Name_____Date_____Per_____

Show all the work. NO WORK = NO CREDIT

1) Find one negative and one positive angle coterminal with:	1a)_____
a) $\dfrac{\pi}{6}$　　　b) $-\dfrac{2\pi}{3}$　　　c) $435°$	b)_____
	c)_____
2) Find the reference angle for each of the following"	
a) $215°$　　b) $\dfrac{5\pi}{6}$　　c) $-\dfrac{3\pi}{4}$　　d) $272°$	2a)_____
	b)_____
3) Use a calculator to find the following values to 4 decimal places:	c)_____
a) $\csc(-51°)$　　b) $\cot 138°$　　c) $\sec 190°$	d)_____
	3a)_____
4) If $\csc\theta = -\dfrac{2\sqrt{3}}{3}$, and $\cos\theta < 0$, find:	b)_____
a) $\sin\theta$　　b) $\cos\theta$　　c) $\tan\theta$	c)_____
	4a)_____
5) If $\csc\theta = \dfrac{25}{24}$, find $\cot\theta$ for $0 < x < 90°$.	b)_____
	c)_____
6) If $\sin\theta = -\dfrac{12}{13}$, and the terminal side of θ lies in Quadrant IV, find $\cos\theta$.	5)_____
	6)_____
7) Express $\sin 1485°$ as a function of an angle in Quadrant I.	7)_____
	8)_____
	9a)_____
8) Express $\csc(-430°)$ as a function of an angle in Quadrant I.	b)_____
	c)_____
9) If the terminal side of θ contains the point $(-8,15)$, find:	d)_____
a) $\sin\theta$　　b) $\cos\theta$　　c) $\tan\theta$	
d) $\cot\theta$　　e) $\sec\theta$　　f) $\csc\theta$	e)_____
	f)_____

10) Solve right triangle ABC where m<A=42°, c=20, m<B=90°.
    Round answers to the nearest whole number
    a)m<C≈ ?   b) b≈ ?   c) a≈ ?

11) Use right triangle trigonometry to express each of the following in 2 ways:

    a) p =   b) q =   c) r =
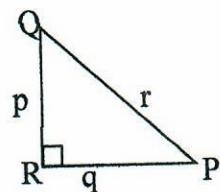
12) If $\tan x = \frac{1}{4}$, find $\tan 2x$.

13) If $\cos x = -\frac{4}{5}$, and $\sin x > 0$, evaluate $\cos\left(x + \frac{\pi}{6}\right)$

14) Convert to radians:

    a) 40°   b) 55°   c) -60.5°

15) Convert to degrees:

    a) $\frac{2\pi}{3}$ b) $-\frac{3\pi}{8}$ c) $\frac{7\pi}{3}$ d) -5π

16) Find the arc length (s) of a circle with the given radius (r) and intercepted by the given central angle (Θ).**Express answers in terms of π.**

    a) r = 5, Θ = 60°   b) r = 2, Θ = 135°   c) r = 3, Θ = 330°

17) Find the exact values of:

    a) $\csc \frac{5\pi}{6}$ b) $\cot\left(-\frac{2\pi}{3}\right)$ c) $\tan 315°$

    d) $\sin\left(-\frac{\pi}{6}\right)$ e) $\cos(-\pi)$ f) $\sec\left(-\frac{3\pi}{2}\right)$

    g) $\csc \frac{3\pi}{4}$ h) $\tan 0$ i) $\tan \pi$

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10a)	
b)	
c)	
11a)	
b)	
c)	
12)	
13)	
14) a)	b)
c)	
15a)	
b)	
c)	
d)	
16) a)	
b)	
c)	
17a)	
b)	
c)	
d)	
e)	
f)	
g)	
h)	
i)	