

A

State the exact value of the trig. functions for the given angle. \_\_\_\_\_

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

= \_\_\_\_\_

2.)  $\csc \frac{13\pi}{6}$

= \_\_\_\_\_

3.)  $\cos \phi$

= \_\_\_\_\_

Find the value of  $t$  in  $[0, 2\pi)$  that corresponds to the following functions.

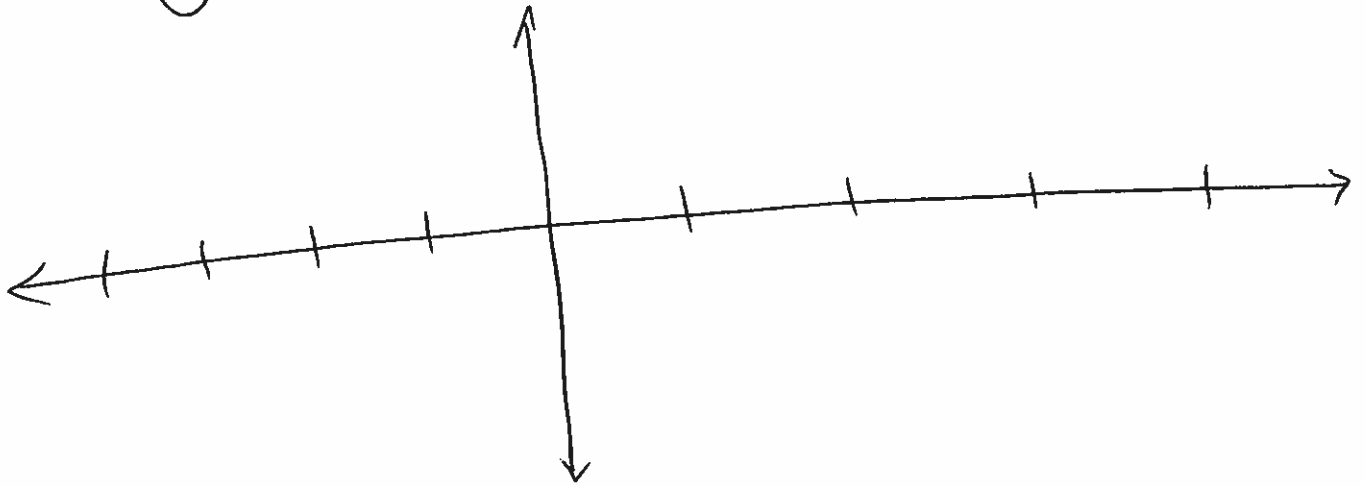
4.)  $\sin t = \frac{+\sqrt{3}}{2}$ ;  $t$  in QII = \_\_\_\_\_

5.)  $\sec t = -2$ ;  $t$  in QIII = \_\_\_\_\_

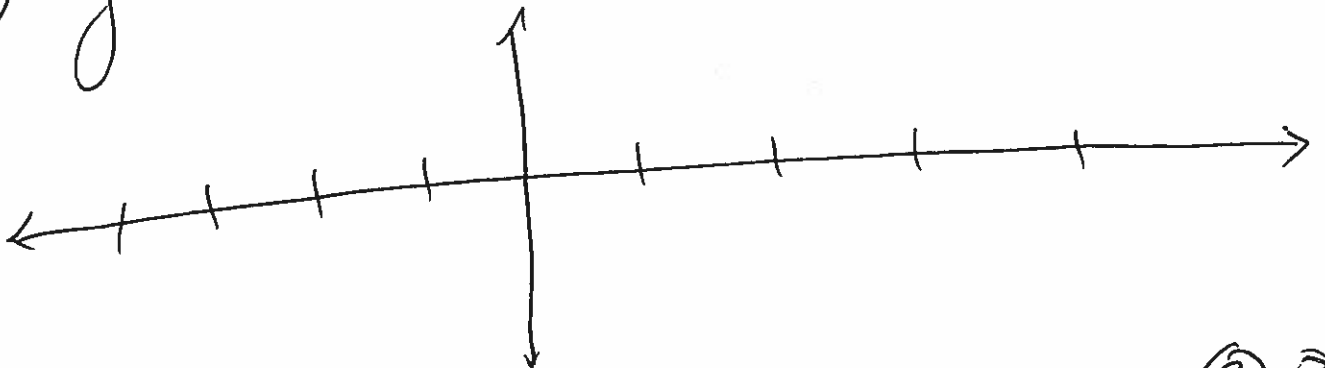
Pre-calc. Chapt. 4 Test Name:

