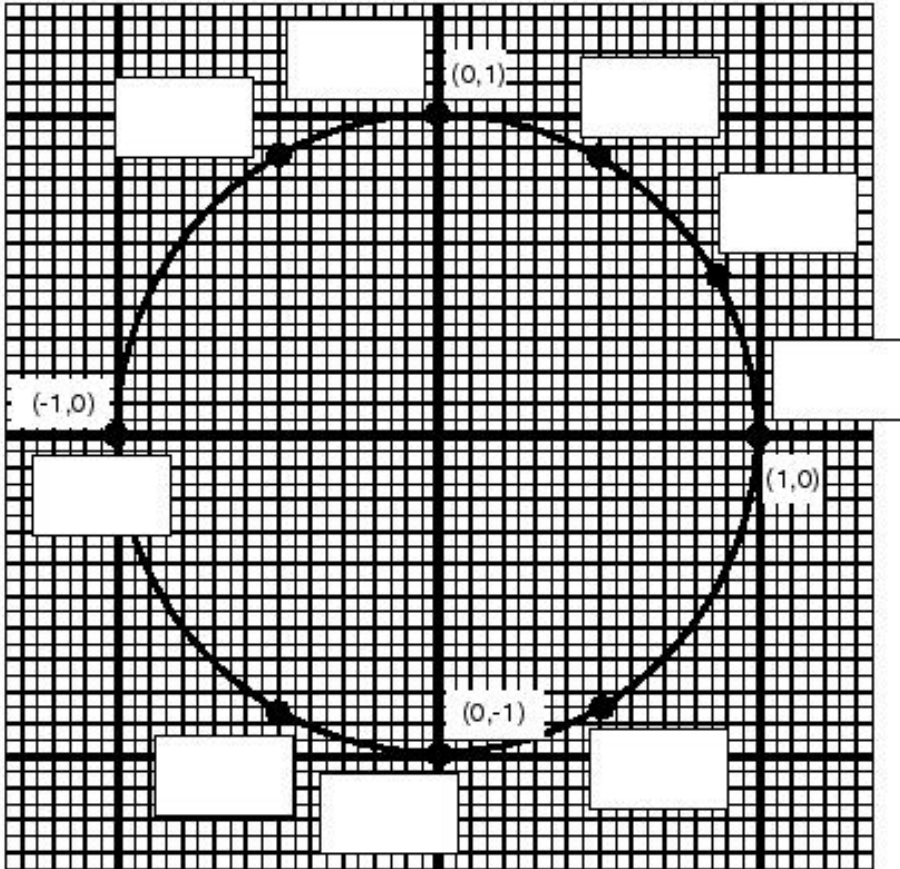


Trigonometry  
Graphs of Trig Functions on xy plane

NAME:

