

Name:

Date:

Period:

Score:

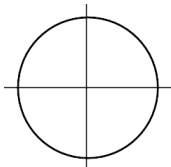
First attempt due:

Final corrections due:

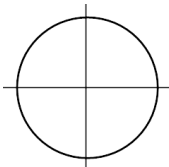
**Practice Worksheet:**  
**Trig Ratios on the Unit Circle**

Find the exact value of the trig ratio without using a calculator. Sketch both the given angle and reference angle on the circle. You must show work that supports your answers.

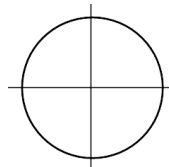
1.  $\sin -1320^\circ$



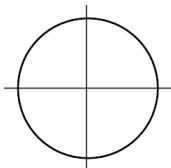
2.  $\tan 930^\circ$



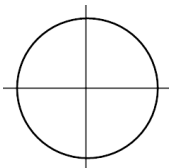
3.  $\cos -405^\circ$



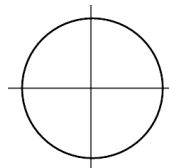
4.  $\cot -240^\circ$



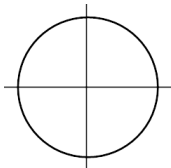
5.  $\sec 1305^\circ$



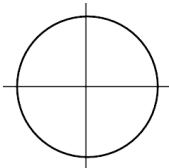
6.  $\csc 630^\circ$



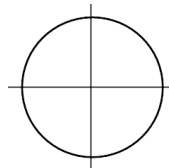
7.  $\cos -\frac{16\pi}{3}$



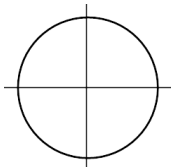
8.  $\sin \frac{47\pi}{6}$



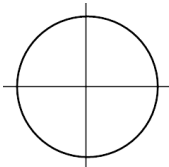
9.  $\sec \frac{29\pi}{6}$



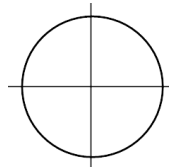
10.  $\csc -\frac{31\pi}{6}$



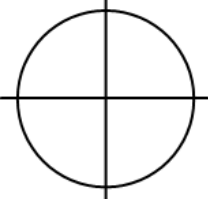
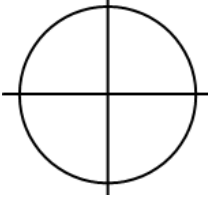
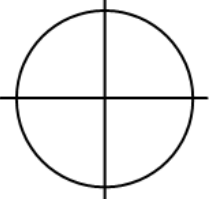
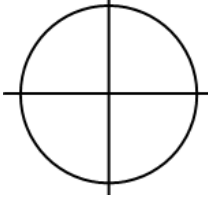
11.  $\tan -\frac{17\pi}{4}$



12.  $\cot \frac{38\pi}{4}$



Rewrite the six trigonometric functions of  $\theta$  in terms of sine and/or cosine of the reference angle. Sketch both the given angle and reference angle on the circle. You must show work that supports your answers.

<p><b>13.</b> <math>\theta = -115^\circ</math></p>  <p><math>\sin \theta =</math>                      <math>\csc \theta =</math></p> <p><math>\cos \theta =</math>                      <math>\sec \theta =</math></p> <p><math>\tan \theta =</math>                      <math>\cot \theta =</math></p>	<p><b>14.</b> <math>\theta = 422^\circ</math></p>  <p><math>\sin \theta =</math>                      <math>\csc \theta =</math></p> <p><math>\cos \theta =</math>                      <math>\sec \theta =</math></p> <p><math>\tan \theta =</math>                      <math>\cot \theta =</math></p>
<p><b>15.</b> <math>\theta = \frac{7\pi}{9}</math></p>  <p><math>\sin \theta =</math>                      <math>\csc \theta =</math></p> <p><math>\cos \theta =</math>                      <math>\sec \theta =</math></p> <p><math>\tan \theta =</math>                      <math>\cot \theta =</math></p>	<p><b>16.</b> <math>\theta = -\frac{\pi}{8}</math></p>  <p><math>\sin \theta =</math>                      <math>\csc \theta =</math></p> <p><math>\cos \theta =</math>                      <math>\sec \theta =</math></p> <p><math>\tan \theta =</math>                      <math>\cot \theta =</math></p>

Approximate the value of the trig ratio using a calculator. To show your work, write down what you entered into the calculator. Round your final answer to four decimal places.

<b>17.</b> $\csc 81^\circ$	<b>18.</b> $\cot -17^\circ$	<b>19.</b> $\sec 802^\circ$
<b>20.</b> $\csc -\frac{3\pi}{5}$	<b>21.</b> $\sec -\frac{7\pi}{5}$	<b>22.</b> $\cot \frac{\pi}{2}$