PreCalculus Name _____
Right Triangle Trig – Review WS

Use a calculator to evaluate each function. Round your answers to 4 decimal places.

1) sin 25° 2) cos 65° 3) cot 71.5° 4) sec 42°12'

5) cos 8°50'25" 6) tan $\pi/16$ 7) csc 1.25 8) csc 0

Find the value of Θ in degrees. Round to the nearest hundredth.

9) sin Θ = 0.8191 10) cos Θ = 0.9848 11) tan Θ = 1.1920 12) sec Θ = 1.4123

Find the value of Θ in D°M'S". Round to the nearest minute.

13) cos Θ = 0.4223 14) tan Θ = 1.5002 15) csc Θ = 1.5555 16) cot Θ = 2.1234

Solve each of the following triangles. Draw and label a picture for each. Show an equation for each. Round answers to the nearest tenth. ****** Show all diagrams and work on notebook paper!******

17) Triangle PQR – given that angle Q is the right angle, angle R is 33°, side q is 18.

18) Triangle JKM – give that angle K is the right angle, angle M is 62.3°, side m is 9

19) Triangle SUT – given that angle T is the right angle, side u = 7.5, side t is 31.3

20) A 30-meter line is used to tether a helium-filled balloon. Because of a breeze, the line makes an angle of approximately 75° with the ground. What is the height of the balloon?

21) From a 60-foot observation tower on the coast, a Coast Guard officer sights a boat in difficulty. The angle of depression of the boat is 4.5°. How far is the boat from the shoreline?

22) A passenger in an airplane flying at an altitude of 37,000 feet sees two towns directly to the left of the airplane. The angles of depression to the towns are 32° and 76°. How far apart are the towns?

23) A boat is 160 miles north and 85 miles east of port. What bearings should be taken to head directly back to port?

Answers:

1) 0.4226 2) 0.4226 3) 0.3346 4) 1.3499
5) 0.9881 6) 0.1989 7) 1.0538 8) undefined
9) 54.99° 10) 10.00° 11) 50.01° 12) 44.92°
13) 65°1' 14) 56°19' 15) 40°0' 16) 25°13'
17) P = 57°; r = 9.8; p = 15.1 18) J = 27.7°; k = 10.2; j = 4.7 19) U = 13.9°; S = 76.1°; s = 30.4
20) 29.0 m 21) 762.4 ft 22) 49,987.2 ft 23) S 28.0° W