Name: _____

Group: _____ Date: _____

EXTRA PRACTICE

Chapter 6

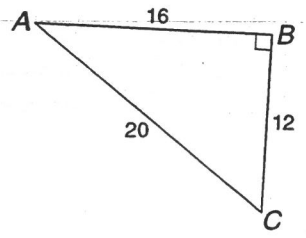
Objective 13.1 To deduce the angle or side measures of a right triangle using trigonometric ratios.

1. Use ΔABC to find the following ratios:

a) $\tan C$ _____ ***b)*** $\cos A$ _____

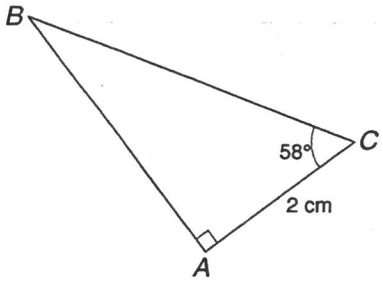
c) $\sin C$ _____ ***d)*** $\tan A$ _____

e) $\cos C$ _____ ***f)*** $\sin A$ _____



2. Solve the following right triangles. Round your answers to the nearest tenth for the sides and to the nearest unit for the angles.

a)



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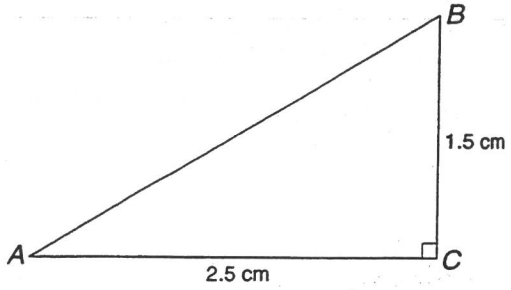
b)



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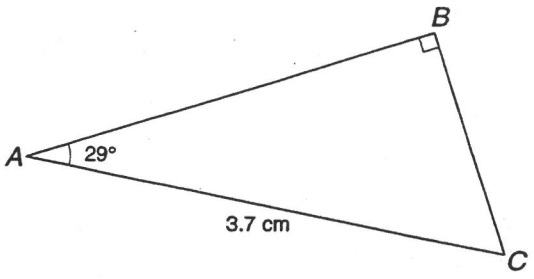
c)



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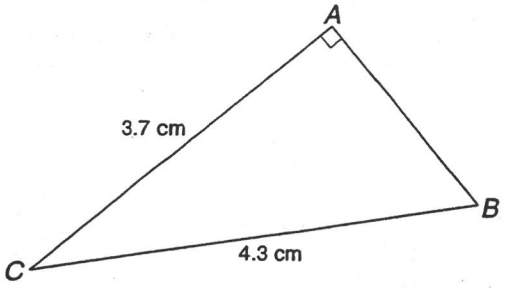
d)



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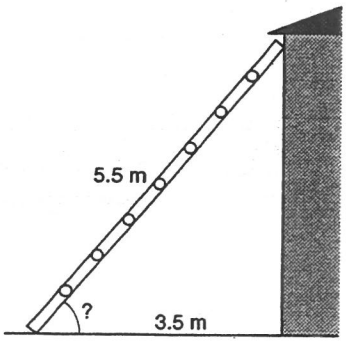
3. A 5.5 m ladder is placed against a wall. The foot of the ladder is 3.5 m from the base of the wall. Give the measure, to the nearest degree, of the angle the foot of the ladder forms with the ground.



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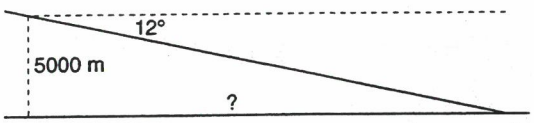
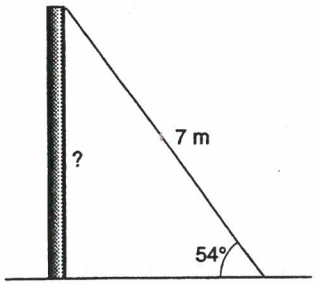
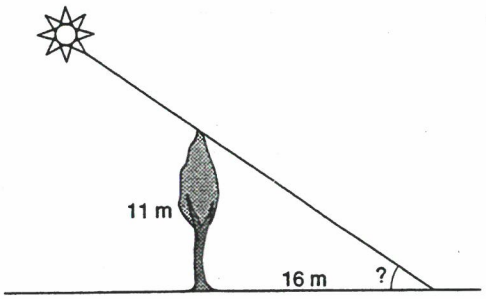
4. An airline pilot begins his descent toward the airport at a 12° angle of depression. If the plane is flying at an altitude of 5000 m, calculate the horizontal distance between the plane and the airport, to the nearest metre.



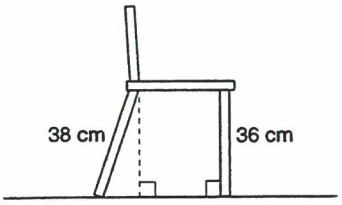
5. A 7 m steel cable is used to secure a telephone pole. The cable forms a 54° angle with the ground. Find the height of the pole to the nearest tenth of a metre.



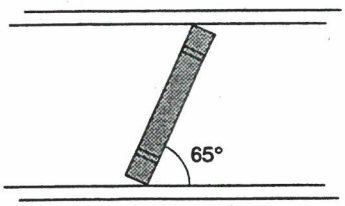
6. At a given time during the day, the shadow cast by an 11 m tall tree measures 16 m. What is the measure of the sun's angle of elevation (to the nearest degree)?



7. The back legs of a chair are slightly tilted. If each leg is 38 cm long and the seat is 36 cm off the ground, find the two legs' angle of inclination.



8. Two shelves of a bookcase are 29 cm apart. A book must be slanted at a 65° angle to fit between them. By how many centimetres (to the nearest centimetre) is this book too long?



9. Find the altitude to the hypotenuse of an isosceles right triangle whose legs measure 20 cm each. Round your answer to the nearest tenth of a centimetre.