1. Fill in the blanks on the graphs with both the degree and radian measure of the angles.

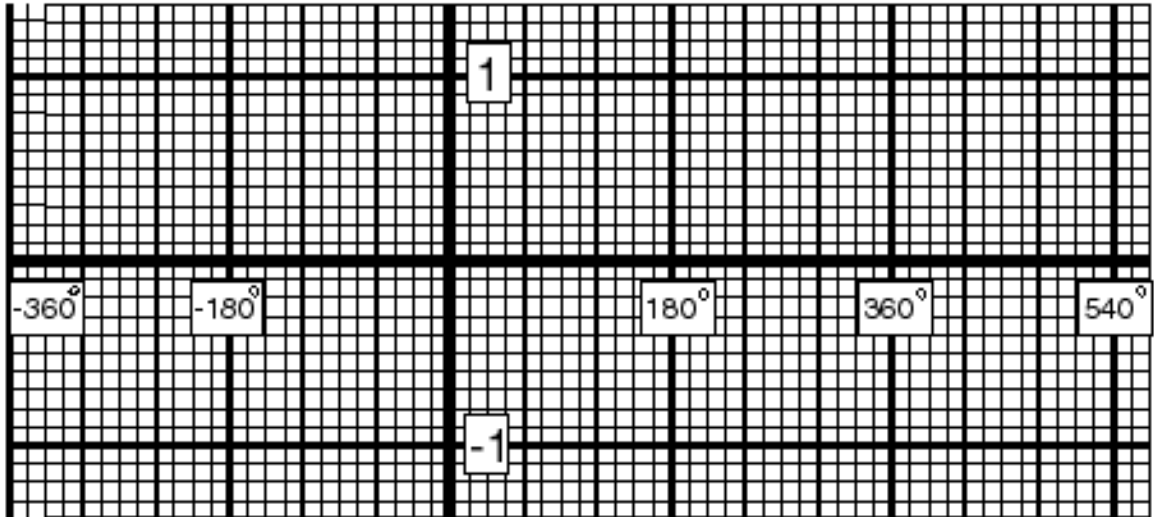


We will use the definitions of the circular functions sine, cosine, and tangent. Recall these use the coordinates of the points that correspond to each angle. We will use this to draw graphs of the sine, cosine, and tangent of  $x$  on the usual  $xy$ -plane.

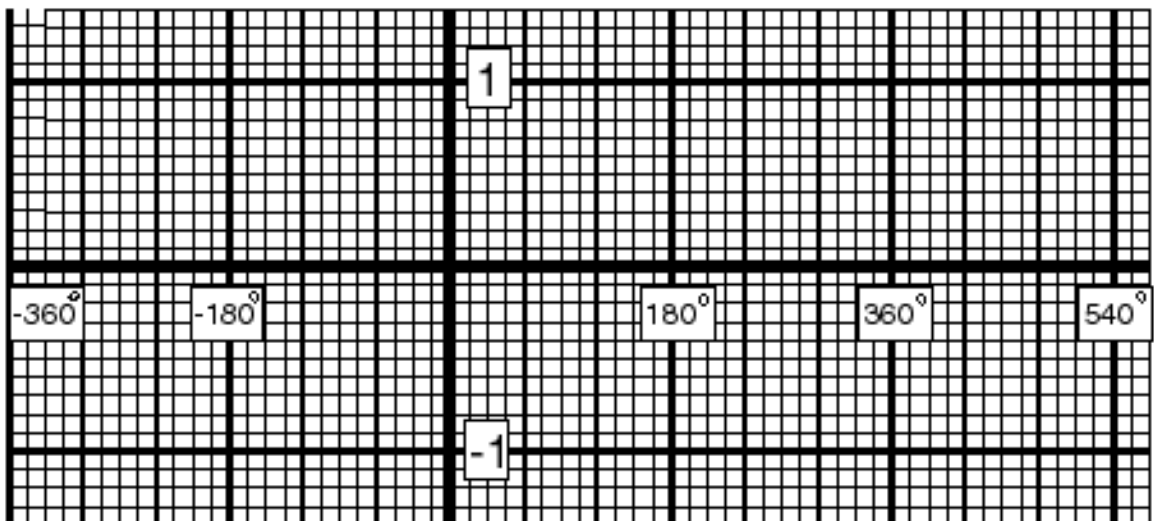
2. Notice the angle measurements in the table correspond to the points on the graph above. First fill in the equivalent radian measures in the first column. Then record each point's coordinates in the second column. Use this information to find the sine, cosine, and tangent of the angles. Use the tables below to organize the information. **Round to two decimal places.**

<b>x = angle measure</b>	<b>Point's coordinates P(a,b)</b>	<b>sin x = b</b>	<b>cos x = a</b>	<b>tan x = <math>\frac{b}{a}</math></b>
0° =				
30° =				
60° =				
90° =				
120° =				
180° =				
240° =				
270° =				
300° =				
360° =				

3. Now we will graph the angle measures versus the third column on an  $xy$ -plane . This will produce the graph of  $y = \sin x$ . Plot the angle measurements and their corresponding sine values on the graph below. The angle measures are  $x$  values and the sines are the  $y$ 's.



4. Now we will graph the angle measures versus the fourth column on an  $xy$ -plane . This will produce the graph of  $y = \cos x$ . Plot the angle measurements and their corresponding cosine values on the graph below. The angle measures are  $x$  values and the cosines are the  $y$ 's.



5. Now we will graph the angle measures versus the fifth column on an  $xy$ -plane . This will produce the graph of  $y = \tan x$  . Plot the angle measurements and their corresponding tangent values on the graph below. The angle measures are  $x$  values and the tangents are the  $y$ 's.

