

Name Schlansky
Mr. Schlansky

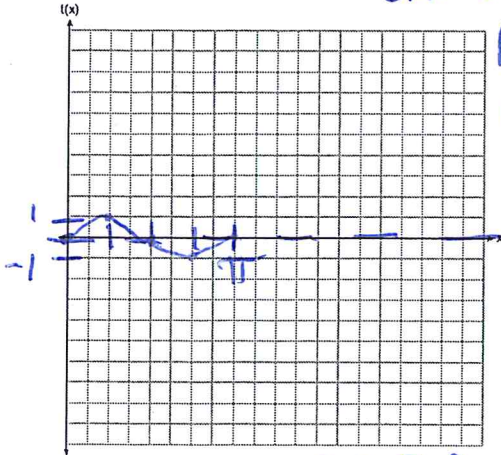
amp sin freq x shift
Period = $\frac{2\pi}{\text{frequency}}$
*put Period at the end of 4th dash

Date _____
Algebra II

Graphing Sinusoidal Curves with Frequency

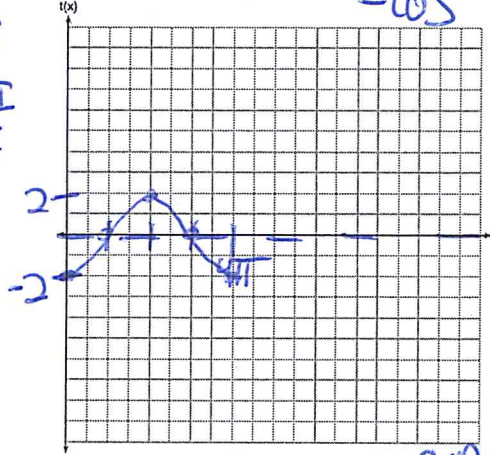
Graph one full wave of the following trigonometric functions and state the domain and range.

1. $y = \sin 2x$ amp=1 freq=2
+sin shift=0



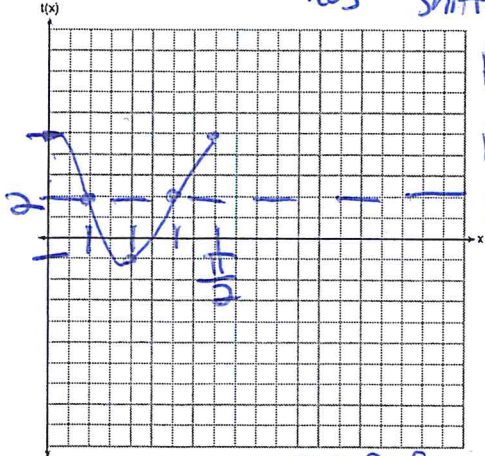
$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{2}$
 $P = \pi$

2. $y = -2 \cos \frac{1}{2}x$ amp=2 freq=1/2
-cos shift=0



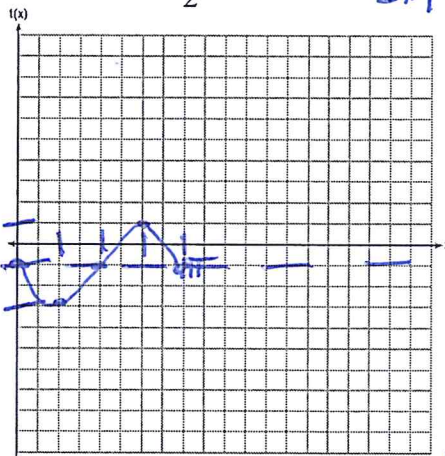
$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{1/2}$
 $P = \frac{2\pi}{1} \cdot \frac{2}{1} = 4\pi$

3. $y = 3 \cos 4x + 2$ amp=3 freq=4
+cos shift=2



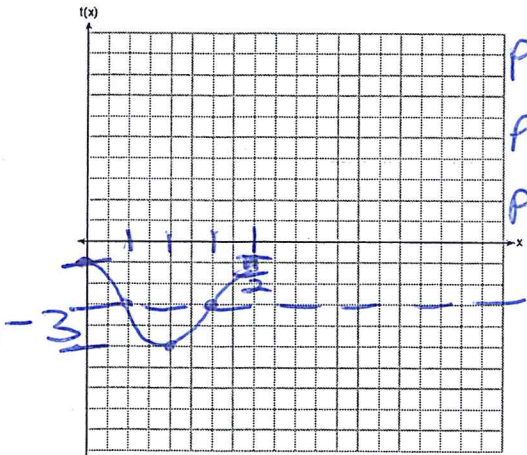
$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{4}$
 $P = \frac{\pi}{2}$

4. $y = -2 \sin \frac{1}{2}x - 1$ amp=2 freq=1/2
-sin shift=-1



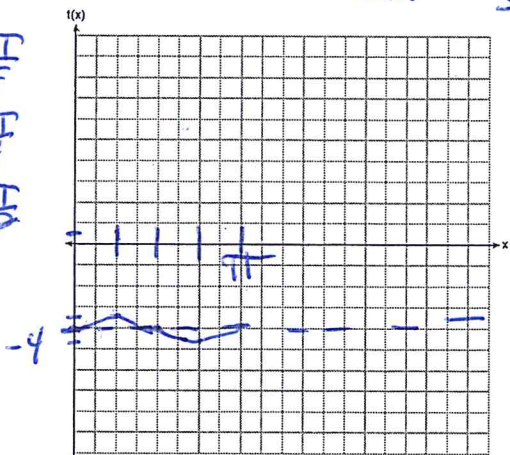
$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{1/2}$
 $P = \frac{2\pi}{1} \cdot \frac{2}{1} = 4\pi$

