

Transforming Sine & Cosine III (5.2) p251 day 5

take up quiz 7

Quiz 7

1. Solve the following on the interval $[0, 2\pi]$

a) $\sin x = 0$ $x = 0, \pi, 2\pi$

b) $\cos x = 1$ $x = 0, 2\pi$

c) $\sin x = \frac{1}{2}$ $x = \frac{\pi}{6}, \frac{5\pi}{6}$

d) $\cos x = -\frac{1}{2}$ $x = \frac{2\pi}{3}, \frac{4\pi}{3}$

2. Find the general solution to $\sin(2x - 1) = 0$

3. Solve $\sin \theta = 0.678$ on $[0, 360]$

4. Create an equation for the following

a) $y = 3 \cos x + 2$

b) $y = -\cos \frac{1}{2}x - 3$

5. Give the exact value of

a) $\cos \frac{4\pi}{3}$

b) $\sin 510^\circ$

6. Sketch $f(x) = \sqrt{2} - 4$

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#W: graphing practice sheet 1-4

$y = \frac{1}{3} \cos 2x$

$y = -3 \sin \frac{1}{2}x$

$y = 2 \cos \frac{\pi}{2}(x-1) + 2$

$y = -\sin 2(x - \frac{\pi}{4}) + 2$

3. $y = 2 \cos \frac{\pi}{2}(x-1) + 2$

$\frac{2}{\pi} \times \frac{\pi}{2} = 1$

$\frac{2}{\pi} \cdot \frac{3\pi}{2} = 3$

$3 + 1 = 4$

x	y	$\frac{2}{\pi}x + 1$
0	1	1
$\frac{\pi}{2}$	2	2
π	3	3
$\frac{3\pi}{2}$	2	2
2π	1	1

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sheet #5,6

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how do we make the equation from a graph?

ex1: Write the equation.

$d = -1$

$a = 2$

$\text{per} = 2\pi$

$b = \frac{2\pi}{2\pi} = 1$

$c = \frac{\pi}{2}$

$y = 2 \cos(x - \frac{\pi}{2}) - 1$

$y = 2 \sin x - 1$

c is the x-coordinate of the starting point of the graph.

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ex2: Write the equation

$d = 2$

$a = 3$

$\text{per} = 4\pi$

$b = \frac{2\pi}{4\pi} = \frac{1}{2}$

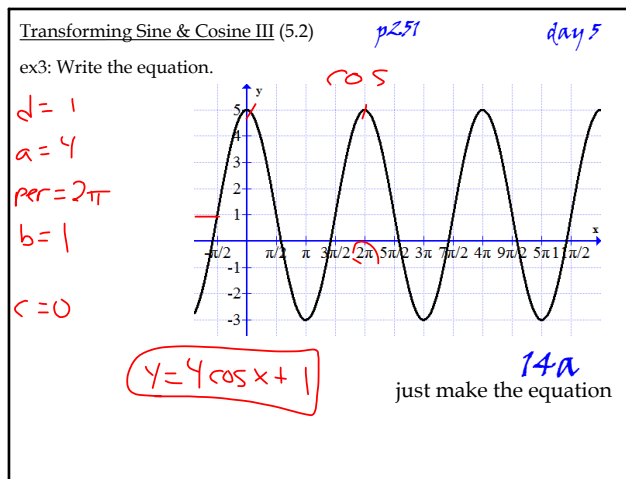
$c = 0$

$y = -3 \sin \frac{1}{2}x + 2$

$y = -3 \cos \frac{1}{2}(x - \pi) + 2$

$y = 3 \cos \frac{1}{2}(x - 3\pi) + 2$

$y = 3 \sin \frac{1}{2}(x - 2\pi) + 2$



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HW: 14c, 15c, 16c
 sheet #7,8