

Graphing $y = \sin \frac{2\pi}{p}$ and $y = \cos \frac{2\pi}{p}$

State the amplitude, period, phase shift and vertical displacement for the following function

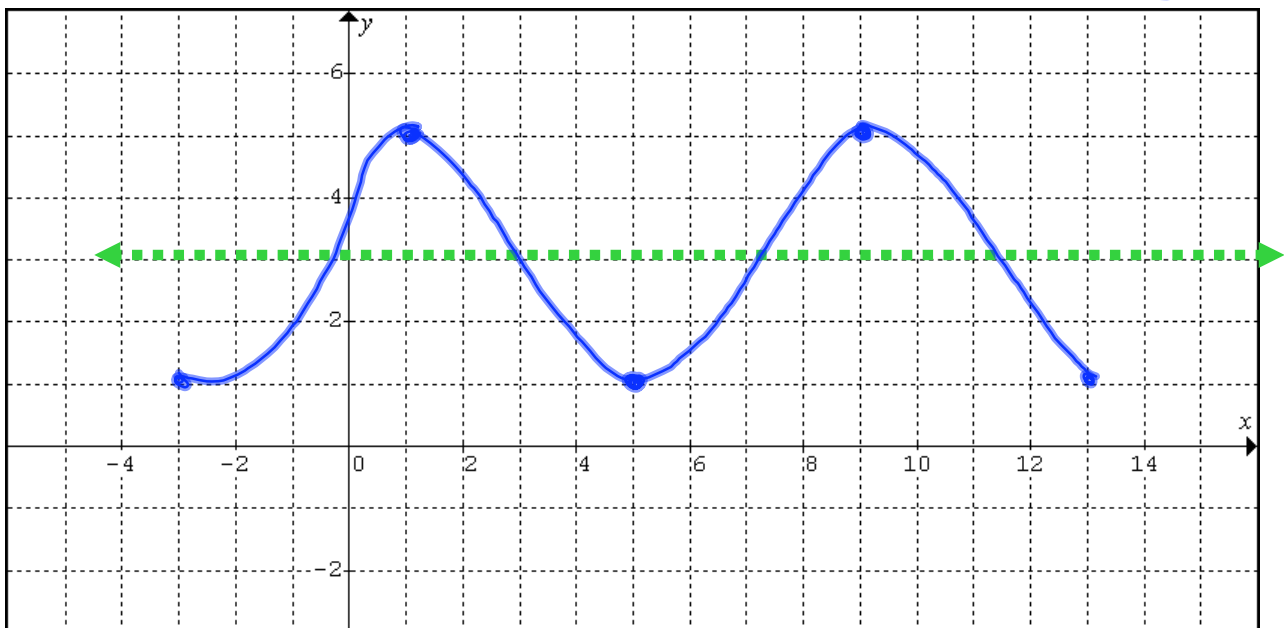
$$y = 2 \cos \frac{2\pi(x-1)}{8} + 3$$

Amp: 2 VD - amp
 VD + amp

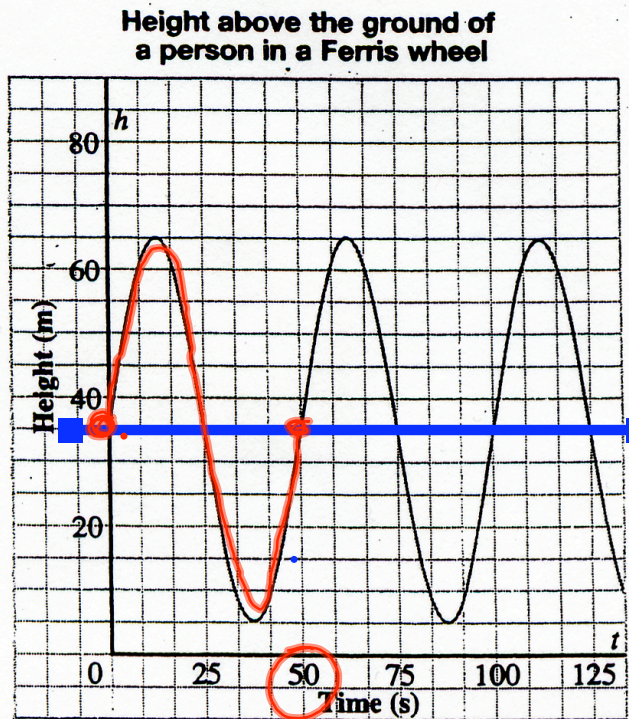
Phase shift: 1 right

Period: 8
 Max: $3+2=5$

Vertical displacement: 3 up
 Min: $3-2=1$



The height, h metres, of a person in a Ferris wheel is a sinusoidal function of time t seconds. a graph illustrating variations in height is shown below. Write the equation for this function



Amp: $\frac{65-5}{2} = 30$

P: 50

P.S.: None

VD: $\frac{65+5}{2} = 35$

$y = 30 \sin \left(\frac{2\pi}{50} (x) \right) + 35$

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

$y = 30 \sin \frac{\pi}{25} (x) + 35$

Pg. 265

1-5

7

14ac

22