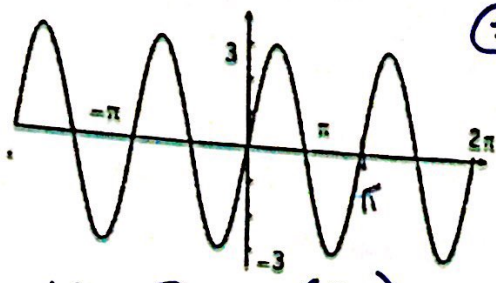
Name: _____ *Can have Multiple Answers

Graphing All Trig Functions:

Write an equation for each graph in terms of sin and cos:

1) Amp 3 pd: π



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

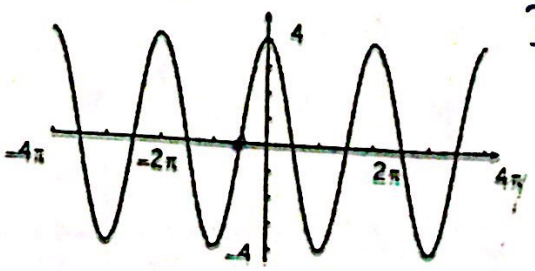
$\pi = \frac{2\pi}{b}$

$b = 2$

$y = 3\sin(2x)$

or $y = 3\cos(2(x - \pi/4))$

2) Amp 4 pd 2π



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

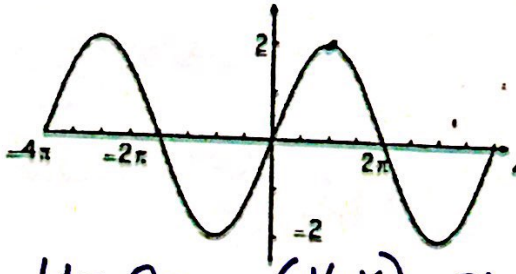
$2\pi = \frac{2\pi}{b}$

$b = 1$

$y = 4\cos(x)$

or $y = 4\sin(x + \pi/2)$

3) Amp: 2 pd $= 4\pi$



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

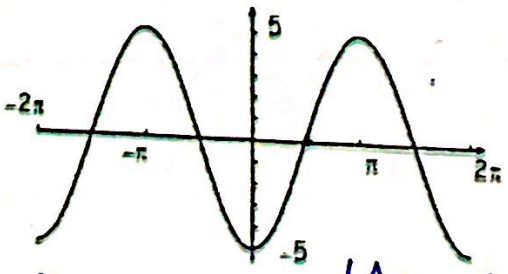
$4\pi = \frac{2\pi}{b}$

$b = 1/2$

$y = 2\sin(1/2x)$ or

$y = 2\cos(1/2(x - \pi))$

4) Amp $= 5$ pd $= 2\pi$



$y = -5\cos x$ or

$y = 5\sin(x - \pi/2)$

Graph two complete periods each function, then state the Domain, Range, amplitude and period

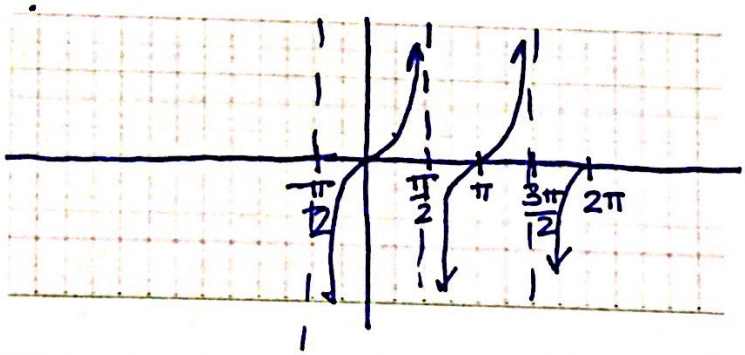
5) $y = tanx$

Amplitude: None

Period: π

Domain: $x = \pi/2 + \pi k$

Range: $(-\infty, \infty)$



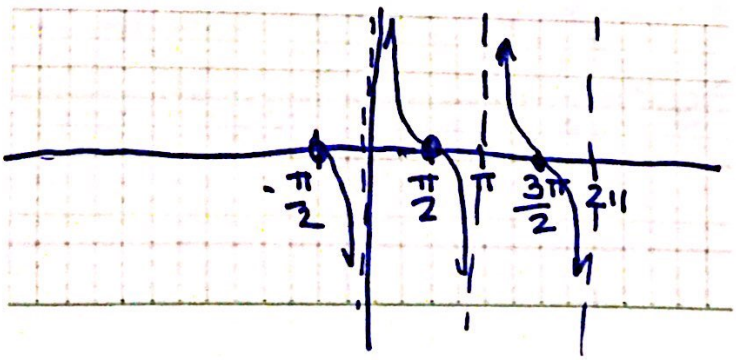
6) $y = cotx$

A: None

P: π

D:

