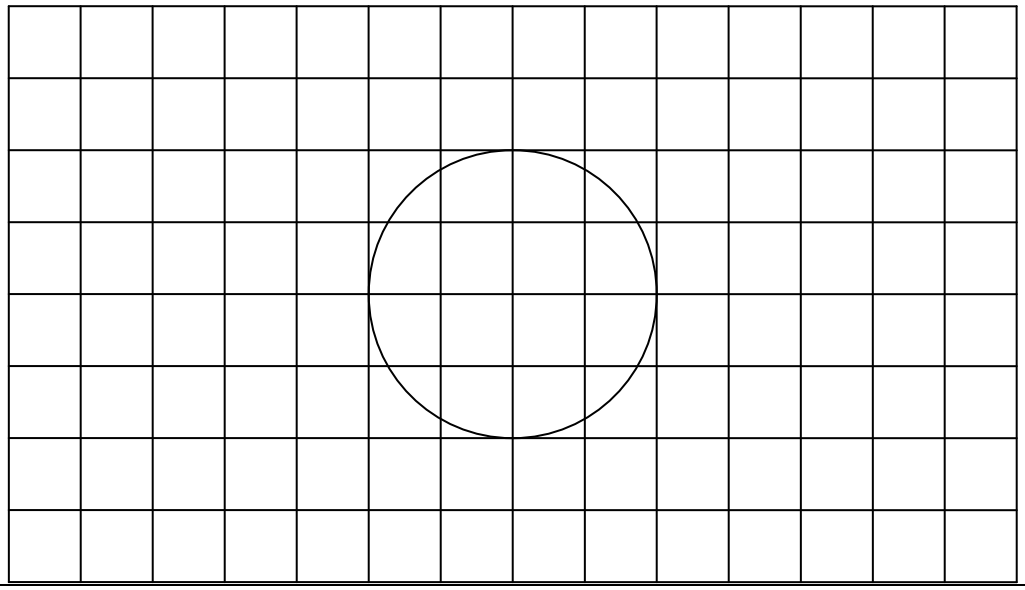
1. [6+4 points]

Graph all points by projecting them onto the given unit circle centered at the origin.
Note: Each tic mark is ½.

| ( a, b) | projection |
|---|---|
| ( –2 , 3/2 ) | |
| ( ½ , 0 ) | |
| ( 2 , –2 ) | |



2. [10 points] Write the specified identity with the given variable.

| Pythagorean Identity with $\phi$ | Pythagorean Identity with $\theta$ (Another form) |
|---|---|
| | |
| Tangent Identity with $\alpha$ | Pythagorean Identity with $\beta$ (Yet another form) |
| | |

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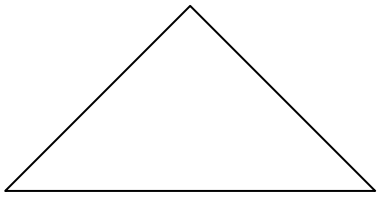
Name: _____

3. [4 points] Greek table fill-in.

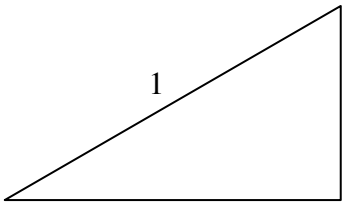
| | |
|---|---|
| beta | |
| | $\phi$ |
| alpha | |
| | $\gamma$ |

4. [4+4 points] Label each Special Triangle.

Degree ∠s , number sides



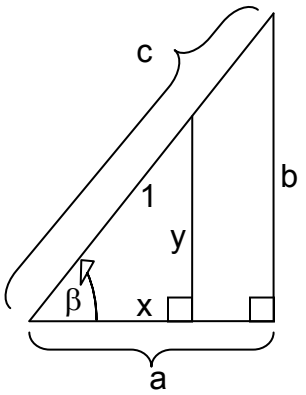
Radian ∠s , number sides




5. [6 points]

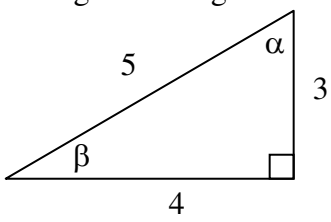
Complete the table for the similar triangle diagram.

| | Small ◢ | Large ◢ |
|---|---|---|
| Tanβ | = | = |
| Sinβ | = | = |
| Cosβ | = | = |




6. [6 points]

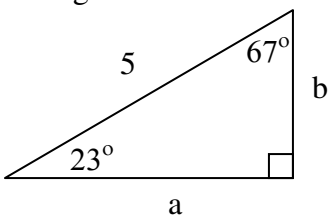
Write the correct number ratios for the given triangle.




| | |
|---|---|
| β = ArcCos( _____ ) | Cos(α) = |
| β = ArcSin( _____ ) | Sin(α) = |
| β = ArcTan( _____ ) | Tan(α) = |

7. [7 points]

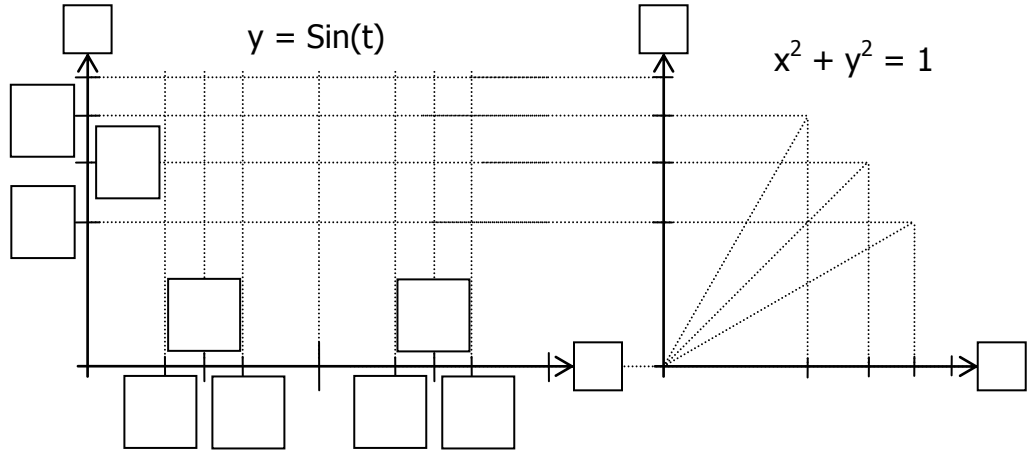
Complete the expressions for the given sides.



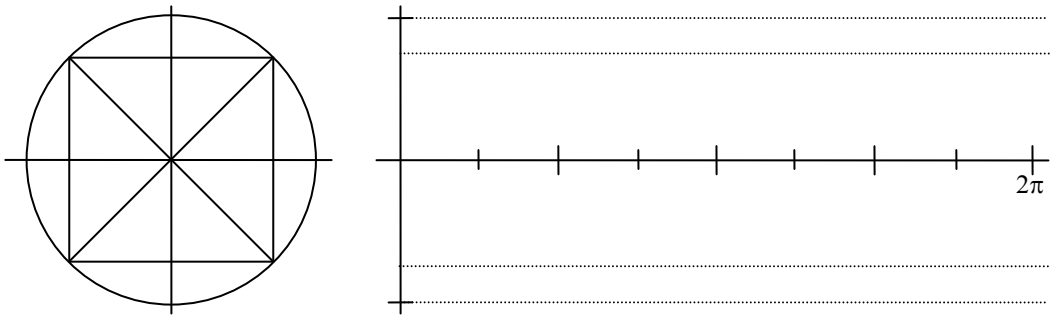

| | |
|---|---|
| 5 = √( _____ ) | b = √( _____ ) |
| a = _____ · Cos( _____ ) | b = _____ · Sin( _____ ) |
| a = _____ · Tan( _____ ) | b = _____ / Tan( _____ ) |

*Over please*

8. [17+7+9+6 points] Graphing. Draw both graphs and fill in the boxes below.




Graph *one full waveform* of the curve $x = -\text{Cos}(t)$.




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

| t | 0 | | | | |
|---|---|---|---|---|---|
| x | | | | | |

Complete this table of 4 distinct points at the smaller tic marks above.

| t | | | | |
|---|---|---|---|---|
| x | | | | |

Use your graphs to find two solutions to each equation.

$\text{Sin}(t) = +\sqrt{3}/2$

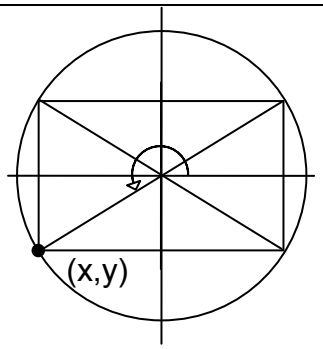
| t | | |
|---|---|---|

$-\text{Cos}(t) = +\sqrt{2}/2$

| t | | |
|---|---|---|

*Over please*

9. [3+16+4 points] Rectangle diagram. Complete everything as done in class.




Draw the three other angles on the diagram above in standard position.

| Angle | $\phi$ | $360^o - \phi$ | $180^o - \phi$ | $\phi + 180^o$ |
|---|---|---|---|---|
| degrees | $210^o$ | | | |
| radians | | | | |
| Coterminal $\angle$ | | | | |
| Quadrant | | | | |

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

10. [12 points] Memorization Sentences (Fill-in)

In _____ mode on your calculator

_____ ( 45 ) = 1 and

_____ ( 1 ) = 45 .

An angle in _____ position has its vertex at the origin and its _____ side on the positive half of the _____.

A triangle with sides a, b, c (where _____ is the _____ side) is right iff (if and only if) the Pythagorean Formula, _____ holds.

We use the Tangent of an _____ to find a _____ triangle's _____.

*end*

*Over please*