Lecture 9 - Homework

Question 1. Determine the six trigonometric ratios for the following angles,

(a) $\theta_1 = 30°$ (b) $\theta_2 = 225°$ (c) $\theta_3 = -240°$ (d) $\theta_4 = 330°$

Question 2. Convert the following polar coordinates to standard coordinates,

a) $\mathbf{P}(1, 45°)$ b) $\mathbf{Q}(2, -240°)$ c) $\mathbf{T}(4, 210°)$ d) $\mathbf{M}(3, -90°)$ e) $\mathbf{G}(3, 330°)$

Question 3. For each of the following, you are given a trigonometric ratio, solve for θ. Assume that each angle θ lies in the **fourth** quadrant.

a) $\cos\theta_1 = \frac{\sqrt{3}}{2}$ b) $\sin\theta_2 = -\frac{1}{2}$ c) $\tan\theta_3 = \sqrt{3}$ d) $\tan\theta_4 = -\frac{1}{4}$

Question 4. For each of the following, you are given a trigonometric ratio, solve for λ. Assume that each angle λ lies in the **second** quadrant.

a) $\cos\lambda_1 = -\frac{1}{\sqrt{2}}$ b) $\sin\lambda_2 = \frac{\sqrt{3}}{2}$ c) $\tan\lambda_3 = -\frac{1}{\sqrt{3}}$ d) $\tan\lambda_4 = -\frac{3}{2}$

Question 5. Convert the following standard coordinates to polar coordinates,

a) $\mathbf{P}\left(4\sqrt{3}, -4\right)$ b) $\mathbf{Q}(-1, 1)$ c) $\mathbf{T}(-6, -3)$ d) $\mathbf{M}\left(3, -\sqrt{27}\right)$