

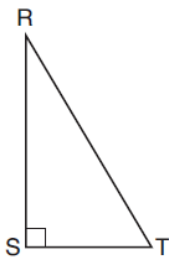
Name: _____
Date: _____
Class: _____

Geometry
Unit 3
HW 3-3

1) If a person is standing on the edge of a cliff and looking at a spot on the ground below that is 100 feet from the base of the cliff, find the angle of depression if the cliff is 200 feet tall.

2) If a tree that is 10 feet tall casts a shadow with an angle of elevation of 35° , how long is the shadow?

3)



If $m\angle SRT = 44^\circ$ and $ST = 17$ ft find the length of RT to the nearest tenth of an inch.

4) Using the triangle for #3, if $ST = 19$ and $RS = 20$ find $m\angle R$ to the nearest hundredth of a degree.

5) In an isosceles right triangle the length of the two legs can be represented by $x^2 - x - 3$ and $3x + 9$. Find the length of the hypotenuse of this triangle.

6) Triangle AXD is a right triangle with $\angle X$ as the right angle. If $m\angle A = 30^\circ$ and the side across from it is 204ft find the d to the nearest tenth of a foot.

7) If the two legs of an isosceles triangle are represented by $2x - 2$ and $x + 7$ find a range for the length of the 3rd side knowing that it must be at least half the length of one of the legs.

8) Triangle DTY is an isosceles triangle with $\angle D$ as the vertex angle. If $d = 2x - 4$, $t = x + 4$, and $y = 3x - 24$, find and explain the perimeter of this triangle.

9) Solve using complete the square: $5x^2 - 4x - 7 = 0$