- Draw the graph of each function by first sketching the related sine & cosine graphs, and applying the observations made in the graphs. (Must have amplitude(s) & correct intervals)

6.)  $y = 3 \csc t$



7.)  $y = -\cos(2t)$



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Use the information given to write a sinusoidal equation & sketch its graph

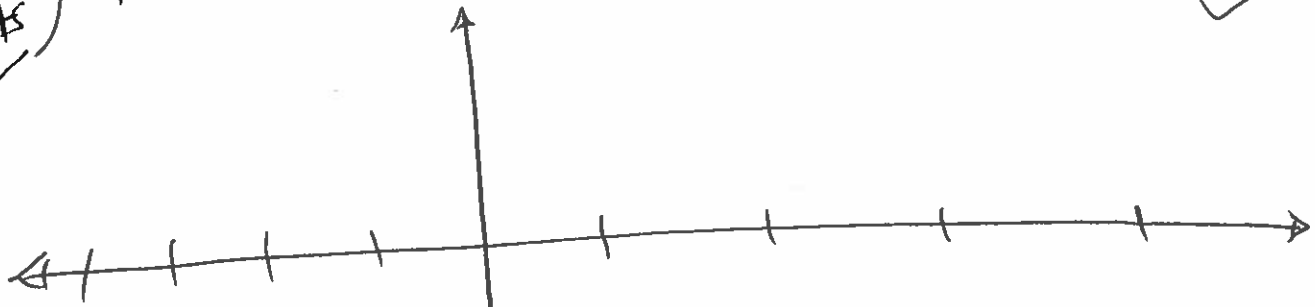
Max: 100

8.) Min: 20 = \_\_\_\_\_

Period: 30

Graph 4 pts

Bonus +1 for the equation

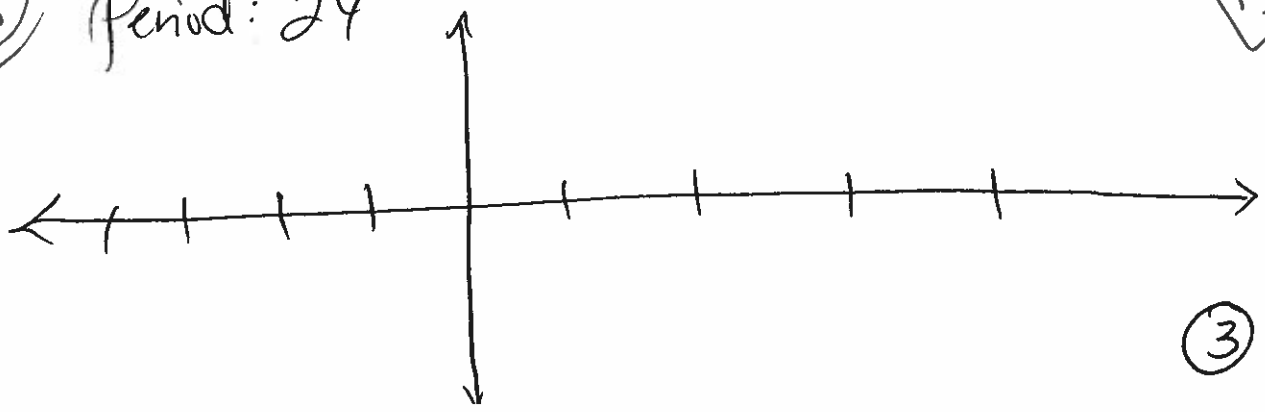


\* Must have Amplitude & Intervals Labeled

9.) Max: 95  
Min: 40 = \_\_\_\_\_  
Period: 24

Graph 4 pts

Bonus +1 for the equation



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● Use the function value given to determine the value of the other five trig. functions.

