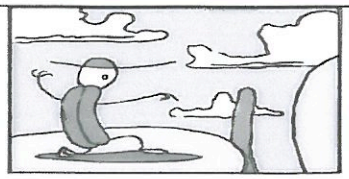
Name__BEN  *Spring Exam*



5

1 230° is in what quadrant? III

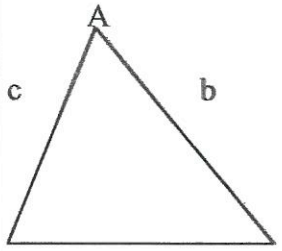
What is it's reference angle? 50°

Tell whether each is + or - sine − cos − tan +

12/30
120
50

6

2 Find the missing sides of this triangle:




A=36° a=9

B=70.4 b=15

C=73.6 c=14.01

$\frac{\sin 36°}{9} = \frac{.59}{9} = .065$

$.065 \cdot 15 = .979$

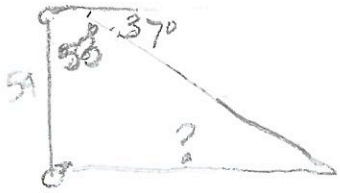
$\frac{\sin 65.6}{x} = .065$

5

3 If a pigeon is on the ground and his love is 54 feet up on a branch DIRECTLY above him. If his love flies at an angle down of 37° from the branch toward the ground. How far will he have to creep along the ground to meet her?

Perpendicular

Draw the triangle- then solve

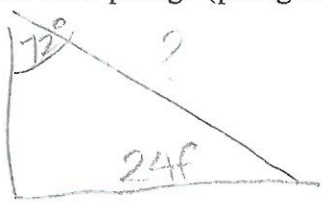



$\tan 53° = \frac{?}{54}$

71.6 feet

5

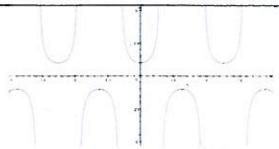
4 If the fishing line is stretched out creating an angel of 72° with the dock piling -how long is the line if it hits the bottom 24 feet away from the dock piling? (pilings are intended to be perpendicular with the bottom)




$\sin 72° = \frac{24}{?}$

25.2 feet

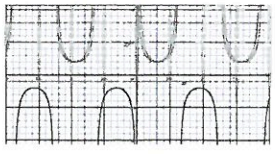
3

5 

= sec

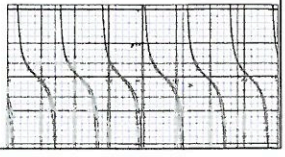
equation

These three graphs are each a "y=trig function x" what goes on the line for each?

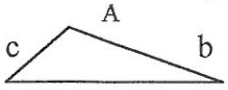


csc

cot



Find the missing sides of this triangle:




$A=45^0$

B= 42.3

C= 92.7

a= 83

b= 79

c= 117.5 X

$\frac{\sin 45^\circ}{83} = \frac{\sin ?}{79}$

$.0085 = \frac{\sin 92.7}{x}$

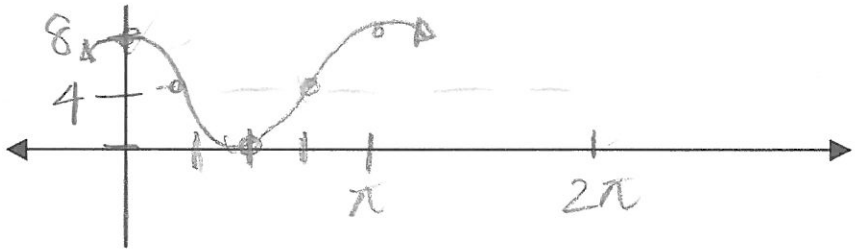
$.0085 =$

$.673$

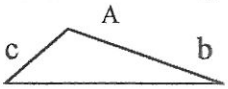
$K = \frac{1}{2}ab^2 \quad \frac{\sin 42.5 \sin 92.7}{\sin 45}$

3,287.32 $cm^2$

Graph the equation $Y = 4\cos 2\theta + 4$




Find the missing sides of this triangle:




$A=51^0$

B= X

C= X

a= 36.8

b= 40

c= 45

$a^2 = 40^2 + 45^2 - 2(40)(45)\cos 51$

$3,625 - 2,265.55$

$a^2 = 1,359.45$

$a = 36.8$

$-195^0$ is in what quadrant? II

What is it's reference angle? 15

Tell whether each is + or - sin + cos − tan −

5

This used to be a funny question with a turtle and a disco... ~~units~~ That was to confusing so now it is just... What is the area of a triangle that has an a side of 6, b side of 12 and an angle of 54°

