Right Triangle Trig Word Problems Name: _____ Block: ___

Word Problems	Draw a Picture	Solution
1. When a ladder is rested against a tree, the foot of the ladder is 1 m from the base of the tree and forms an angle of 64° with the ground. How far up the tree does the ladder reach?		
2. A graded ramp is to be built to a barn loft. The ramp is to be inclined at an angle of 17°. The floor of the loft is 5 m above ground level. Find the length of the ramp, to the nearest tenth of a meter.		
3. Kendra walked diagonally across a rectangular field that is 45 m by 65 m. To the nearest degree, at what angle with respect to the longer side did she walk?		
4. A light house sits at the top of a sheer cliff. The top of the lighthouse is 33 m above sea level. The angle of depression to sight a small fishing boat at sea is 24°. How far from the base of the cliff is the fishing boat, to the nearest meter?		
5. A kite is 32 m above the ground. The angle the kite makes with the ground is 39°. How long is the kite string, to the nearest meter?		
6. At 2 pm Josh's shadow is 2.5 m long. If Josh is 1.5 m tall find the angle (to the nearest degree) that the sun's rays make with the ground.		
7. ΔABC is an isosceles triangle with equal sides of 5 cm. The base of the triangle is 8 cm. Find all three angles of the triangle to the nearest degree.		
8. When a road has a 10% gradient, it means that the road rises 10 m for every 100 m of horizontal distance travelled. What is the angle of inclination, to the nearest degree?		
9. If you were in a hot air balloon 500 m over Kelowna, BC, at what angle of depression would you look at a point on the ground 800 m horizontally from the balloon?		