

Accel. PreCalculus
 Graphing Sine Functions
 Period Change or Phase Shift

Name Key
 Date _____

Graph the following functions. State the period or phase shift.

1. $y = -\sin 2x$

2. $y = \sin \frac{1}{4}x$

3. $y = \sin 3x$

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

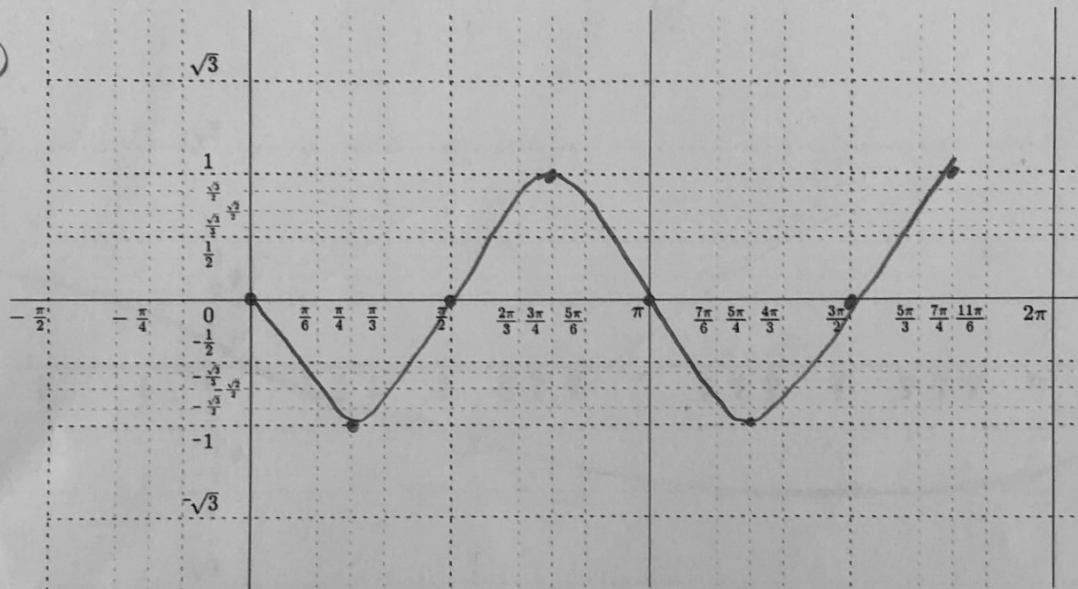
