Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Section 04-05-Sample Quiz-General Trig Equations

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following would be the most reduced form of the equation shown that you might use before finding the general solution?

$2\sin(x) + \sqrt{3} = 0$

a. $\sin(x) = \frac{\sqrt{3}}{2}$

b. $\sin(x) = -\frac{\sqrt{3}}{2}$

c. $\sin(x) = -\sqrt{3} - 2$

d. $\sin(x) = -\sqrt{6}$

____ 2. Which of the following would be the most reduced form of the equation shown that you might use before finding the general solution?

$\frac{\sin(2x)}{\cos(x)} = 1$

a. $\sin(x) = \frac{1}{2}$

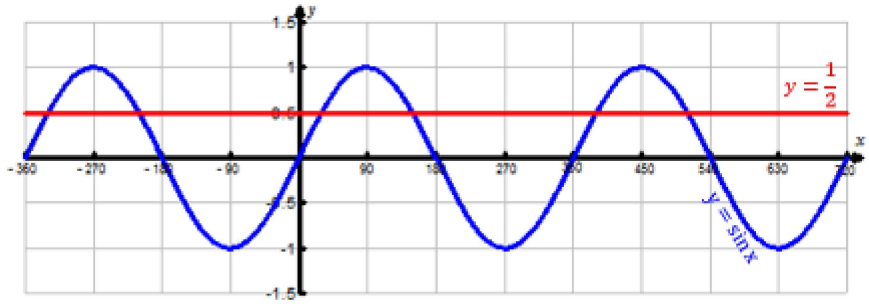
b. $\cos(x) = \frac{1}{2}$

c. $\tan(x) = \frac{1}{2}$

d. $\tan(x) = 2$

____ 3. Find the general solution to the following trigonometric equation in **degrees** using the **roster method**.

$$\sin(x) = \frac{1}{2}$$



a. $x = \ldots, -330°, 30°, 390°, 750°, \ldots$

or $x = \ldots, -210°, 150°, 510°, 870°, \ldots$

_____

b. $x = \ldots, -315°, 45°, 405°, 765°, \ldots$

or $x = \ldots, -225°, 135°, 495°, 855°, \ldots$

_____

c. $x = \ldots, -300°, 60°, 420°, 780°, \ldots$

or $x = \ldots, -240°, 120°, 480°, 840°, \ldots$

_____

d. $x = \ldots, -330°, 30°, 390°, 750°, \ldots$

or $x = \ldots, -30°, 330°, 690°, 1050°, \ldots$

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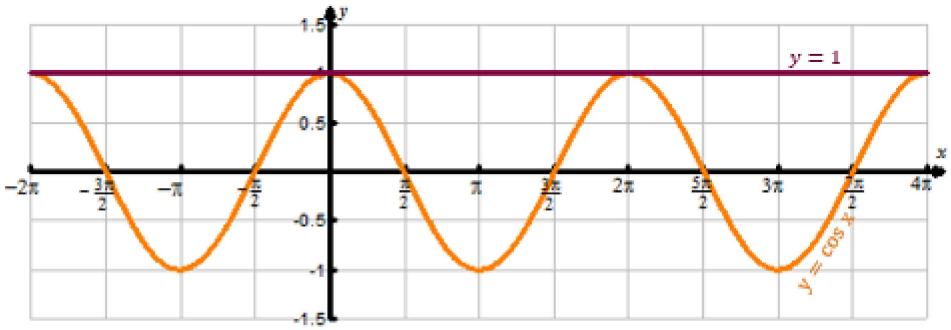
____ 4. Find the general solution to the following trigonometric equation in **radians** using an **algebraic solution**.

$\cos(x) = 1$



a. $x = \frac{\pi}{3} \cdot n$; where 'n' is any integer

_____

b. $x = \frac{\pi}{2} \cdot n$; where 'n' is any integer

_____

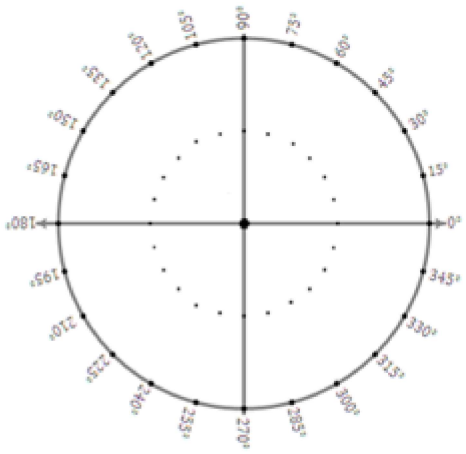
c. $x = \pi \cdot n$; where 'n' is any integer

