

Quiz Warm Up

Name: _____

Convert each of the radian angles into degrees and each of the degree angles into radians. Write answers in exact form, if possible. ~~Any decimal answers should be rounded to 3 decimal places.~~

1. $42^\circ \frac{7\pi}{30}$

2. $-\frac{\pi}{86} -90^\circ$

3. $-174^\circ -\frac{29\pi}{30}$

4. $\frac{7}{8} \frac{315^\circ}{2\pi}$

5. $-87^\circ -\frac{29\pi}{60}$

6. $\frac{19\pi}{32} 855^\circ$

7. $874^\circ \frac{437\pi}{90}$

8. $\frac{9}{11} \frac{1620^\circ}{11\pi}$

Evaluate each of the following. NO DECIMAL ANSWERS.

9. $\sin\left(\frac{\pi}{4}\right) - \cos\left(\frac{\pi}{4}\right)$

10. $4\cot\left(\frac{\pi}{3}\right)$

11. $2\sec\left(\frac{2\pi}{3}\right)$

12. $5\tan(\pi)$

$\frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2} = 0$

$\frac{4\sqrt{3}}{3}$

-4

0

13. $5\sin(-480^\circ)$

14. $\tan(-90^\circ)$

$-\frac{5\sqrt{3}}{2}$

undef

What quadrant does θ lie in if...

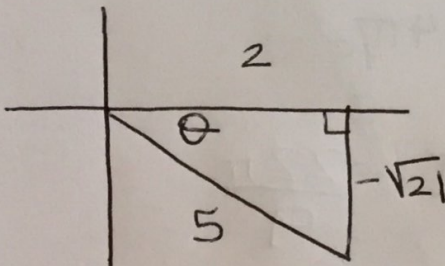
15. $\sec\theta < 0$ and $\cot\theta > 0$?

16. $\csc\theta = \frac{1}{3}$ and $\tan\theta < 0$

III

II

17. Find each value of the remaining trigonometric ratios given that $\cos\theta = \frac{2}{5}$ and $\frac{3\pi}{2} < \theta < 2\pi$.



$\sin\theta = -\frac{\sqrt{21}}{5}$

$\csc\theta = -\frac{5\sqrt{21}}{21}$

$\cos\theta = \frac{2}{5}$

$\sec\theta = \frac{5}{2}$

$\tan\theta = -\frac{\sqrt{21}}{2}$

$\cot\theta = -\frac{2\sqrt{21}}{21}$

18. The minute hand of a clock is 9 centimeters long. The hand travels $\frac{2}{3}$ radians around the clock. What is the angular speed of the hand? What is the linear speed?

Omit

19. The minute hand of a clock is 15 centimeters long. After 15 minutes, what area of the clock has the minute hand passed over? Round your answer to the nearest square centimeter.

$$\text{Area } \frac{225\pi}{4} = 176.71 \text{ cm}^2$$

$$\text{Arc len } \frac{15\pi}{2} \approx 23.56 \text{ cm}$$

Find a positive + negative coterminal angle.

20. 100°

$$+460^\circ$$

$$-260^\circ$$

21. -78°

$$-438^\circ$$

$$282^\circ$$

22. $\frac{\pi}{7}$

$$\frac{15\pi}{7} \quad \frac{-13\pi}{7}$$

23. $-\frac{4\pi}{9}$

$$\frac{14\pi}{9} \quad \frac{-22\pi}{9}$$