Math 1060 Exam 1 Name_____
Practice

Show all work for any credit

(5 points) Convert the angle to D° M' S" form. Round the answer to the nearest second.

1) 87.28° 1) _____

(10 points) Solve the problem.

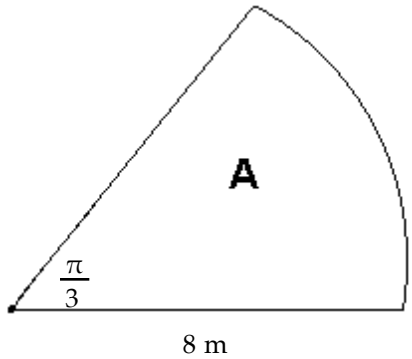
2) Salt Lake City, Utah, is due north of Flagstaff, Arizona. Find the distance between Salt Lake City (40°45' north latitude) and Flagstaff (35°16' north latitude). Assume that the radius of the Earth is 3960 miles. Round to nearest whole mile. 2) _____

(5 points) Convert the angle in degrees to radians. Express the answer as multiple of π.

3) 87° 3) _____

(5 points) Find the area A. Round the answer to three decimal places.

4) 4) _____



(10 points) Solve the problem.

5) To approximate the speed of a river, a circular paddle wheel with radius 0.63 feet is lowered into the water. If the current causes the wheel to rotate at a speed of 13 revolutions per minute, what is the speed of the current? If necessary, round to two decimal places. 5) _____

(10 points) Fnd the exact value of the indicated trigonometric function of the acute angle θ.

6) $\sec\theta = \frac{13}{12}$ Find $\csc\theta$. 6) _____

(5 points) Solve the problem.

7) A twenty-five foot ladder just reaches the top of a house and forms an angle of $41.5°$ **with the wall of the house**. How tall is the house? Round your answer to the nearest 0.1 foot. 7) _____

(5 points) A point on the terminal side of angle θ is given. Find the exact value of $\sin\theta$.

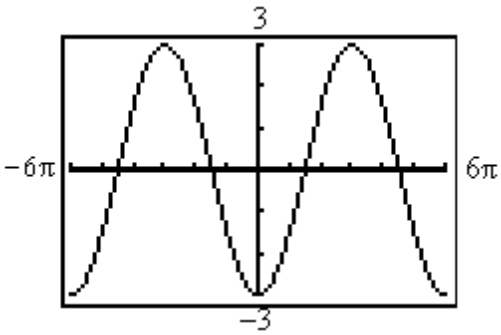
8) $(4, -3)$ Find $\sin\theta$. 8) _____

(5 points) Find the exact value of the indicated trigonometric function of θ.

9) $\sec\theta = \frac{9}{2}$, θ in quadrant IV Find $\tan\theta$. 9) _____

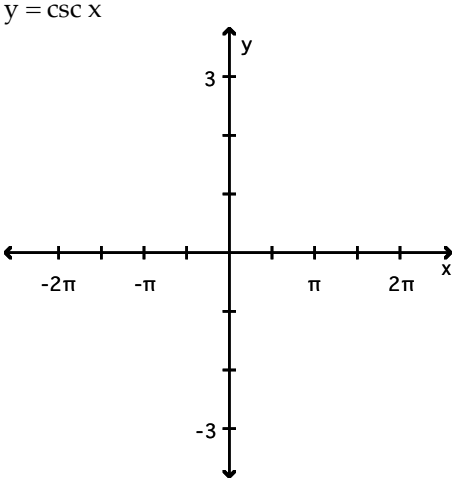
(5 points) Find an equation for the graph.

10) 10) _____



(10 points) Graph the function.