6
12

$\frac{1}{2} 6^2 12^2 \sin 54°$

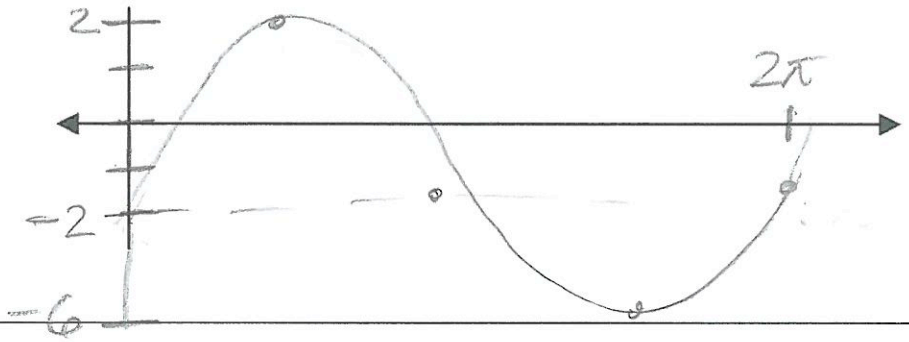
$\frac{1}{2}(36)(144)\sin 54$

.809

2,096.9 units$^2$

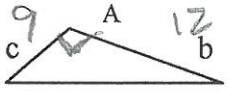
10

Graph the equation for the wave $Y = 4\sin\theta - 2$




12

Find the missing sides of this triangle:




3.0

3.5

A=90°

B=53.13°

C=36.87°

a= 15

b= 12

c= 9

$\sin C = \frac{9}{15}$

6

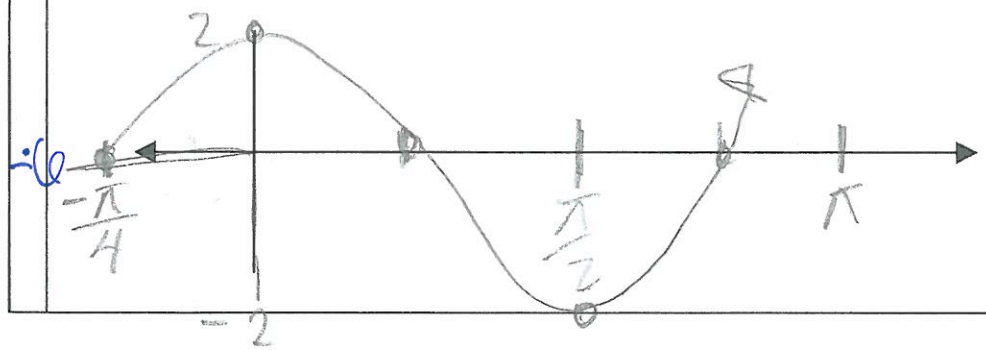
13

Graph the equation $Y = 2\sin(2\theta + \pi/2) - 6$

$P = \frac{2\pi}{K} = \pi$

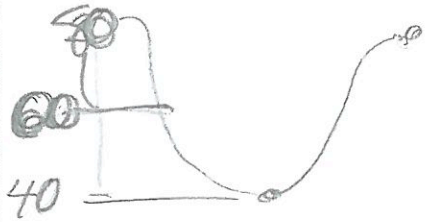
$\frac{-C}{K} = \frac{-\frac{\pi}{2}}{2} = -\frac{\pi}{4}$

8




-16

Turtle is ridin' the waves. When at the crest of the wave he is 20 inches from the middle- he likes the 40 inch fall that takes him to the deepest point of the troth. If turtle starts at the crest, falls and then rises yet again what is the equation of his path. It takes him $6\pi$ to finish the entire ride.

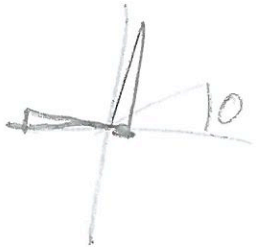



$P = 6\pi \qquad \frac{2\pi}{K} = 6\pi \qquad K = \frac{1}{3}$

$y = 20\cos \frac{1}{3}\theta + 60$

Complete this chart:

| *Angle in Degrees* | *Angle in Radians* | *Sin* | *Cos* | *Tangent* |
|---|---|---|---|---|
| 90° | $\frac{\pi}{2}$ | 1 | 0 | und. |
| 270° | $3\pi/2$ | −1 | 0 | Qund. |
| 180° | $\pi$ | 0 | -1 | 0 |





I'm the king of the paper towel roll