Hint: Draw Triangle

10.)  $\sec \theta = \frac{53}{45}$

$\sin \theta =$  \_\_\_\_\_

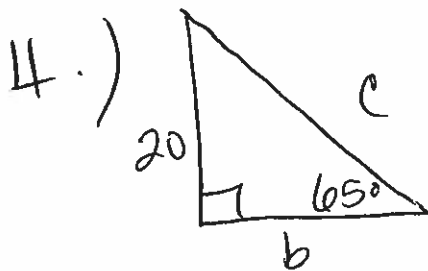
$\cos \theta =$  \_\_\_\_\_

$\tan \theta =$  \_\_\_\_\_

$\csc \theta =$  \_\_\_\_\_

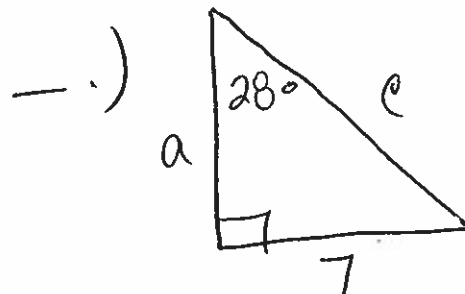
$\cot \theta =$  \_\_\_\_\_

● Solve each side length



$b =$  \_\_\_\_\_

$c =$  \_\_\_\_\_



$a =$  \_\_\_\_\_

$c =$  \_\_\_\_\_

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- Use a calculator to find the values of each expression, round to  $\frac{1}{10}$  place.

12.)  $\tan 40^\circ$

= \_\_\_\_\_

13.)  $\cos 72^\circ$

= \_\_\_\_\_

14.)  $\cot 5.7^\circ$

= \_\_\_\_\_

- Use a calculator measures to find the angle

15.)  $\sin A = 0.4540$

= \_\_\_\_\_

16.)  $\sec B = 1.3230$

= \_\_\_\_\_

17.)  $\cot A = 0.6420$

= \_\_\_\_\_

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- Use the formula for arc length to find the value of the unknown quantity:

