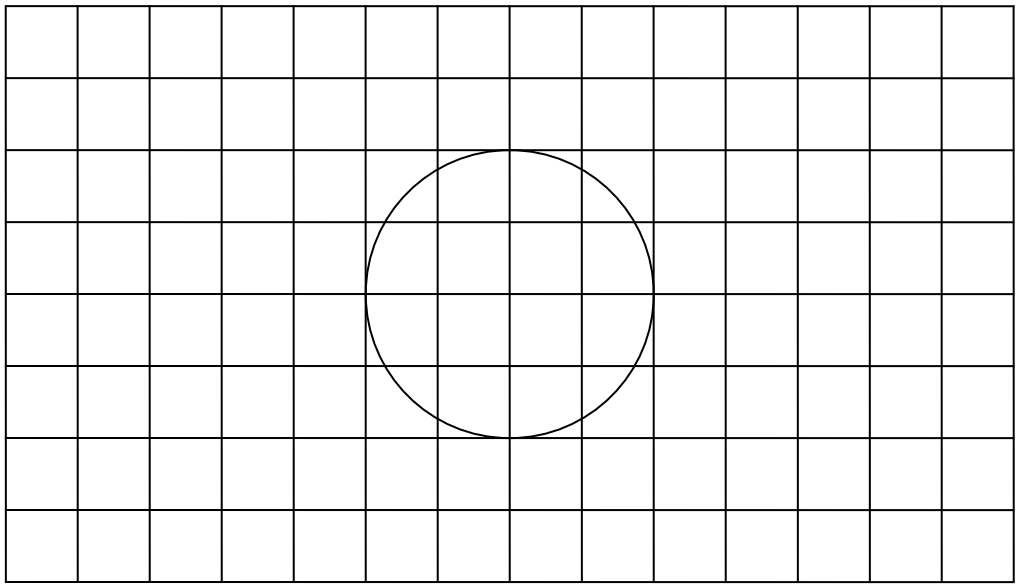
1. [9+4 points]
For each point (a,b) draw a standard position angle (+ or – as indicated) with terminal side through (a,b).

Then give that angle's Cosine, Sine and Tangent.

The unit circle is shown.

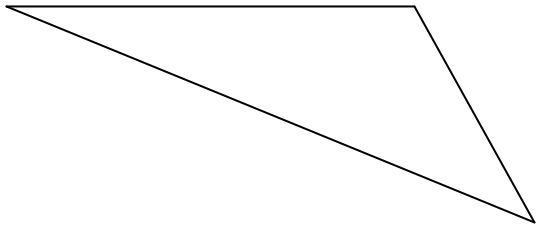
±∠	(a, b)	Cos(∠)	Sin(∠)	Tan(∠)
–	(–2.5 , 0)			
–	(–1 , 3/4)			
+	(1/2, –1/2)			



2. [3+3+2+2+1 points] Write the specified identity with the given variable.	
Pythagorean Identitity with Tangent and θ	Periodic Identitity with Cosine and β
Pythagorean Identitity with Tangent and α (Yet another form)	Pythagorean Identitity with Tangent and ϕ (Another form)

Over please

3. [4+4+4 points] Triangle labeling and the Cosine Law

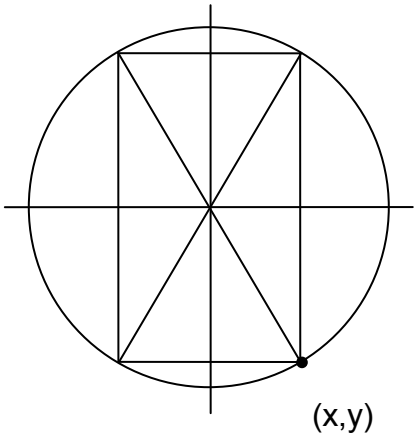


Label the sides and angles of the General Triangle at left with letters.

Make β the **smallest** angle.

b	=	$\sqrt{}$(_____)
β	=	ArcCos(_____)

4. [4+2+2+2+4+6+4+6 points] Rectangle diagram. Complete everything as done in class.



Draw all four angles in standard position on the diagram above.

Angle	degrees	radians	Quad-rant	Cos (+or–)	Sin (+or–)	Tan (+or–)
$-\phi$						
ϕ	300^o	$5\pi/3$				
$-\phi + 180^o$						
$-180^o + \phi$						
Number (+ only)	---	---	---			

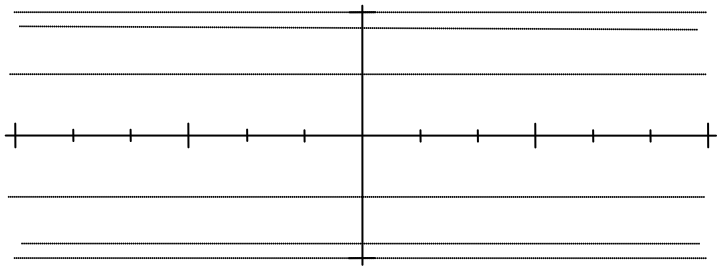
On the unit circle, the above point (x,y) has coordinates

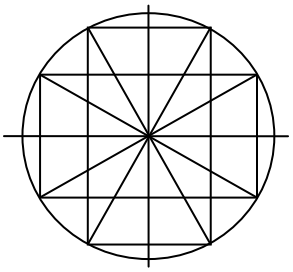
(_____ , _____) .

$\text{Cos}(-180^o + \phi)$ =	
$\text{Sin}(-180^o + \phi)$ =	
$\text{Tan}(-180^o + \phi)$ =	

Over please

5. [7+4+9+2+2+14+8 points] Graph *one waveform* of the curve $y = +6 \sin(2t/3)$.





Show period computation: _____.

t			0		
y					

Complete this table of 5 distinct points at the big tic marks above (quadrantal angles).

Show computation for y at the first + small tic:

_____.

Show computation for y at the second + small tic:

_____.

Complete this table of 8 distinct points at the small tic marks above (two in each quadrant).

t				$-\pi/4$	$\pi/4$			
y								

Use your graphs to find two solutions to each equation.

t		

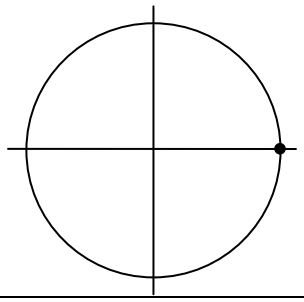
$6 \sin(2t/3) = -3$

t		

$6 \sin(2t/3) = +3\sqrt{3}$

Over please

6. [3+2+3 points] $\beta = +9\pi/3$



The angles θ and ϕ are coterminal with β.

$0 < \theta < 2\pi$, $\theta =$ _____

$-2\pi < \phi < 0$, $\phi =$ _____

Sketch β, θ, ϕ in standard position.

$\cos(\theta)$	=
$\sin(\phi)$	=
$\tan(\beta)$	=

7. [12 points] Memorization Sentences (Fill-in)

Remember to include the _____ symbol on your angle answers when not in _____ _____ .	The point where the terminal side of an angle ϕ in standard position intersects the _____ circle has coordinates (x, y) = (_____ , _____).
The _____ solution to an equation contains _____ values of the _____ that make the equation true.	A nonidentity has a _____ of its _____ for which _____ .

24 + 42 + 46 + 20 = 132

Name: _____ / 132

Over please