

Find the period, amplitude, vertical and horizontal shifts,

1. $y = 3\sin(x)$
 Pd = 2π
 Amp = 3

2. $y = -\frac{1}{2}\sin(\theta)$ *2 axes ref*
 Amp $\frac{1}{2}$
 Pd: 2π

3. $y = 4\cos(\theta)$
 Amp 4
 Pd 2π

4. $y = \sin(2\theta)$
 Amp 1
 Pd = $\frac{2\pi}{2} = \pi$

5. $y = \cos(\frac{\theta}{3})$
 Amp 1
 Pd = 6π

6. $y = \cos 2\pi(x)$
 Amp 1
 Pd = 1

7. $y = -\sin 3(\theta)$
 Amp 1
 Pd = $2\pi/3$

8. $y = 4\cos(\frac{\theta}{4})$
 Amp 4
 Pd = 8π

9. $y = -3\cos(\pi x)$
 Amp 3
 Pd = 2

10. $y = \frac{1}{2}\sin(\frac{\theta}{2})$
 Amp $\frac{1}{2}$
 Pd = 6

11. $y = 10\cos 5(x)$
 Amp 10
 Pd = $2\pi/5$

12. $y = -2\sin(\frac{\pi x}{4})$
 Amp 2
 Pd = 8

13. $y = -\cos(4x)$
 Amp 1
 Pd = $\pi/2$

14. $y = \frac{3}{2}\cos(2x)$
 Amp $3/2$
 Pd = π

15. $y = 6\sin(\frac{1}{2}x)$
 Amp 6
 Pd = 4π