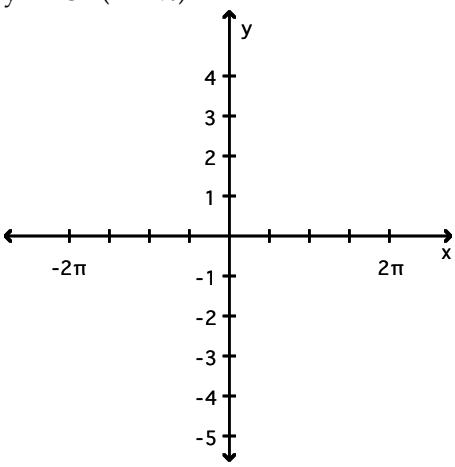
11) $y = \csc x$ 11) _____

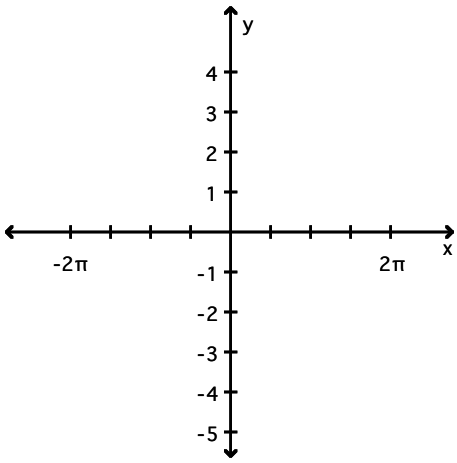


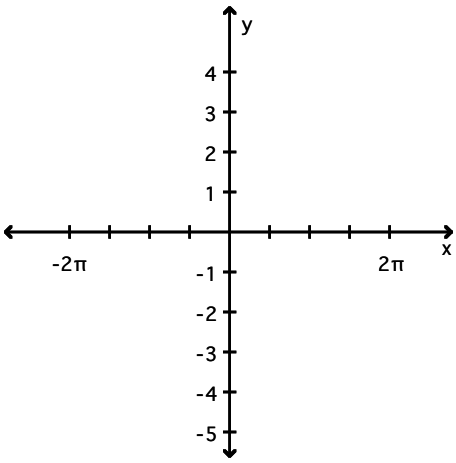
(15 points) **Graph the function using transformations. Show at least one period.**

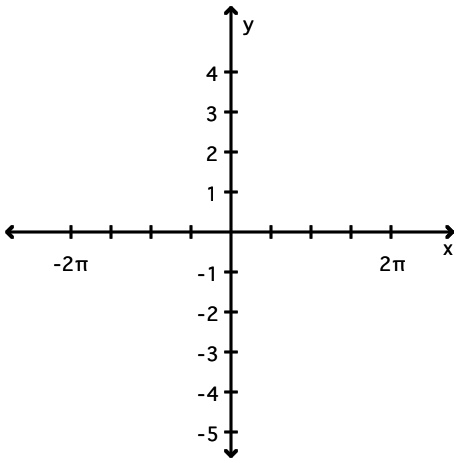
12) $y = 4 \sin(2x - \pi)$

12) ____________









(10 points) **Write the equation of a sine function that has the given characteristics. Simplify your answer.**

13) Amplitude: 5
Period: π
Phase Shift: -4

13) ____________

Answer Key
Testname: 1060_EXAM1_SP18

1) $87°16'48''$
ID: AT10 7.1.1–16+

2) 379 mi
ID: AT10 7.1.2–12+

3) $\frac{29\pi}{60}$
ID: AT10 7.1.3–5+

4) 33.51 m^2
ID: AT10 7.1.4–9

5) 0.58 mph
ID: AT10 7.1.5–10+

6) $\frac{13}{5}$
ID: AT10 7.2.3–8+

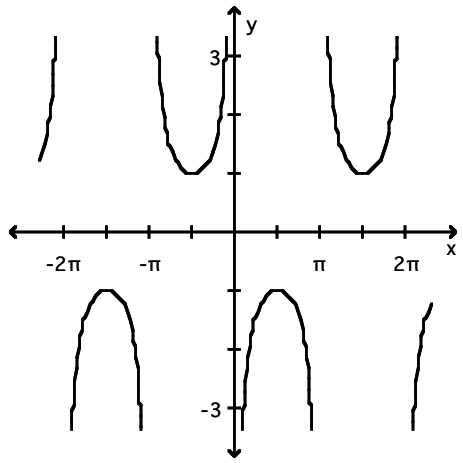
7) 18.7 ft
ID: AT10 7.3.4–13+

8) $-\frac{3}{5}$
ID: AT10 7.4.1–6+

9) $-\frac{\sqrt{77}}{2}$
ID: AT10 7.4.6–2+

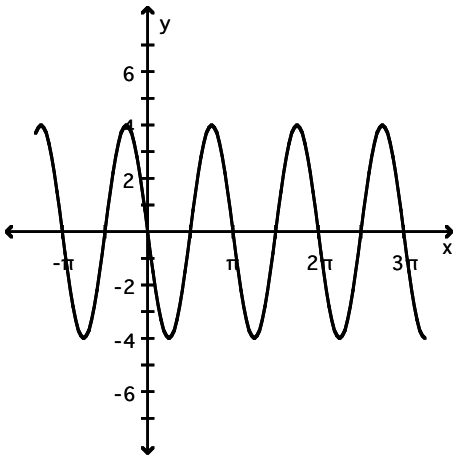
10) $y = -3\cos\left(\frac{1}{3}x\right)$
ID: AT10 7.6.5–13+

11)



ID: AT10 7.7.2–3+

12)



ID: AT10 7.8.1–10+

13) $y = 5\ \sin\ (2x + 8)$

ID: AT10 7.8.1–21