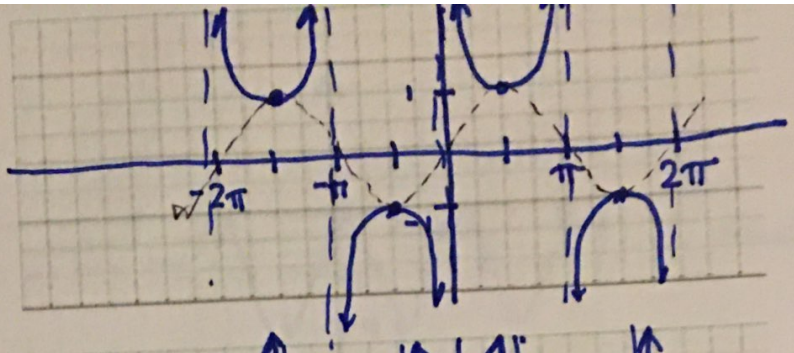
R: $(-\infty, \infty)$



7) $y = \csc x$

A: none
P: 2π
D: ---
R: $(-\infty, -1] \cup [1, \infty)$

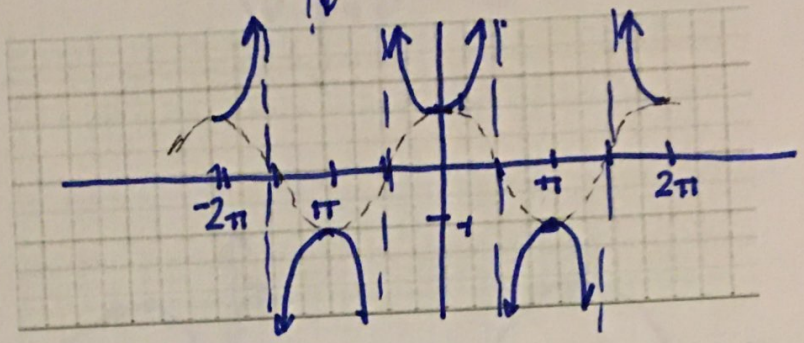
× $y = \sin x$ ---



8) $y = \sec x$

A: none
P: 2π
D:
R: $(-\infty, -1] \cup [1, \infty)$

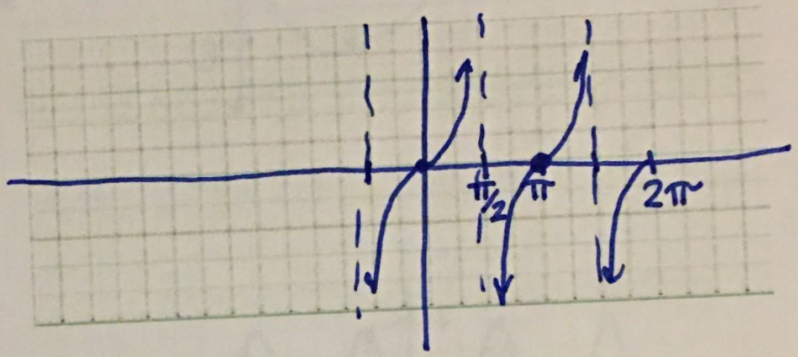
* $y = \cos x$ ---



9) $y = \tan(x - \pi)$

A: none
P: π
D:
R: $(-\infty, \infty)$

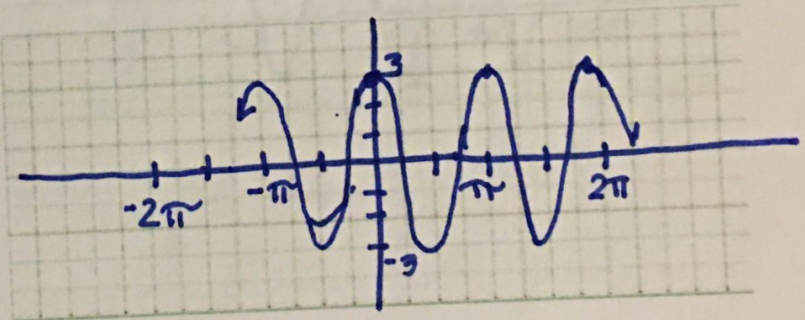
right π



10) $y = 3\cos(2x)$

A: 3
P: π
D: $(-\infty, \infty)$
R: $[-3, 3]$