16. $y = 2\sin(\theta) + 1$

17. $y = \sin(\frac{\theta}{2}) - 2$
 Amp 1 down 2
 Pd = 4π

18. $y = -3\cos 4(\theta) - 5$
 Amp 3 down 5
 Pd = $\pi/2$

Amp 2 up 1
 Pd = 2π

20. $y = \sin 3(\theta + \frac{\pi}{3})$

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

Amp 3
 Pd = 2π
 right $\pi/2$

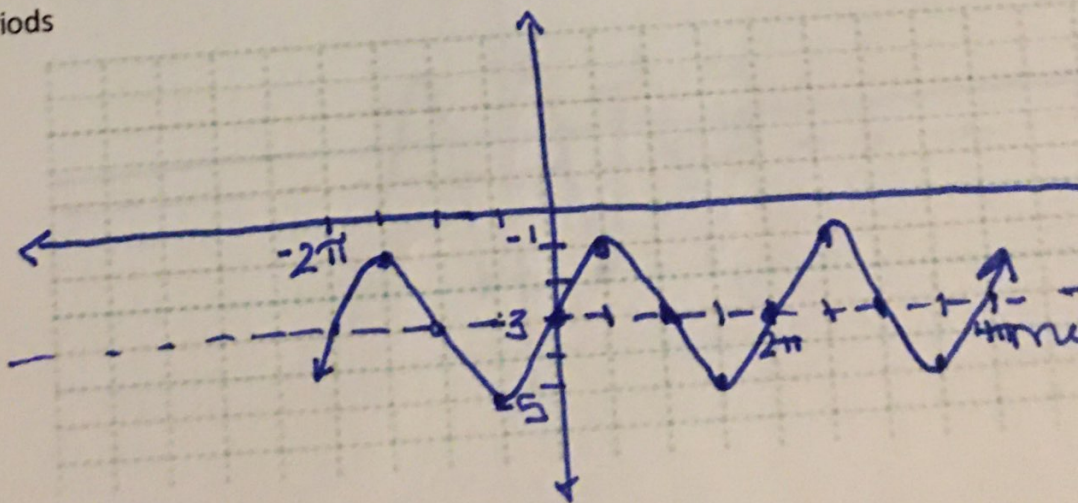
Amp 1
 Pd = $2\pi/3$ left $\pi/3$

Amp 1
 Pd = 4
 left 2

Graphing Sin/Cos - Graph 2 periods

1.) $y = 2\sin x - 3$

Amplitude: 2
 Period: 2π
 Vertical Shift: down 3
 Phase Shift: None

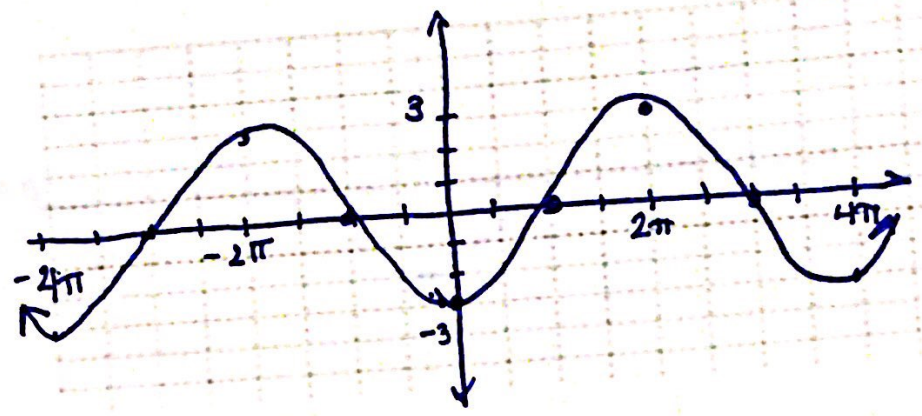


2.) $y = -3\cos(\frac{1}{2}x)$

- A: 3
- P: 4π
- VS: none
- PS: none

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

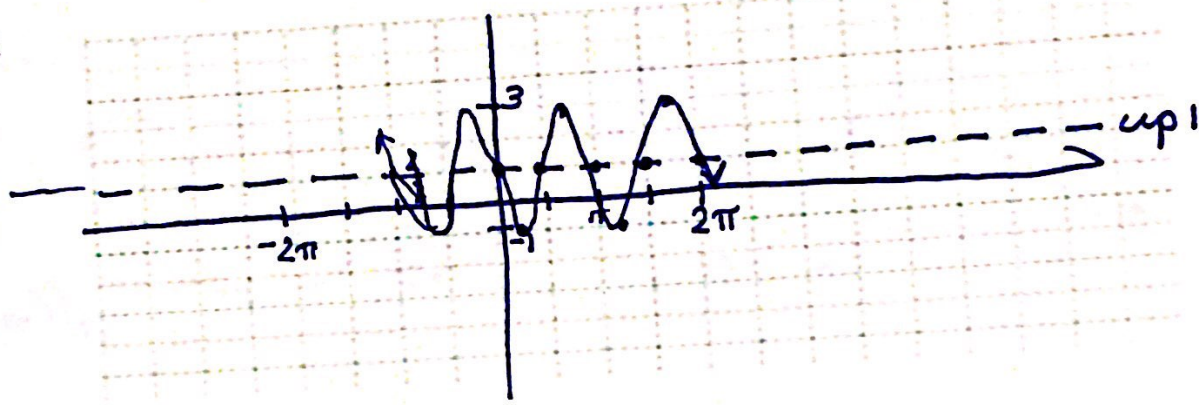
x-axis ref



3.) $y = -2\sin(2x) + 1$

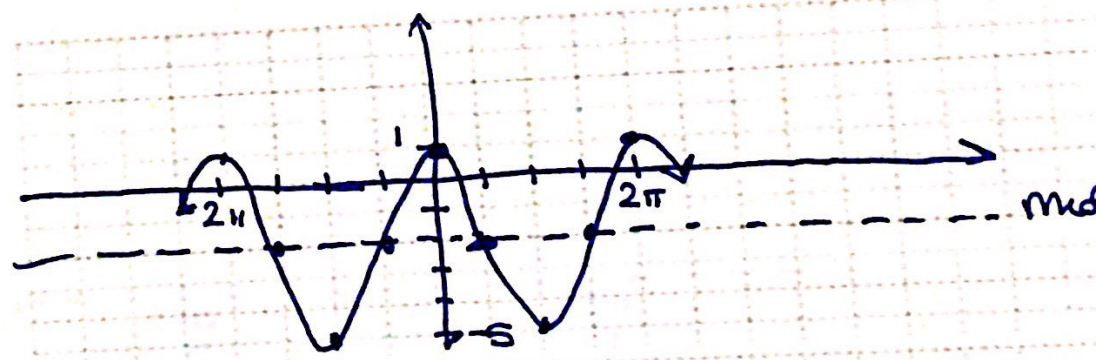
