Math-3A	Name		ID: 1	
\otimes 2019 Kuta S offware LLC. Al SM3-A HW #10-10 (Unit 10)	$\Gamma = \frac{1}{\Gamma est review #1}$	Date	Period	
1) Solve:	Expand ea	Expand each logarithm.		
5 6v + 18 1	2			

$$5 = \frac{6v + 18}{v} + \frac{1}{v}$$

2) $\log_5 \frac{x^2}{v}$

Condense each expression to a single logarithm.

Solve each equation.

4) $5^m = 25^{-3m+2}$

3) $\log_3 x - 2\log_3 y$

Solve. Round your answers to the nearest thousandth.

- 6) $\log_2 -3x = 5$ 5) $4^{x-1} + 9.9 = 35$
- 7) Find the time required for an investment of \$100 to double if the money is placed in a simple interest account (compounded monthly) that earns 5.5% interest.

Find the value of the trig function indicated. Do not give these values in decimal form. I want them in fraction form with simplified radicals (if applicable).



In each triangle ABC, angle C is a right angle, little side 'a' is opposite angle A, etc. Find the value of the trig function indicated (in simplified radical form if applicable).

10) Find csc *A* if
$$b = 6$$
, $c = 21$, $a = 9\sqrt{5}$

Find the measure of each: a) Standard Position angle b) Reference Angle



13) $\cos \theta$



Convert each radian measure into degrees.



Find the length of each arc. Write your answer as a reduced fraction. Leave π in your answer.



Find the exact value of each trigonometric function.



Convert each degree measure into radians.

14) 75°

Find a positive and a negative coterminal angle for each given angle.

16) 225°

Find the area of each sector. Write your answer as a reduced fraction. Leave π in your answer.



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Find each measurement indicated. Round your answers to the nearest tenth.



20) Find $m \angle A$



State the number of possible triangles that can be formed using the given measurements.

21) $m \angle A = 127^{\circ}, c = 9 \text{ cm}, a = 17 \text{ cm}$

22)
$$m \angle C = 18^{\circ}, b = 32 \text{ km}, c = 18 \text{ km}$$

23) $m \angle C = 57^{\circ}, b = 24 \text{ km}, c = 7 \text{ km}$

Find the measure of the indicated angle to the nearest degree.



Find the measure of each side indicated. Round to the nearest tenth.

25)



Find each measurement indicated. Round your answers to the nearest tenth.

26) Find AB





Find the area of each triangle to the nearest tenth.



30) Find the equation that predicts the height of a weight that is suspended from a spring given the following conditions: a) Initial displacement from equilibrium: 25 inches, (b) completes one cycle in 10 seconds, (c) disregard left/right shift, (d) use degrees

 $h(t) = a \sin bt$

31) A Ferris wheel has a radius of 80 feet. The bottom of the Ferris Wheel is 3 feet off the ground. Once all of the seats are loaded it takes 60 seconds to complete one revolution. (This is a period!). Write an equation that predicts the height of the bottom of a car as a function of time. Disregard any left/right shift of the sine function. Use degrees to determine 'b'. $h(t) = a \sin(b \cdot \theta) + k$