1. In the following problems, $t$ is a real number and assume a unit circle. In each case, identify the reference arc, find the $(x, y)$ coordinates of the point at $t$, and evaluate the six circular functions at $t$ using EXACT FORM.

(a) $t = \frac{14\pi}{3}$
(b) $t = -\frac{3\pi}{2}$
(c) $t = \frac{\pi}{2} + \frac{\pi}{6}$

2. Show the following points are on the unit circle:

(a) $\left(-\frac{2}{3}, \frac{\sqrt{5}}{3}\right)$
(b) $\left(\frac{\sqrt{20}}{6}, \frac{2}{3}\right)$

3. Graph $f(t) = 3\sin(2t - \pi)$ over the interval $[0, 2\pi]$.

(a) Place a point (●) on the zero-points, max, min and endpoints and CLEARLY specify the coordinate of each point (e.g. $\left[\frac{\pi}{2}, 1\right]$).

Using your graph, specify the following:

Amplitude: ___________________ Range: ___________________

Period: ___________________ Zero-Points: ________________

4. Graph one complete cycle/period of $f(t) = 2\cos\left(t + \frac{\pi}{4}\right)$.

(a) Place a point (●) on the zero-points, max, min and endpoints and CLEARLY specify the coordinate of each point (e.g. $\left[\frac{\pi}{2}, 1\right]$).

Using your graph, specify the following:

Amplitude: ___________________ Range: ___________________

Period: ___________________ Zero-Points: ________________
5. Graph one complete cycle/period of \( f(t) = -350 \sin(\frac{\pi}{6}t + \frac{\pi}{3}) + 420 \). 

(a) Place a point (●) on the max, min and endpoints and CLEARLY specify the coordinate of each point (e.g. \([\frac{\pi}{2}, 1]\)).

Using your graph, specify the following:

- Amplitude: 
- Period: 
- Horizontal shift (C) & direction (circle): units left/right
- Vertical shift (D) & direction (circle): units up/down

6. Graph \( f(t) = -0.5\tan(3t - \frac{\pi}{2}) \) through two complete cycles - one where \( t > 0 \), and one where \( t < 0 \).

(a) Show asymptotes with a vertical dashed line and CLEARLY specify their coordinates on the t-axis (e.g. \([\frac{\pi}{2}]\)).

(b) Place a point (●) on the zero-points and CLEARLY specify the coordinate of each point on the t-axis (e.g. \([\frac{\pi}{2}]\)).

Using your graph, specify the following:

- Amplitude: 
- Period: 
- Range: 
- Asymptotes: