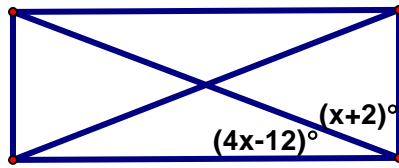


Quarter 4 Test Review 1

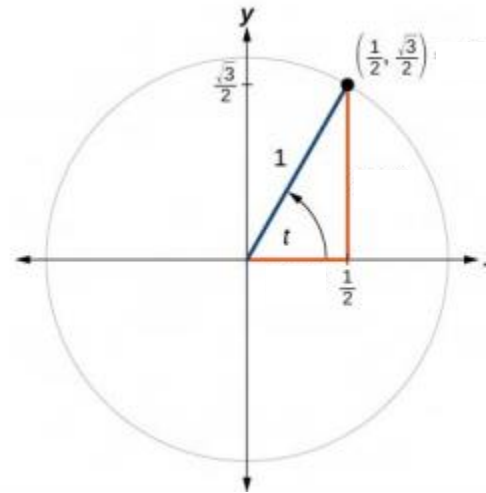
1. What is the value of x for the rectangle?



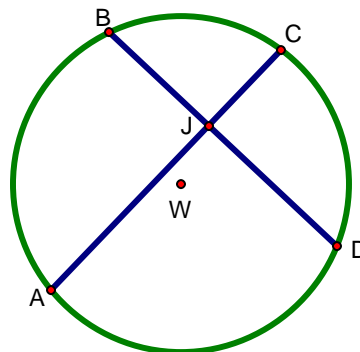
2. What is the center and radius of a circle given by the equation:

$$x^2 + y^2 + 4x - 10y + 20 = 0$$

3. The figure below represents a unit circle. What is the sine of t ?



4. In circle W , chords \overline{AC} and \overline{DB} intersect at Point J as shown below. If $AJ = 12$, $JC = 8$, $BJ = 6$, what is JD ?



5. Write the equation of a sine function that has a period of 4π and an amplitude of 8.

6. Write the equation of the function that is a phase shift of $y = \sin \theta$ by 5 units to the left.

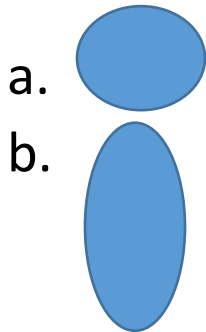
Quarter 4 Test Review 2

1. Describe the asymptotes and points of discontinuity

of $f(x) = \frac{x+5}{x^2+4x-5}$

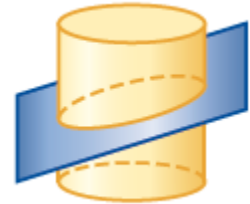
2. Given the function $f(x) = \frac{(x-2)(3x+2)}{(x+4)(x-2)(x-6)}$
 - a. What are the equations of the asymptotes of this function?
 - b. Determine if there are any points of discontinuity. Explain.
 - c. Describe the end behavior.
3. To completely cover a spherical ball, a ball company uses a total area of 36 square inches of material. What is the maximum volume the ball can have?

4. Which of the following is the cross section created by slicing the cylinder as shown in the figure?

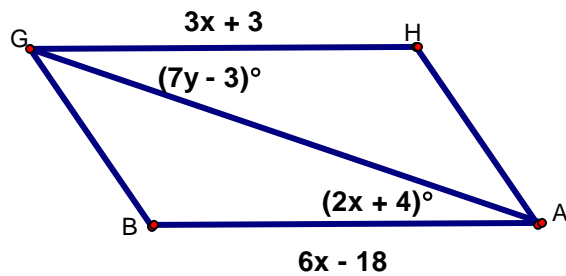


c. 

d. 



5. What is the value of x and y for the parallelogram?



Quarter 4 Test Review 3

1. Which expression is equivalent to

$\frac{x+7}{x^2+4x-21} \div \frac{x+5}{x^2+8x+15}$ when x is restricted so that the expressions are defined?

a. $\frac{x+3}{x-3}$

c. 1

b. $\frac{x-3}{x+3}$

d. -1

2. Which value is a solution to the equation

$$\frac{2}{x} + \frac{1}{x+12} = \frac{5x-8}{x^2+12x}?$$

a. $x=8$

c. $x = 11$

b. $x=10$

d. $x = 16$

3. As part of a home-improvement project, Andy painted 10 walls in his house. The area of each wall is 142 ft^2 . The paint he bought comes in 2 gallon cans. About how many cans did Andy need if 1 gallon of paint covers 150 ft^2 ?

a. 5

c. 11

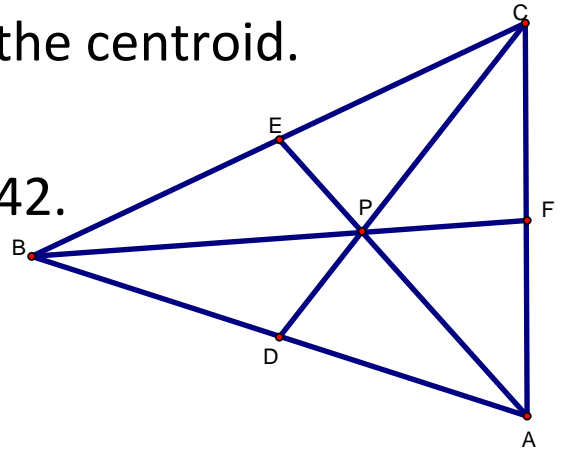
b. 10

d. 22

4. In $\triangle ABC$, \overline{BF} is the angle bisector of $\angle ABC$, \overline{AE} , \overline{BF} and \overline{CD} are medians, and P is the centroid.

