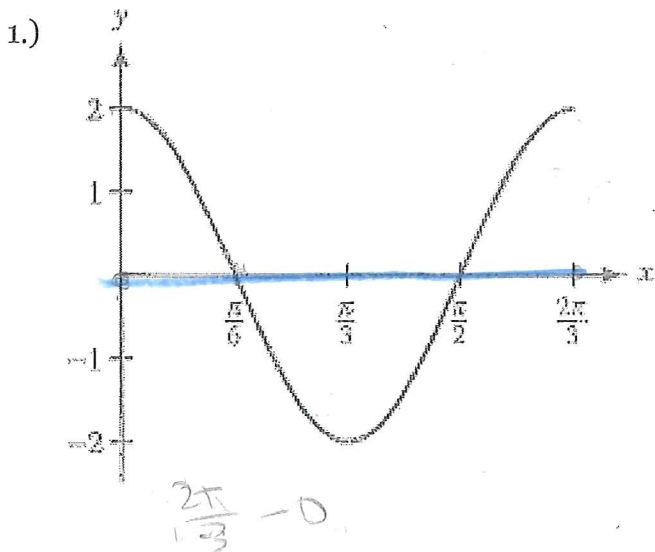
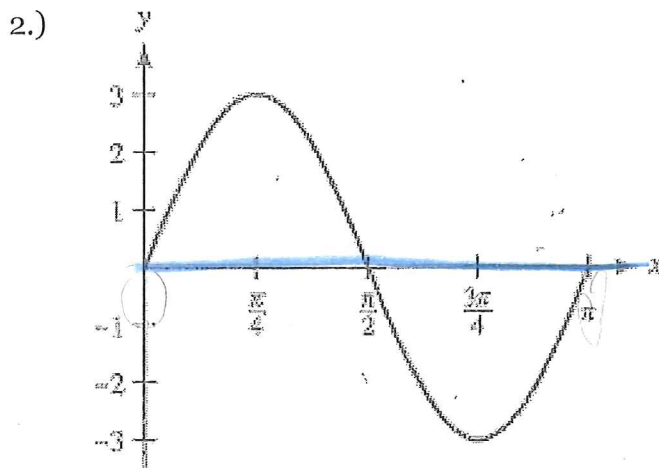


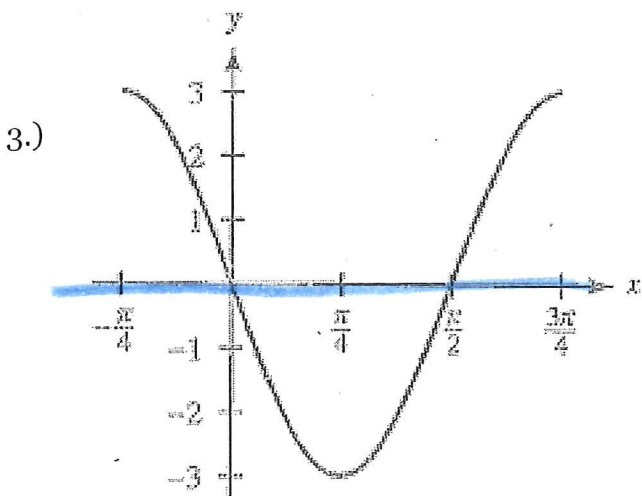
Identify the amplitude, period, and shifts of the following graphs. Then write the equation.



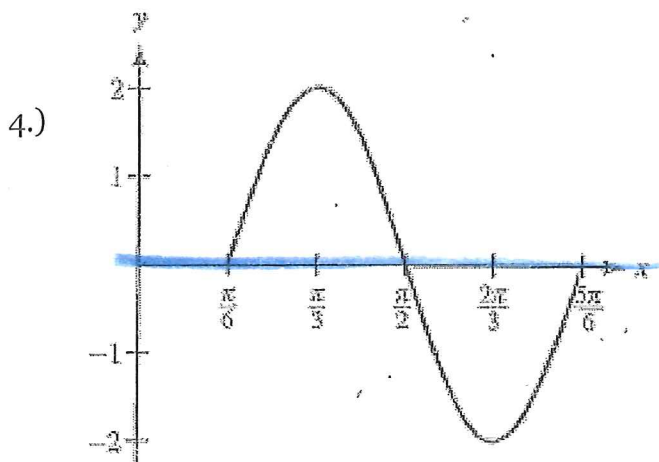
Amplitude: 2 Vertical Shift: none
 Period: $\frac{2\pi}{3} = \frac{2\pi}{B}$ $B=3$ Horizontal Shift: none
 Equation: $y = 2\cos 3x$



Amplitude: 3 Vertical Shift: none
 Period: $\pi = \frac{2\pi}{B}$ $B=2$ Horizontal Shift: none
 Equation: $y = 3\sin 2x$

