

Use a calculator to find a nonnegative angle less than 360° for the function value.

1) $\csc \theta = -1.3902$, θ is in quadrant III

2) $\tan \theta = 0.6009$, θ is in quadrant III

Without using a calculator, give the exact trigonometric function values with rational denominators.

3) $\sec 45^\circ$

4) $\sin 30^\circ$

5) $\tan 60^\circ$

6) $\csc 45^\circ$

Find the exact function value for #7 and #8.

7) $\tan 405^\circ$

8) $\sec -315^\circ$

9) Find the supplement of an angle whose measure is $59^\circ 58' 35''$.

10) Find the complement of an angle whose measure is $13^\circ 8' 17''$.

Find the exact acute angle θ for the given function value. for #11 and #12.

11) $\csc \theta = \sqrt{2}$

12) $\cot \theta = \sqrt{3}$

13) City X is 95 miles due south of City Y, and City Z is 100 miles due west of City X. What is the angle at Y (to the nearest tenth of a degree)?

14) From a balloon 1,076 feet high, the angle of depression to the ranger headquarters is $46^\circ 50'$. How far is the headquarters from a point on the ground directly below the balloon (to the nearest foot)?

15) A fire is sighted due west of lookout A. At lookout B, 8.4 miles due south of A, the fire is also sighted. The angle at B is 48.5° . How far is the fire from B (to the nearest tenth of a mile)?

16) 16 . A boat sails for 2 hours at 25 mph in a direction $123^\circ 11'$. How far south has it sailed (to the nearest mile)?

Find the requested function value of θ .

17) If $\cos \theta = \frac{5}{8}$, find $\tan \theta$.

18) If $\sin \theta = \frac{7}{11}$, find $\cos \theta$.

Convert the angle measures to degrees, minutes, and seconds. Round seconds to whole units.

19) 51.68°

Write in terms of the cofunction.

20) $\cot 77^\circ$

Use the appropriate identity to find the indicated function value. Rationalize the denominator when applicable. If the given value is a decimal, round your answer to three decimal places.

21) $\sec \alpha$, if $\cos \alpha = \frac{\sqrt{7}}{2}$

Find the acute angle θ , to the nearest hundredth of a degree, for the given function value.

22) $\tan \theta = 0.3099$

23) $\csc \theta = 2.525$

Solve the right triangle. Give exact answers if possible.

24) $B = 42.4^\circ$, $c = 4.7$ mm, $C = 90^\circ$

Express the angle in degrees to the nearest hundredth.

25) $73^\circ 43' 51''$

Find the indicated trigonometric function, if θ is an angle in standard position with the terminal side passing through the given point.

26) $(4, 7)$; Find $\tan \theta$.

Answer Key

Testname: JANET REVIEW CHAPTERS 1 & 2

- 1) 226°
- 2) 211°
- 3) $\sqrt{2}$
- 4) $\frac{1}{2}$
- 5) $\sqrt{3}$
- 6) $\sqrt{2}$
- 7) 1
- 8) $\sqrt{2}$
- 9) $120^\circ 1' 25''$
- 10) $76^\circ 51' 43''$
- 11) 45°
- 12) 30°
- 13) S 46.5° W
- 14) 1,009 ft
- 15) 12.7 mi
- 16) 27 mi
- 17) $\frac{\sqrt{39}}{5}$
- 18) $\frac{\sqrt{72}}{11}$
- 19) $51^\circ 40' 48''$
- 20) $\tan 13^\circ$
- 21) $\frac{2\sqrt{7}}{7}$
- 22) 17.22°
- 23) 23.33°
- 24) $a = 3.5$ mm, $A = 47.6^\circ$, $b = 3.2$ mm
- 25) 73.73
- 26) $\frac{7}{4}$