The Unit Circle

Date_____ Period____

1) If a 45-45-90 triangle has a hypotenuse of length 1 unit, what are the lengths of the legs? Show all solving.

2) If a 30-60-90 triangle has a hypotenuse of length 1 unit, what are the lengths of the legs? Show all solving

Find the exact value of each trigonometric function.

3) $\cos 135°$

4) $\sin 780°$

5) $\tan -225°$

6) $\tan 210°$

7) $\sin \frac{13\pi}{6}$

8) $\sin \frac{\pi}{6}$

9) $\tan \pi$

10) $\tan \frac{7\pi}{3}$

Challenge! Find the exact value of each trigonometric function.

11) $\cot -\frac{8\pi}{3}$

12) $\sec \frac{5\pi}{3}$

Answers to The Unit Circle (ID: 1)

1) sqrt(2)/2

2) long leg: sqrt(3)/2 , short leg: 1/2

3) $-\frac{\sqrt{2}}{2}$

4) $\frac{\sqrt{3}}{2}$

5) -1

6) $\frac{\sqrt{3}}{3}$

7) $\frac{1}{2}$

8) $\frac{1}{2}$

9) 0

10) $\sqrt{3}$

11) $\frac{\sqrt{3}}{3}$

12) 2