Trigonometry Test Questions:

1. For all x, $\sin(2x) = 2\sin x$. True or False

2. $\tan\dfrac{\pi}{3} = \sqrt{3}$ True or False

3. If θ is in the second quadrant, then $\sqrt{1-\sin^2\theta} = -\cos\theta$. True or False

4. The number of solutions to the equation

$$2\sin^2 x - \sin x - 1 = 0$$

in the interval $0 \le x \le 2\pi$ is

A. 1 B. 2 C. 3 D. 4

5. If $\sin x = \dfrac{3}{4}$ and $\cos x < 0$, then the exact value of $\tan x$ is

A. $\dfrac{3}{\sqrt{7}}$ B. $\dfrac{-3}{\sqrt{7}}$ C. $\dfrac{-7}{\sqrt{3}}$ D. $\dfrac{7}{\sqrt{3}}$

6. Which of the following represents the radian measure of $45°$?

A. $\dfrac{\pi}{4}$ B. $\dfrac{\pi}{6}$ C. $\dfrac{\pi}{3}$ D. $\dfrac{\pi}{2}$

7. A right triangle has sides of lengh $9, 40$ and 41. If α is the angle between the sides of length 9 and 41, what is $\sin\alpha$?

A. $\dfrac{41}{40}$ B. $\dfrac{9}{41}$ C. $\dfrac{9}{40}$ D. $\dfrac{40}{41}$