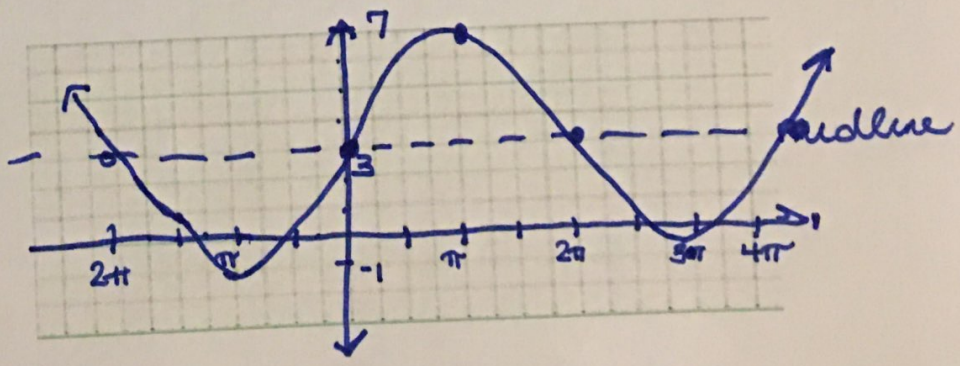
Pd $= \frac{2\pi}{2} = \pi$



11) $y = 4\sin\frac{1}{2}x + 3$

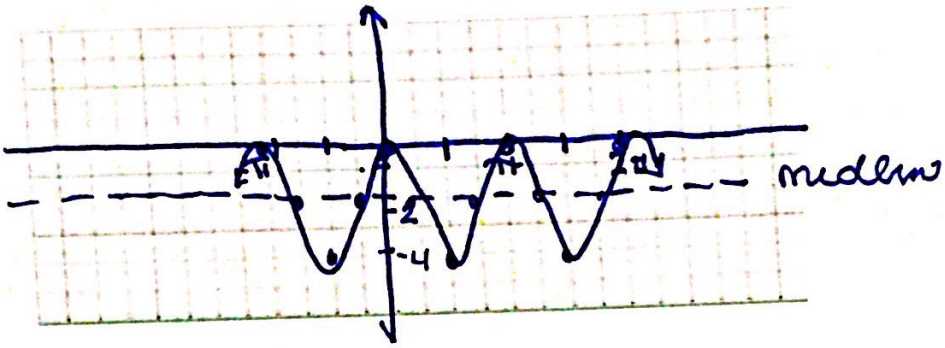
A: 4
P: 4π
D: $(-\infty, \infty)$
R: $[-1, 7]$

Pd $= \frac{2\pi}{1/2}$
4π
up 3



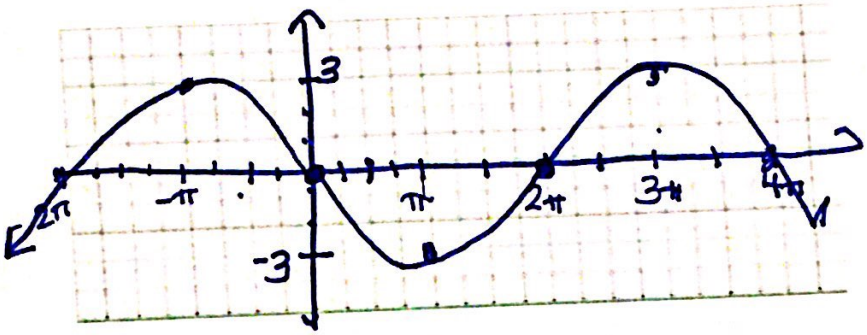
12) $y = 2\cos(2x) - 2$

A: 2
P: π
D: $(-\infty, \infty)$
R: $[-4, 0]$



13) $y = -3\sin\left(\frac{1}{2}x\right)$

A: 3
P: 4π
D: $(-\infty, \infty)$
R: $[-3, 3]$



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

A: 3
P: π
D: $(-\infty, \infty$
R: $[-2, 4]$