Trigonometry

Quiz 2

Sept 11, 2008

Covering A1 – A5

Name KEY

B 1. An angle θ in standard position whose measure is $24{,}972^{\circ}$ has its terminal side in which quadrant?

A. I B. II C. III D. IV

$\frac{24972}{360} = 69(360) + 132$ → 132° final partial rotation.

B 2. Consider an angle θ in standard position whose measure is 120°. What is the measure of this angle in radians?

A $\frac{5\pi}{6}$ B. $\frac{2\pi}{3}$ C. $\frac{\pi}{2}$ D. $\frac{\pi}{6}$ E. $\frac{4\pi}{5}$

$\frac{120^{\circ}}{180^{\circ}}\pi = \frac{2\pi}{3}$

A 3. Determine correct to 4 decimal places: sec(-1.5 radians). Note that I changed the angle to a negative quantity. A calculator might prove helpful.

A. 14.1368 B.0.0707 C. 1.0025 D. 0.9975 E. 1.0003

F. none of these values are correct.

A 4. Find the radian measure of the central angle of a circle whose radius is 16 cm that intercepts an arc of length 24 cm.

$s = r\theta$

$\frac{s}{r} = \frac{r\theta}{r}$

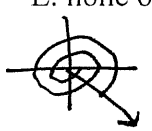
$\frac{24}{16} = \theta$

$\frac{3}{2} = 1.5 = \theta$

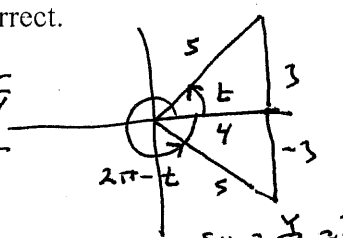
A. $\frac{3}{2}$ B. 0.8 C. $\frac{\pi}{6}$ D. 0.16 E. 20 F. None of these is correct.

D 5. Suppose $\cos(t) = \frac{4}{5}$. Use this fact to determine $\sin(2\pi - t)$.

A. $\frac{4}{5}$ B. $\frac{-4}{5}$ C. $\frac{3}{5}$ D. $\frac{-3}{5}$ E. none of these values are correct.



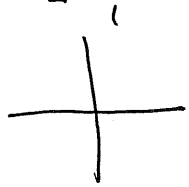
If $\angle = 45^{\circ} = \frac{x}{y} = \frac{-\sqrt{2}}{1}$



$\sin = \frac{y}{r} =$

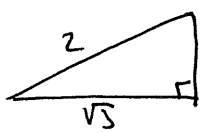
A 6. Determine $\csc(\frac{-17\pi}{4})$.

A. $-\sqrt{2}$ B. $\frac{-\sqrt{2}}{2}$ C. $\frac{-2\sqrt{3}}{3}$ D. $\sqrt{2}$ E. $\frac{\sqrt{2}}{2}$



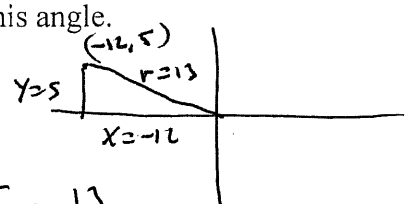
D 7. Determine the exact value of $\tan(\frac{\pi}{6})$

30°



A. -0.5 B. $\frac{\sqrt{3}}{2}$ C. 1 D. $\frac{\sqrt{3}}{3}$ E. $\sqrt{3}$

A 8. Consider an angle θ in standard position. Suppose the terminal side of the angle passes through the point (-12,5). Find the exact value of the secant of this angle.



A. $\frac{-13}{12}$ B. $\frac{-\sqrt{2}}{2}$ C. $\frac{-12}{13}$ D. $\frac{-5}{12}$ E. $\frac{-12}{5}$

$\sec\theta = \frac{r}{x} = \frac{13}{-12}$