5. $y = 2\sin(x + \frac{\pi}{2})$

6. $y = \sin(x + \frac{\pi}{4})$

7. $y = -\sin(x - \pi)$

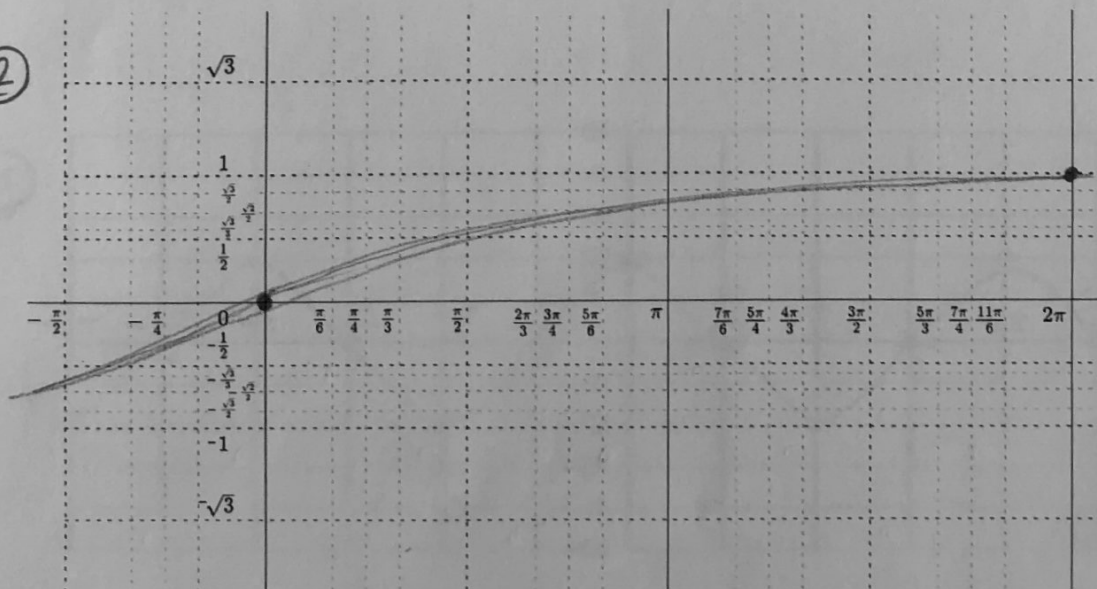
8. $y = -3 + 2\sin x$

①



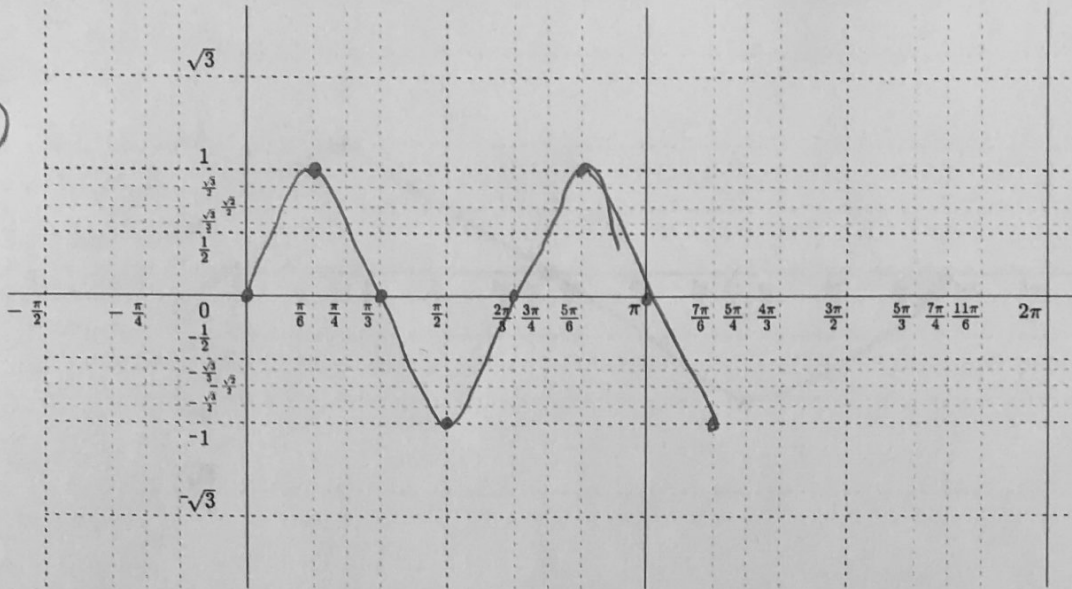
Period = $\frac{2\pi}{2} = \pi$

②



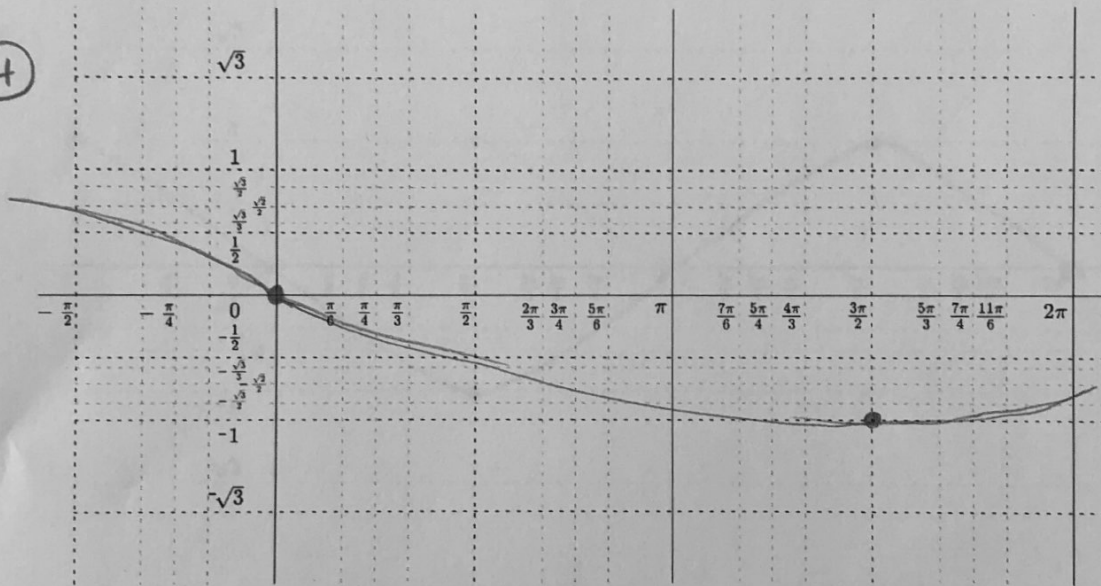
