

King Fahd University of Petroleum and Minerals

Prep-Year Math Program

Math 002 - Term 142

Recitation (5.2)

Question 1: If $\tan \theta = 2\sqrt{3}$ and θ is in quadrant III. Find $4\cos \theta + \sin^2 \theta$.

Answer: $\frac{-4\sqrt{13}+12}{13}$

Question 2: If $12x - 5y = 0$, $x \leq 0$ is the equation of the terminal side of an angle θ in standard position, then find the value of: $60(\tan \theta + \csc \theta)$

Answer: 79

Question 3: Which of the following statement is possible?

(a): $\csc \theta = 0$

(b): $\cos \theta = \frac{\pi}{2}$

(c): $\sec \theta = \frac{1}{2}$ and $\cos \theta = 2$

(d): $\tan \theta = \frac{2}{3}$; $\sin \theta = 2$ and $\cos \theta = 3$

(e): $\tan \theta = -\sqrt{3}$ and $\csc \theta = -\frac{2\sqrt{3}}{3}$

Answer:

(a): Impossible

(b): Impossible

(c): Impossible

(d): Impossible

(e): Possible:

Question 4: Let the point $(-3, y)$ lie on the terminal side of θ in standard position.

If $\sin \theta = -\frac{\sqrt{3}}{2}$, then the value of y is

(A): $-3\sqrt{3}$

(B): $3\sqrt{3}$

(C): $-\sqrt{3}$

(D): $\sqrt{3}$

(E): 3

Answer: (A): $-3\sqrt{3}$