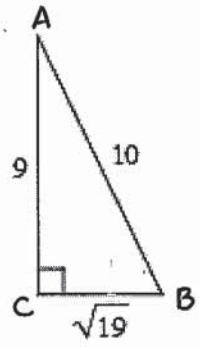


4. Find the measure of each **angle** indicated. Round your final answer to the nearest degree.

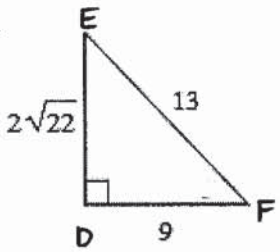
a) $\angle ABC$



b) $\angle BAC$



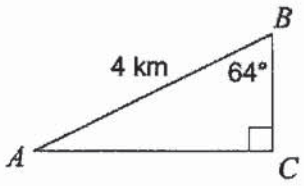
c) $\angle DEF$



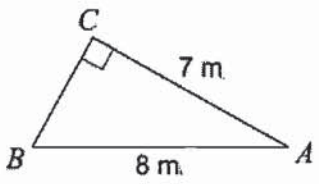
5. Victor is building a wheelchair ramp to an entranceway that is 3 m above the sidewalk. The ramp will cover a horizontal distance of 50 m. What angle, to the nearest degree, will the ramp make with the ground?

6. **Solve** the following right triangles. Give lengths to the nearest tenth and angles to the nearest degree.

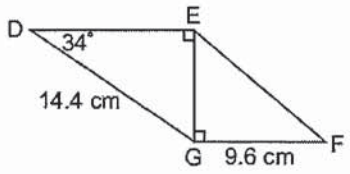
a)



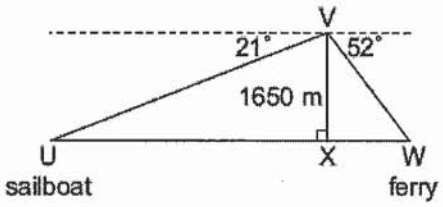
b)



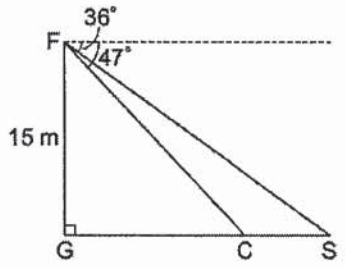
7. Find the measure of $\angle F$ to the nearest degree.



8. From a small plane, V, the angle of depression of a sailboat is 21°. The angle of depression of a ferry on the other side of the plane is 52°.
The plane is flying at an altitude of 1650 m.
How far apart are the boats, to the nearest meter?



9. The diagram shows a falcon, F, on a tree, with a squirrel, S, and a chipmunk, C, on the ground. From the falcon, the angles of depression of the animals are 36° and 47°.
How far apart are the animals on the ground to the nearest tenth of a meter?



10. Two buildings are 25 m apart. From the top of the shorter building, the angles of elevation and depression of the top and bottom of the taller building are 31° and 48° respectively.
What is the height of the taller building? Give your answer to the nearest meter.