Period = $\frac{2\pi}{1/4} = 8\pi$

3



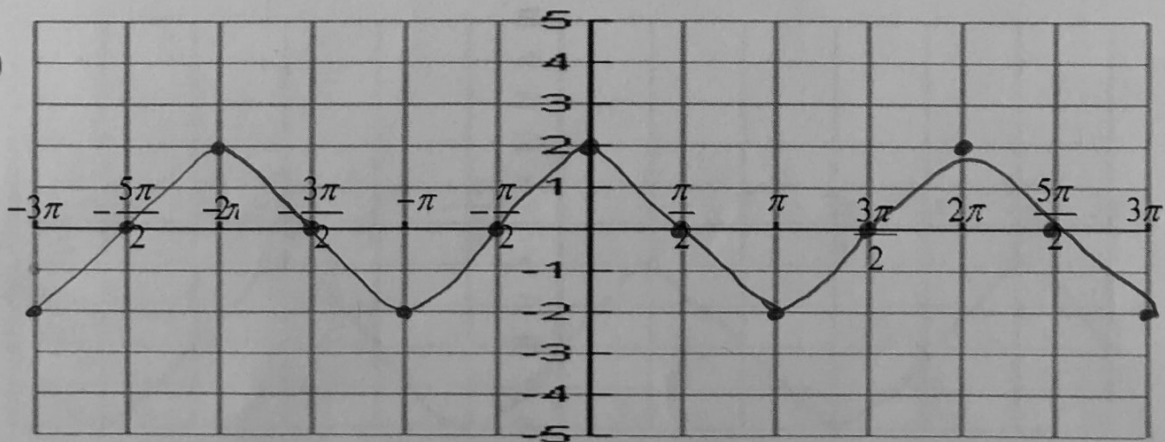
Period = $\frac{2\pi}{3}$

4



Period = $\frac{2\pi}{\frac{1}{3}} = 6\pi$

5



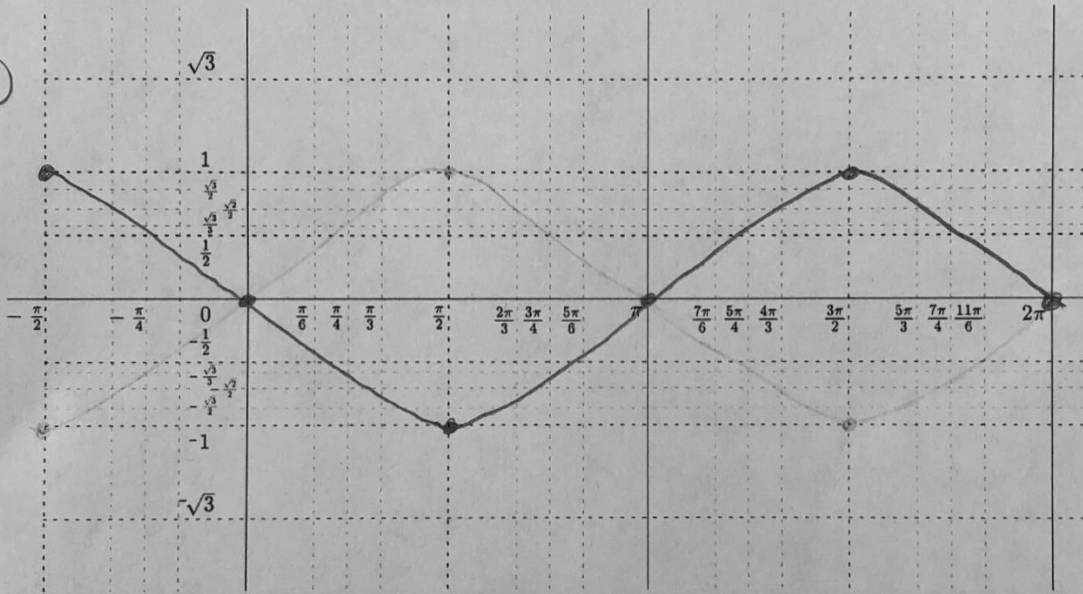
Phase shift : left $\frac{\pi}{2}$

6



Phase shift:
left $\frac{\pi}{4}$

7



Phase shift:
right π

8

