

THIS IS A NO CALCULATOR QUIZ

[10 POINTS] Sketch the graph of the function $y = 2 - \sin \frac{2\pi x}{3}$.
Include two full periods, and label all x- and y-coordinates discussed in class.

MIDDLE $y = 2$
AMPLITUDE $| -1 | = 1$ \sim
PERIOD $\frac{2\pi}{\frac{2\pi}{3}} = 2\pi \cdot \frac{3}{2\pi} = 3$
MAX = $2 + 1 = 3$
MIN = $2 - 1 = 1$

"STARTS" AT $x = 0$

$\frac{1}{4}$ PERIOD = $\frac{3}{4}$

START + $\frac{1}{4}$ PERIOD

$0 + \frac{3}{4} = \frac{3}{4}$

$\frac{3}{4} + \frac{3}{4} = \frac{6}{4}$

$\frac{6}{4} + \frac{3}{4} = \frac{9}{4}$

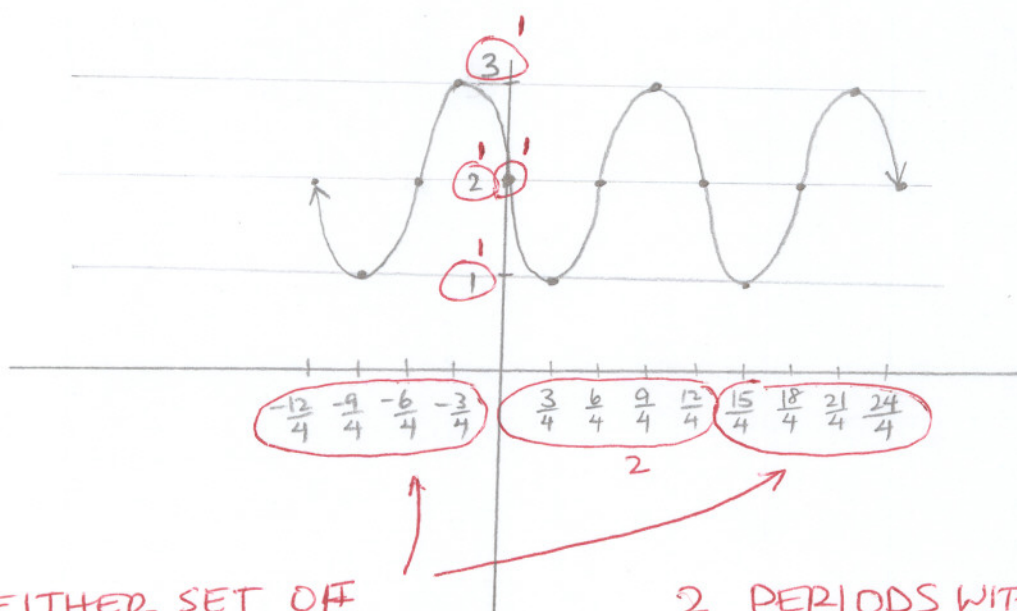
$\frac{12}{4}$

$\frac{15}{4}$

$\frac{18}{4}$

$\frac{21}{4}$

$\frac{24}{4}$



EITHER SET OFF
4 LABELS = 1 POINT

2 PERIODS WITH
CORRECT SHAPE = 1 POINT

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[10 POINTS] Sketch the graph of the function $y = \frac{2}{3} \cos\left(\frac{x}{2} - \frac{\pi}{4}\right)$.

Include two full periods, and label all x- and y-coordinates discussed in class.

MIDDLE $y = 0$

AMPLITUDE $\left|\frac{2}{3}\right| = \frac{2}{3}$



$$\text{MAX} = 0 + \frac{2}{3} = \frac{2}{3}$$

$$\text{MIN} = 0 - \frac{2}{3} = -\frac{2}{3}$$

PERIOD $\frac{2\pi}{\frac{1}{2}} = 2\pi \cdot \frac{2}{1} = 4\pi$

"STARTS" AT $-\frac{(-\frac{\pi}{4})}{\frac{1}{2}} = \frac{\pi}{4} \cdot \frac{2}{1} = \frac{\pi}{2}$

$$\frac{1}{4} \text{ PERIOD} = \frac{1}{4} (4\pi) = \pi$$

START + $\frac{1}{4}$ PERIOD

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

$$\frac{3\pi}{2} + \frac{2\pi}{2} = \frac{5\pi}{2}$$

$$\frac{5\pi}{2} + \frac{2\pi}{2} = \frac{7\pi}{2}$$

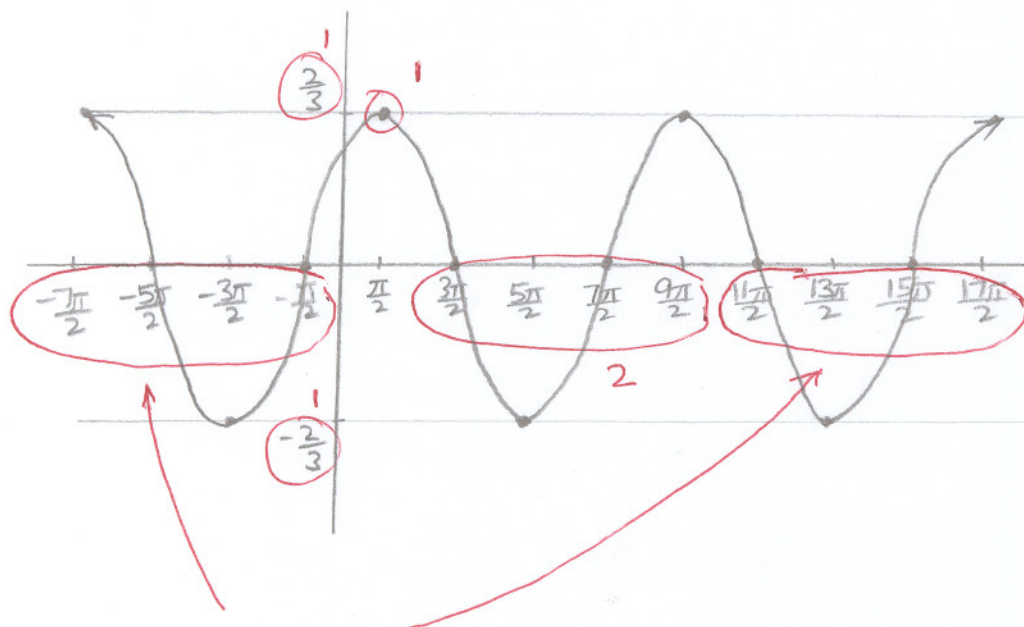
$$\frac{9\pi}{2}$$

$$\frac{11\pi}{2}$$

$$\frac{13\pi}{2}$$

$$\frac{15\pi}{2}$$

$$\frac{17\pi}{2}$$



EITHER SET OF 4 LABELS = 1 POINT

2 PERIODS WITH CORRECT SHAPE = 1 POINT

MIDDLE OF GRAPH ALONG X-AXIS = 1 POINT