- A: 2
- P: π
- VS: up 1
- PS: none

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



4.) $y = 3\cos x - 2$

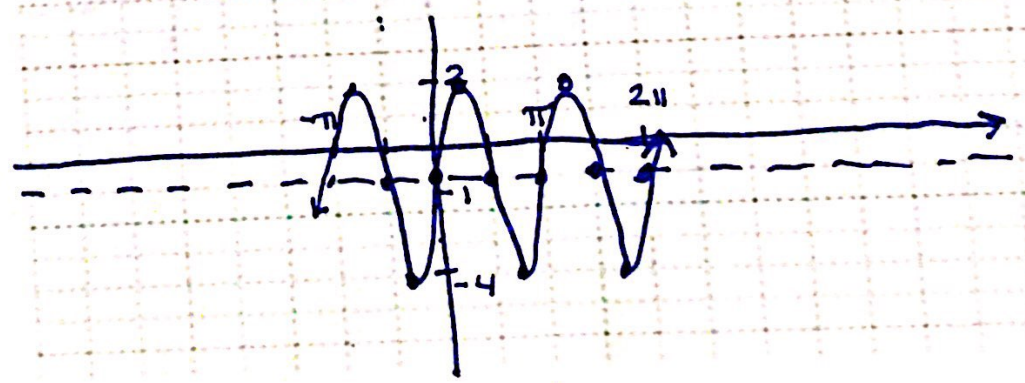
- A: 3
- P: 2π
- VS: down 2
- PS: none



5.) $y = 3\sin(2x) - 1$

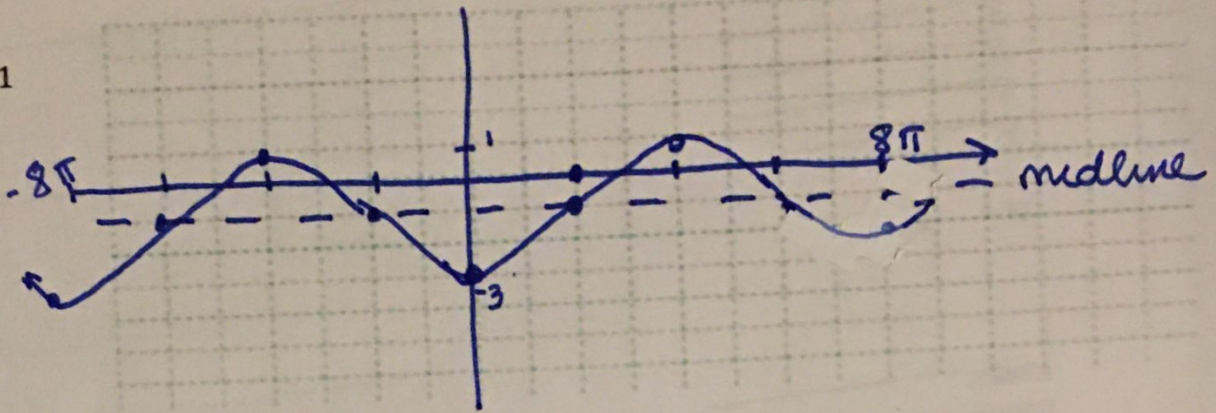
- A: 3
- P: π
- VS: down 1
- PS: none

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



6.) $y = -2 \cos\left(\frac{1}{4}x\right) - 1$

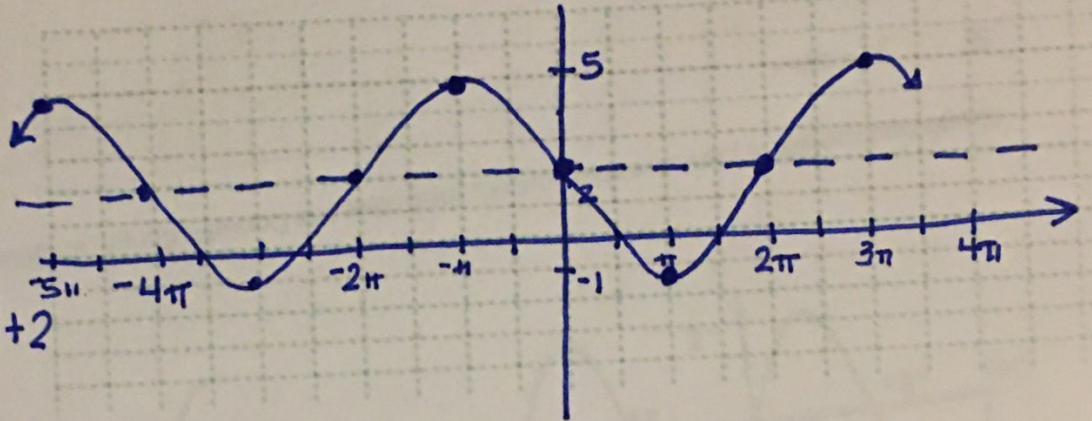
A: 2
 P: 8π
 VS: down 1
 PS: _____



$$Pd = \frac{2\pi}{\frac{1}{4}} = 8\pi$$

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

A: 3
 P: 4π
 VS: up 2
 PS: left π



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

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

8.) $y = 4 \sin(x - \pi) - 3$

A: 4
 P: 2π
 VS: down 3
 PS: right π