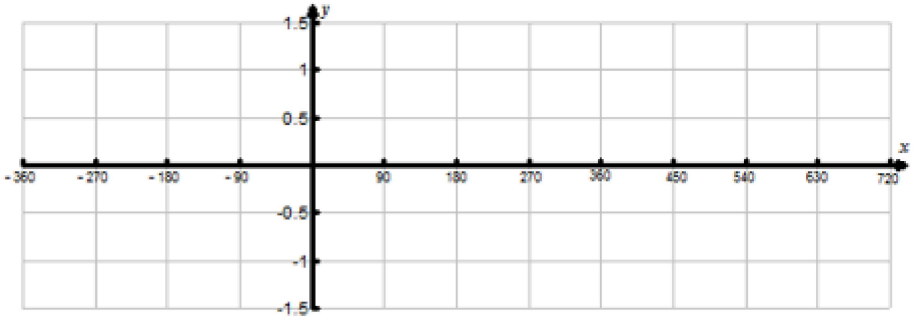
_____

d. $x = 2\pi \cdot n$; where 'n' is any integer

____ 5. Find the general solution to the following trigonometric equation in **degrees** using an **algebraic solution**.

$$\sin(x) = \frac{\sqrt{3}}{2}$$





a. $x = (30 + 360n)°$ or $x = (150 + 360n)°$; where 'n' is any integer

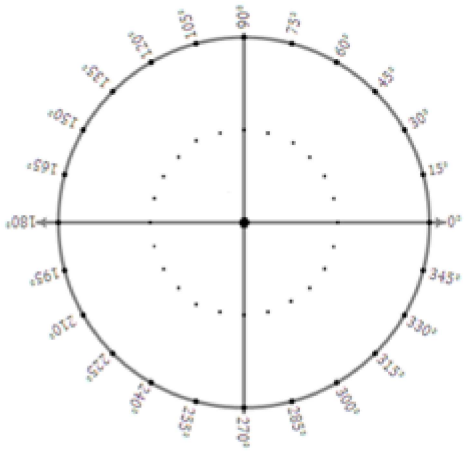
b. $x = (45 + 360n)°$ or $x = (135 + 360n)°$; where 'n' is any integer

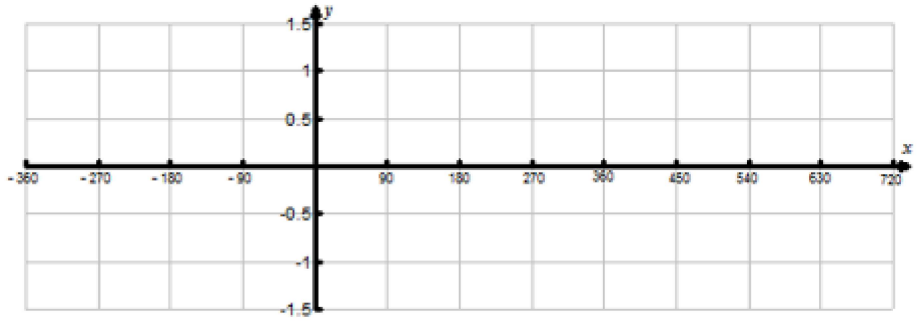
c. $x = (60 + 360n)°$ or $x = (120 + 360n)°$; where 'n' is any integer

d. $x = (30 + 360n)°$ or $x = (-30 + 360n)°$; where 'n' is any integer

____ 6. Find the general solution to the following trigonometric equation in **degrees** using the **roster method**.

$4\cos(x)+5=3$





a. $x=\ldots,-330°,\ 30°,\ 390°,\ 750°,\ldots$

or $x=\ldots,-210°,\ 150°,\ 510°,\ 870°,\ldots$

b. $x=\ldots,-315°,\ 45°,\ 405°,\ 765°,\ldots$

or $x=\ldots,-225°,\ 135°,\ 495°,\ 855°,\ldots$

c. $x=\ldots,-240°,\ 120°,\ 480°,\ 840°,\ldots$

or $x=\ldots,-120°,\ 240°,\ 600°,\ 960°,\ldots$

d. $x=\ldots,-240°,\ 120°,\ 480°,\ 840°,\ldots$

or $x=\ldots,-300°,\ 60°,\ 420°,\ 780°,\ldots$