Find z if $FP = 5z + 10$ and $BP = 42$.

- a. 6.4 c. 4.2
b. 2.2 d. 2.4



5. In a circle, an arc of length 8π cm is intercepted by a central angle of $\frac{2\pi}{3}$ radians. What is the radius of the circle?

- a. $\frac{3\pi}{16}$ cm c. $\frac{16\pi^2}{3}$ cm
b. $\frac{16\pi}{3}$ cm d. 12 cm

6. What is the amplitude of $y = 3 \sin 4\theta$?

- a. $\frac{4}{3}$ c. 4
b. 3 d. 2π

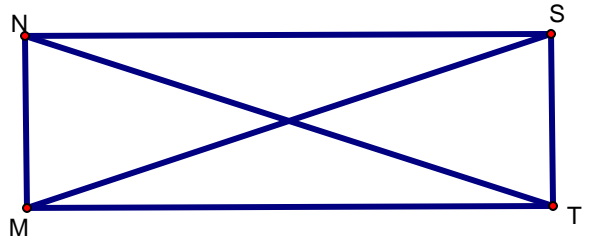
7. Which answer choice describes

$$y = -\sin 2\theta$$

- a. Amplitude -1, period 4π
b. Amplitude 1, period π
c. Amplitude 2, period $-\pi$
d. Amplitude 2π , period 1

Quarter 4 Test Review 4

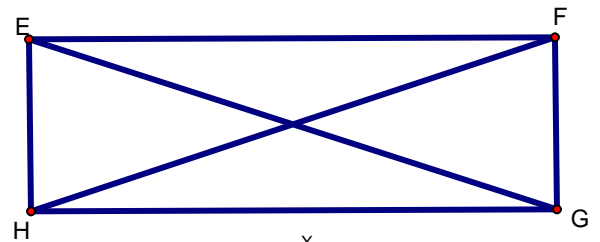
1. In the figure below, NSTM is a rectangle and $m\angle SMN = 65$.



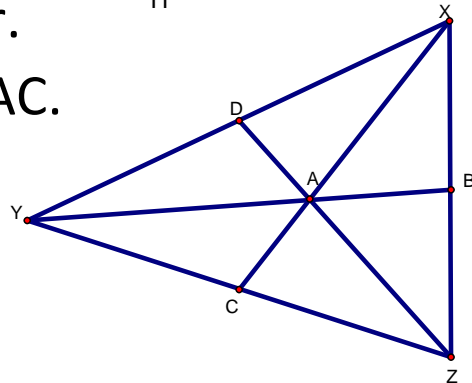
What is $m\angle NTM$?

2. Given $FG = 2x + 4$, $EG = 3x + 9$, $FH = 7x - 3$

What is the length of \overline{EH} ?

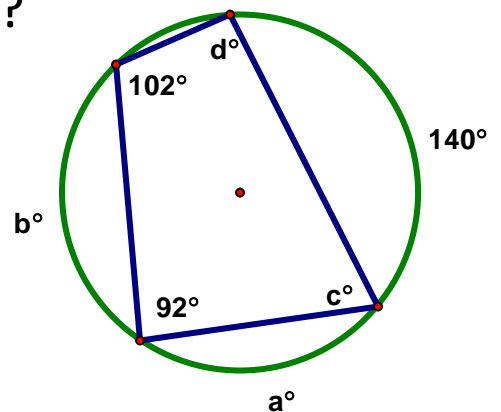


3. In $\triangle XYZ$, A is the incenter.
a. If $AD = 12$, find AB and AC.



- b. If $m\angle CZA = 27^\circ$, then $m\angle BZA = \underline{\hspace{2cm}}$.

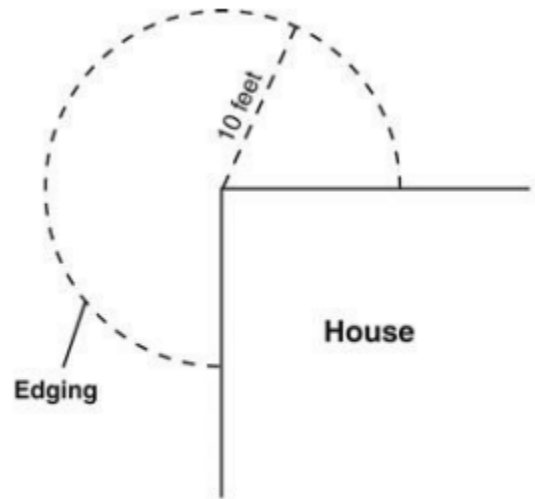
4. What is the value of a , b , c and d ?



5. Sally is creating a flower bed that wraps around the corner of her house. She will put edging around the flower bed 10 feet from the corner of the house in all directions as shown below.

Which is the best estimate of the number of feet of edging that Sally will need?

- a. 24 c. 48
b. 43 d. 63



6. What is the value of a , b and c ?