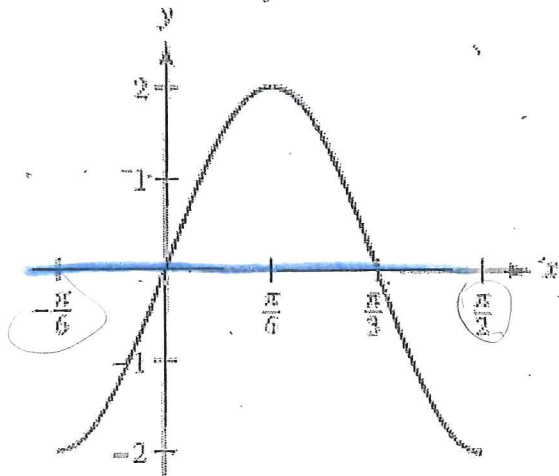


Amplitude: 3 Vertical Shift: none
 Period: $\frac{3\pi}{4} - (-\frac{\pi}{4}) = \pi = \frac{2\pi}{B}$ $B=2$ Horizontal Shift: $\pi/4$
 Equation: $y = 3\cos 2(x + \pi/4)$



Amplitude: 2 Vertical Shift: none
 Period: $\frac{5\pi}{6} - \frac{\pi}{6} = \frac{4\pi}{6} = \frac{2\pi}{3}$ $B=3$ Horizontal Shift: $\pi/6$
 Equation: $y = 2\sin 3(x - \pi/6)$

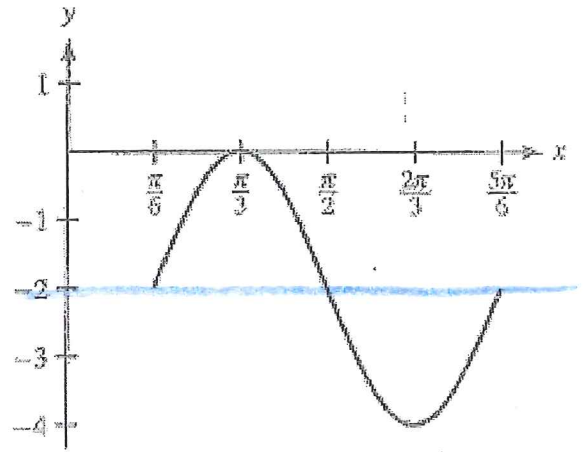
5.)



Amplitude: 2^* Vertical Shift: none
 $\frac{\pi}{2} - \frac{-\pi}{6} = \frac{2\pi}{3}$ Horizontal Shift: $\frac{\pi}{6} \leftarrow$
 Period: $B=3$

Equation: $y = -2 \cos 3(x + \frac{\pi}{6})$

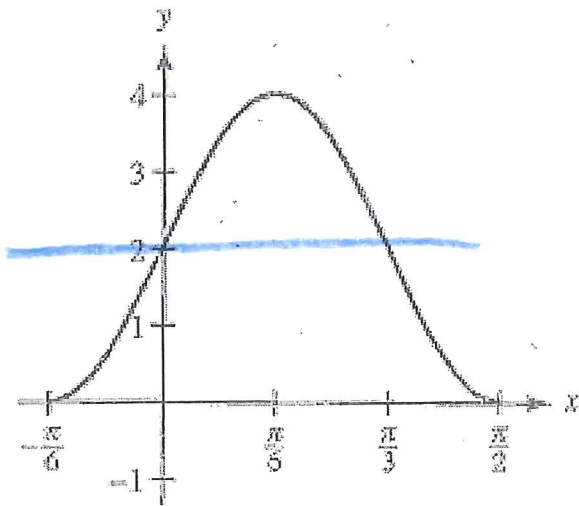
6.)



Amplitude: 2 Vertical Shift: $\downarrow 2$
 $\frac{5\pi}{6} - \frac{\pi}{6} = \frac{4\pi}{6} = \frac{2\pi}{3}$ Horizontal Shift: $\frac{\pi}{6} \rightarrow$
 Period: $B=3$

Equation: $y = 2 \sin 3(x - \frac{\pi}{6}) - 2$

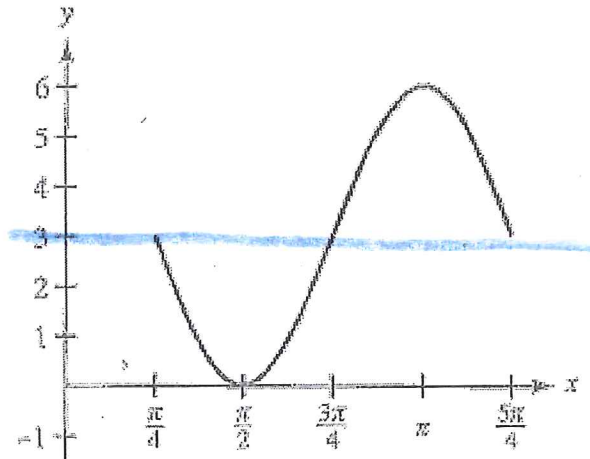
7.)



Amplitude: 2^* Vertical Shift: $\uparrow 2$
 $\frac{\pi}{2} - \frac{-\pi}{6} = \frac{2\pi}{3}$ Horizontal Shift: $\frac{\pi}{6} \leftarrow$
 Period: $B=3$

Equation: $y = -2 \cos 3(x + \frac{\pi}{6}) + 2$

8.)



Amplitude: 3^* Vertical Shift: $\uparrow 3$
 $\frac{5\pi}{4} - \frac{\pi}{4} = \pi$ Horizontal Shift: $\frac{\pi}{4} \rightarrow$
 Period: $B=2$

Equation: $y = -3 \sin 2(x - \frac{\pi}{4}) + 3$