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| For each exercise, you MUST draw a picture, set up the equation, and solve. | |
| **Angle of Elevation:**  [http://www.skwirk.com/content/upload/images/Secondary/NSW/Year_10/Maths/trigonometry/tp2/ch1/tp2ch1_image1.jpg](http://www.google.com/url?sa=i&rct=j&q=angle%20of%20elevation&source=images&cd=&cad=rja&docid=HQ_lRntK7X9vfM&tbnid=2A61gG5-kHWShM:&ved=0CAUQjRw&url=http://www.skwirk.com/p-c_s-12_u-95_t-230_c-770/angles-of-elevation-and-depression/nsw/angles-of-elevation-and-depression/trigonometry/applications&ei=faAGUs3DLujhygHZn4DgDw&bvm=bv.50500085,d.b2I&psig=AFQjCNHUt5rzAF_w0q9-NoaQ7hfb_CvaUA&ust=1376252398027628) | **Angle of Depression:**  [http://t3.gstatic.com/images?q=tbn:ANd9GcSDRoeRAGg3MKD6ZqXws8XBkaXm24zVIB_SOwBx2ax3hqdnMJvQ](http://www.google.com/url?sa=i&rct=j&q=angle%20of%20depression&source=images&cd=&cad=rja&docid=ZTLizmZ3uS1ZpM&tbnid=5-YvjHXo3xpjmM:&ved=0CAUQjRw&url=http://www.onlinemathlearning.com/angle-of-elevation.html&ei=4qAGUpSBKdLOyAH7r4Ew&bvm=bv.50500085,d.b2I&psig=AFQjCNHw87aAr4DtEdtsdMVTs50EmDFYMg&ust=1376252467231008) |
| 1. A 60 – foot extension ladder leans against the side of a building. Find the distance up the side of the building if the angle of elevation of the ladder is 72 degrees. | |
| 1. The pilot of an airplane flying at 14,000 feet sights a water tower. The angle of depression to the base of the tower is 19 degrees. What is the length of the line of sight from the plane to the tower? | |
| 1. An airplane leaves the runway climbing at 19 degrees with a speed of 270 feet per second. Find the altitude of the plane after 1 minute. | |
| 1. The angle of depression from the top of a building to the base of a statue 42 feet from the base of the building is 71 degrees. Determine the height of the building. | |
| 1. From a point on a cliff 72 feet above water level an observer can see a ship. The angle depression to the ship is 6 degrees. How far is the ship from the base of the cliff? | |
| 1. The ramp approaching a loading platform that is 5 feet off the ground is to have an angle of 17 degrees with the ground. Find the length of the ramp. | |
| 1. Find the height of a tree that casts a 25 foot shadow when the angle of elevation to the sun is 52°. | |
| 1. As a submarine at the surface of the ocean makes a dive, its path makes an angle of 22° with the surface of the water. If the sub travels for 315 meters along this path, how deep will it be? | |