

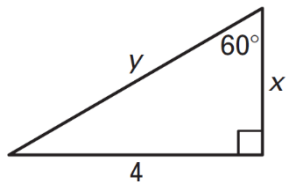
Review Lessons 13.1 – 13.3 Worksheet

Name: _____

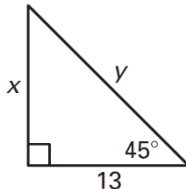
NO CALCULATOR, NO REFERENCE SHEET

Find the exact values of x and y .

1.)



2.)



Evaluate the trigonometric function. Give an exact answer.

3.) $\tan \frac{\pi}{6}$

4.) $\csc \frac{\pi}{3}$

5.) $\sin \frac{\pi}{4}$

6.) $\cos \frac{\pi}{3}$

7.) $\sec \frac{\pi}{4}$

8.) $\cot \frac{\pi}{6}$

Evaluate the six trigonometric functions of θ .

9.) $\theta = -270^\circ$

10.) $\theta = -\pi$

NO CALCULATOR, MAY USE REFERENCE SHEET

Evaluate the function without using a calculator (i.e. ALL ANSWERS SHOULD BE EXACT, NO DECIMALS).

11.) $\sin(-120^\circ)$

12.) $\sec 45^\circ$

13.) $\cot(-390^\circ)$

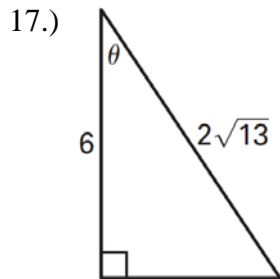
14.) $\cos \frac{17\pi}{6}$

15.) $\csc \left(-\frac{3\pi}{4}\right)$

16.) $\tan \frac{8\pi}{3}$

MAY USE CALCULATOR, MAY USE REFERENCE SHEET

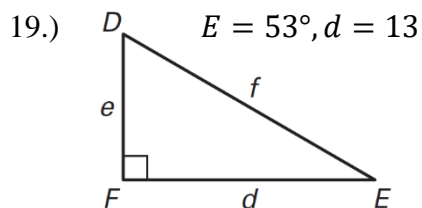
Evaluate the six trigonometric functions of the angle θ .



Let θ be an acute angle of a right triangle. Find the values of the other five trigonometric functions of θ .

18.) $\cos \theta = \frac{5}{6}$

Solve $\triangle ABC$ using the diagram and the given measurements. Round answers to the nearest tenth, when necessary.

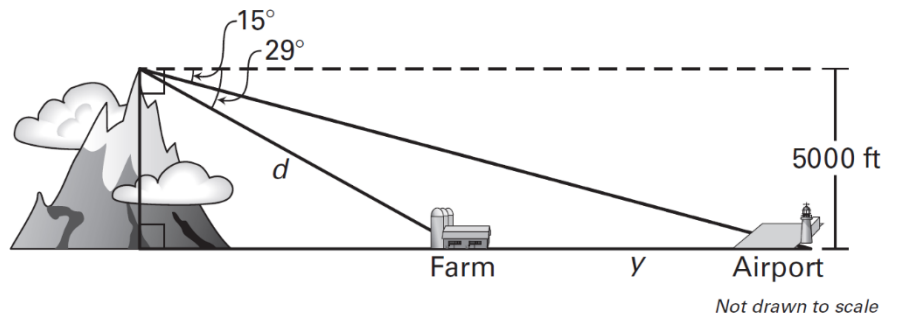


20.) A person casts a 21 foot shadow when the sun is at a 16° angle of elevation. What is the approximate height of the person?

21.) A hiker at the top of a mountain sees a farm and an airport in the distance.

a.) What is the distance d from the hiker to the farm?

b.) What is the distance y from the farm to the airport?

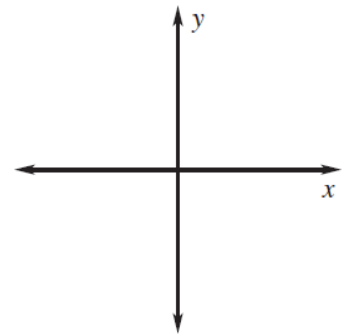
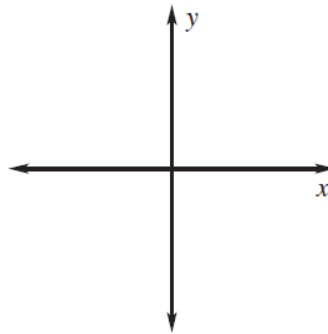
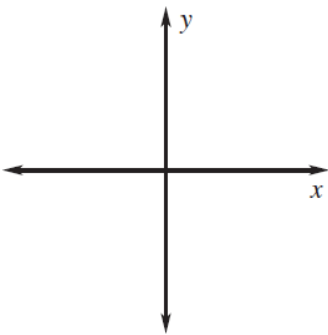


Sketch the angle. Then find its reference angle. Answer in the unit of the given angle.

22.) -115°

23.) 125°

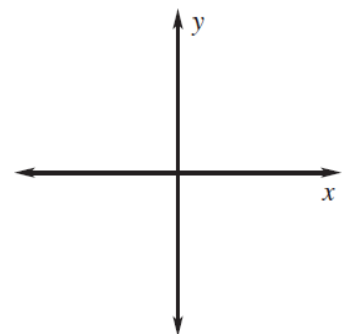
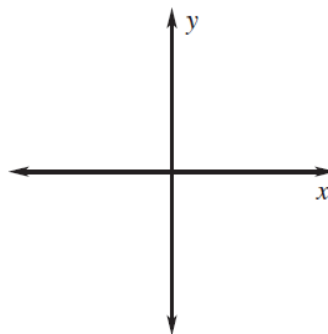
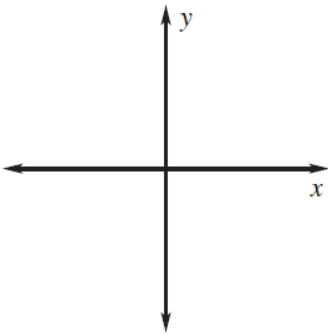
24.) 325°



25.) $-\frac{17\pi}{6}$

26.) $-\frac{7\pi}{4}$

27.) $\frac{11\pi}{3}$



Find one positive angle and one negative angle that are coterminal with the given angle.

28.) 70°

29.) -375°

30.) $-\frac{5\pi}{8}$

31.) $\frac{13\pi}{6}$

Convert the degree measure to radians or the radian measure to degrees.

32.) 500°

33.) -125°

34.) 5π

35.) $-\frac{\pi}{12}$

Find the arc length and area of a sector with the given radius r and central angle θ . Round answers to the nearest hundredth.

36.) $r = 15$ cm, $\theta = 45^\circ$

37.) $r = 25$ in., $\theta = 270^\circ$

Use the given point on the terminal side of an angle θ in standard position to evaluate the six trigonometric functions of θ .

38.) $(8, -15)$

39.) A projectile is launched with an initial speed of 42 feet per second. It is projected at an angle of 50° . How far does the projectile travel? How much farther does it travel with an initial speed of 84 feet per second?

40.) A baseball player hits a ball projected at an angle of 40° . The height at which the ball is hit is the same as the height of the fence. At what speed must the baseball player hit the ball in order for it to clear a fence that is 385 feet away?