Math-3 Name_____ ID: 1

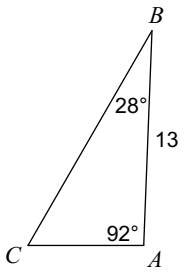


# SM3 HW #6-4 (law of sines)

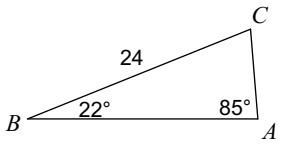
Period____

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

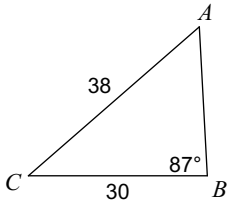
1) Find AC



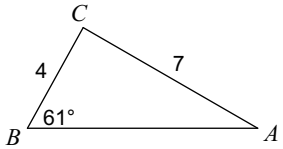

2) Find AC




3) Find $m\angle A$




4) Find $m\angle A$




**Solve for the missing side or angle(s). Hint: Build an ABC triangle so that your side-angle orientation is correct. Remember that side length 'a' is opposite of angle A, etc. Round your answers to the nearest tenth**

5) $m\angle A = 68°$, $m\angle C = 24°$, $b = 27$
Find $a$

6) $m\angle C = 45°$, $b = 28$, $c = 24$
Find $a$

7) $m\angle B = 89°$, $a = 12$ km, $b = 24$ km
Find $m\angle A$

8) $m\angle A = 52°$, $c = 34$ km, $a = 32$ km
Find $m\angle B$

9) a) Describe the transformation of the parent function $y = 4^x$ given by the equaiton
$g(x) = 2 \cdot 5^{x+1} - 4$
b) what is the asymptote?
c) what is the domain?
d) what is the range?
e) what is the y-intercept?
f) what is the x-intercept?
g) is the function "growth" or "decay"?

10) $2250 was placed into an account that pays 2.5% annual interest compounded continuously;
a) How many years (to the nearest 1/10) will it take for the money in the account to triple?
b) How much money will be in the account after 15 years?

**Solve each equation by factoring.**

11) $2a^2 - 13a - 24 = 0$

**Solve each equation. Remember to check for extraneous solutions.**

12) $\frac{k-4}{k} - \frac{k-6}{k^2} = \frac{k+1}{k}$

13) $y = \log_2 (x+5) - 1$

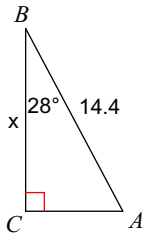
a) Asymptote?
b) Domain?
c) Range?
d) x-intercept?
e) y-intercept?

**Solve each equation.**

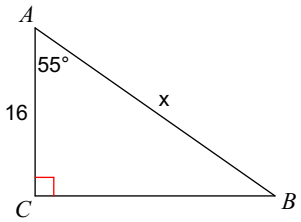
14) $\log_3 8 + \log_3 2x^2 = 4$

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

15)




16)



17) An angle in standard position passes through the point (6, -2).

a) Draw the standard position angle. On your drawing, show the location of the reference angle.

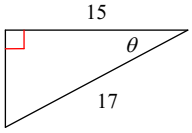
b) $\sin\theta = ?$

c) what is the measure of the reference angle?

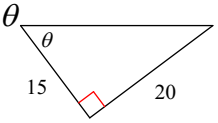
d) what is the measure of the standard position angle

**Find the value of the trig function indicated.**

18) sec $\theta$




19) csc $\theta$




**Convert each degree measure into radians.**

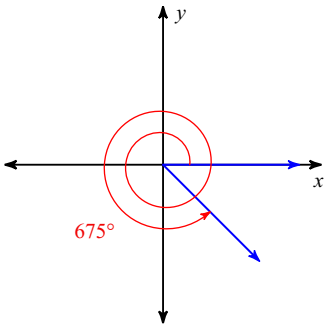
20) 320°

**Convert each radian measure into degrees.**

21) $-\frac{3\pi}{4}$

**Find the exact value of each trigonometric function.**

22) sin $\theta$




23) sec $\theta$