$$S = r\theta \quad \text{or} \quad A = \frac{1}{2} r^2 \theta$$

18.)  $S = 2007 \text{ mi}; r = 2676 \text{ mi} \quad \theta =$  \_\_\_\_\_

19.)  $\theta = 3.5; r = 280 \text{ m} \quad S =$  \_\_\_\_\_

20.)  $A = 1080 \text{ m}^2; r = 60 \text{ mi} \quad \theta =$  \_\_\_\_\_

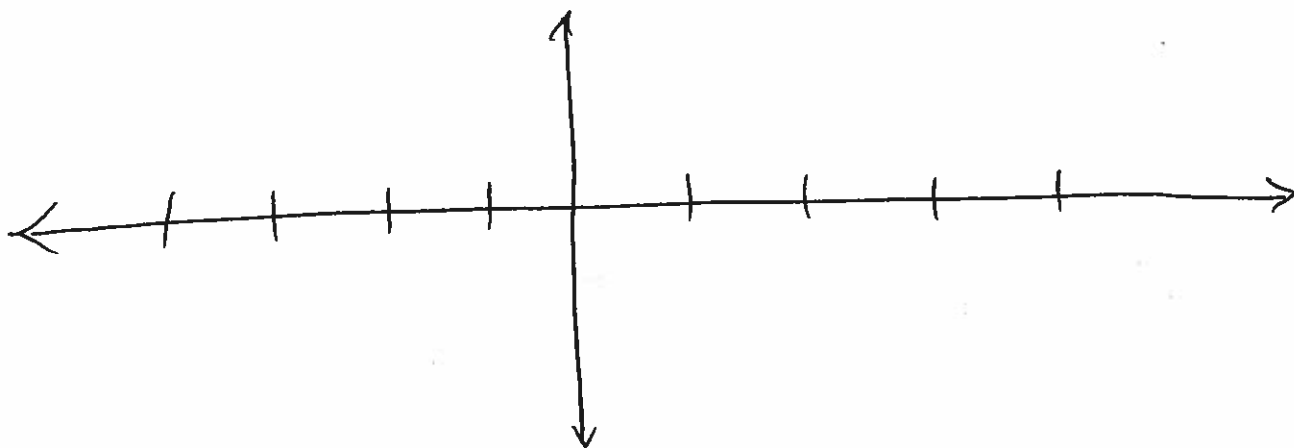
21.)  $\theta = 5; r = 6.8 \text{ km} \quad A =$  \_\_\_\_\_

Graph the functions. Clearly state the Amplitude & period. \_\_\_\_\_

22.)  $y = -3 \cos t$

A: \_\_\_\_\_

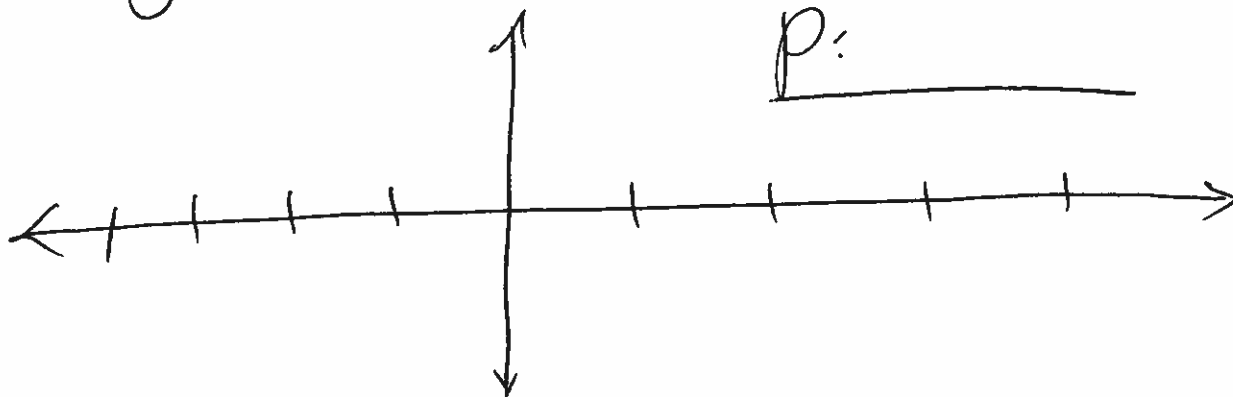
P: \_\_\_\_\_



23.)  $y = 2 \sec t$

A: \_\_\_\_\_

P: \_\_\_\_\_



Pre-calc. Chapt 4 Test name: \_\_\_\_\_

Find the exact value of  $\sin \theta$ ,  $\cos \theta$ , and  $\tan \theta$ , using reference angles.

24.)  $\theta = 48^\circ$

$\sin \theta =$  \_\_\_\_\_

$\cos \theta =$  \_\_\_\_\_

$\tan \theta =$  \_\_\_\_\_

25.)  $\theta = 600^\circ$

$\sin \theta =$  \_\_\_\_\_

$\cos \theta =$  \_\_\_\_\_

$\tan \theta =$  \_\_\_\_\_

Find the cofunction complement of each.

26.)  $\sin 47^\circ = \cos$  \_\_\_\_\_

27.)  $\csc 17^\circ = \sec$  \_\_\_\_\_