King Fahd University of Petroleum and Minerals
Prep-Year Math Program
Math 002 - Term 151
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: $\dfrac{-4\sqrt{13}+12}{13}$

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: $60\left(\tan\theta + \csc\theta\right)$

Answer: 79

Question 3: Which of the following statement is possible?

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

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

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

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

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

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

(A): $-3\sqrt{3}$
(B): $3\sqrt{3}$
(C): $-\sqrt{3}$
(D): $\sqrt{3}$
(E): 3

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