Right Triangle Trig Review

1. Find the missing parts of the triangle ABC, with right angle C, if $c = 6$, $m\angle B = 38^\circ$

$m\angle A =$	$a =$
$m\angle B = 38^\circ$	$b =$
$m\angle C = 90^\circ$	$c = 6$

2. Find the missing parts of the triangle ABC, with right angle C, if $a = 12$, $b = 14$

$m\angle A =$	$a = 12$
$m\angle B =$	$b = 14$
$m\angle C = 90^\circ$	$c =$

3. At a point on the ground that is 30 meters from the base of a tree, the measurement of the angle of elevation to the top of the tree is 65°. How tall is the tree?

4. At the point from which it is being flown, the measurement of the angle of elevation of a kite is 70°. It is held by a string 65 meters long. How far is the kite above the ground?

5. Robert is standing on top of a cliff 200 feet above a lake. The measurement of the angle of depression to a boat on the lake is 21°. How far is the boat from the base of the cliff?

6. A 24 foot ladder leans against a building. It forms an angle with the ground measuring 82°. How far is the foot of the ladder from the base of the building?

7. In a parking garage, each floor is 20 feet apart. The ramp to each floor is 120 feet long. What is the measurement of the angle of elevation of the ramp?

Circular Trig

The given point is on the terminal side of angle θ, where θ is in standard position. Draw the angle and the reference triangle, then find the value of $\csc\theta$, $\sec\theta$ and $\cot\theta$

1. $(8, 6)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

2. $(40, -9)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

3. $(-12, 5)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

4. $(5, 12)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

5. $(-8, -15)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

6. $(4, -4)$ $\csc\theta =$ $\sec\theta =$ $\cot\theta =$

Find all 6 trig functions of θ, given the quadrant and the value of one trig function value of the angle.

1. Q I; $\sin\theta = \frac{3}{5}$

$\sin\theta =$ $\quad$ $\csc\theta =$

$\cos\theta =$ $\quad$ $\sec\theta =$

$\tan\theta =$ $\quad$ $\cot\theta =$

2. Q IV; $\sin\theta = -\frac{9}{41}$

$\sin\theta =$ $\quad$ $\csc\theta =$

$\cos\theta =$ $\quad$ $\sec\theta =$

$\tan\theta =$ $\quad$ $\cot\theta =$

3. Q II; $\cos\theta = -\frac{5}{13}$

$\sin\theta =$ $\quad$ $\csc\theta =$

$\cos\theta =$ $\quad$ $\sec\theta =$

$\tan\theta =$ $\quad$ $\cot\theta =$

4. Q III; $\tan\theta = \frac{15}{8}$

$\sin\theta =$ $\quad$ $\csc\theta =$

$\cos\theta =$ $\quad$ $\sec\theta =$

$\tan\theta =$ $\quad$ $\cot\theta =$