5. $y = 2 \cos 4x - 3$ amp=2 freq=4
+cos shift=-3



$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{4}$
 $P = \frac{\pi}{2}$

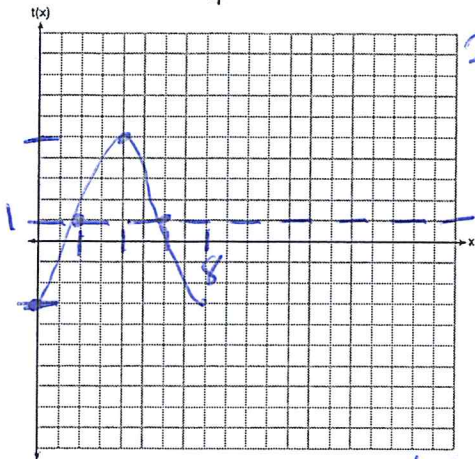
6. $y = \frac{1}{2} \sin 2x - 4$ amp=1/2 freq=2
+sin shift=-4



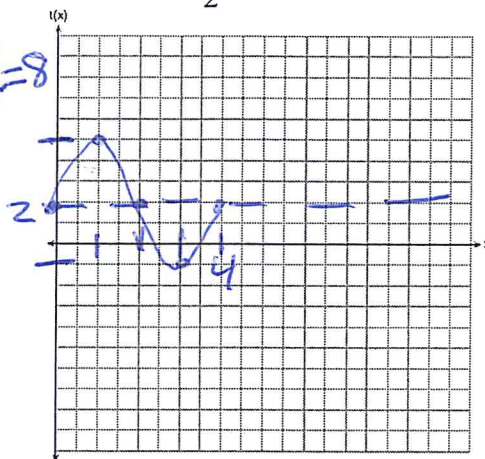
$P = \frac{2\pi}{f}$
 $P = \frac{2\pi}{2}$
 $P = \pi$

amp=4 freq= $\frac{\pi}{4}$ shift=1
 $-cos$ $p = \frac{2\pi}{f}$
 $p = \frac{2\pi}{\frac{\pi}{4}} = 8$

7. $y = -4 \cos \frac{\pi}{4} x + 1$

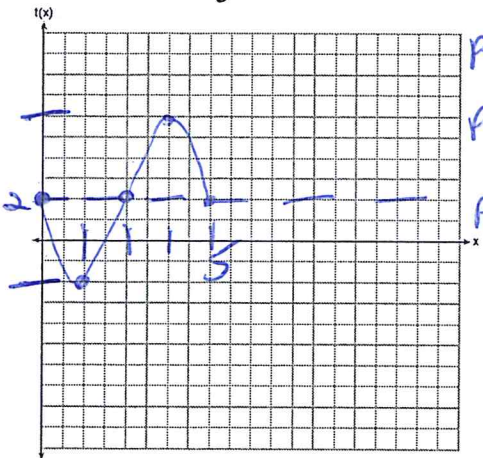


8. $y = 3 \sin \frac{\pi}{2} x + 2$

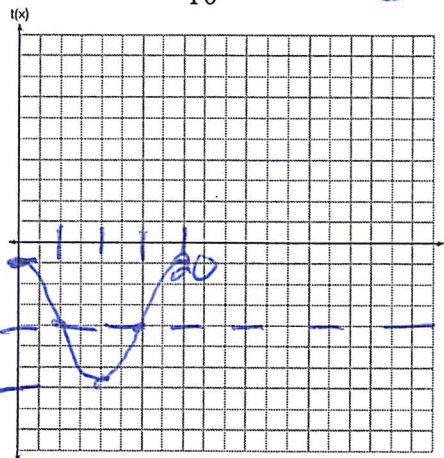


$p = \frac{2\pi}{f}$
 $p = \frac{2\pi}{\frac{\pi}{2}} = 4$
 $p = \frac{2\pi}{1} \cdot \frac{2}{\pi} = 4$

9. $y = -4 \sin \frac{2\pi}{5} x + 2$ amp=4 freq= $\frac{2\pi}{5}$ shift=2
 $-sin$ $p = \frac{2\pi}{f}$

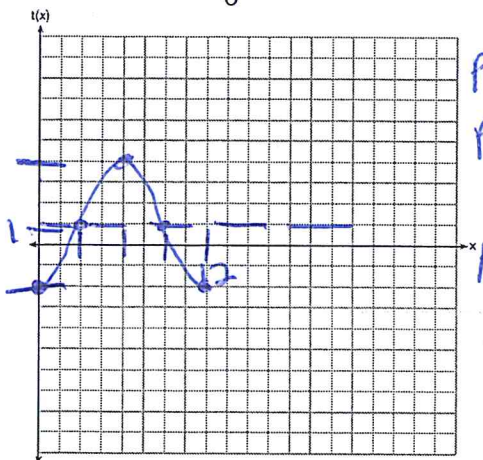


10. $y = 3 \cos \frac{\pi}{10} x - 4$ amp=3 freq= $\frac{\pi}{10}$ shift=-4
 $+cos$ $p = \frac{2\pi}{f}$

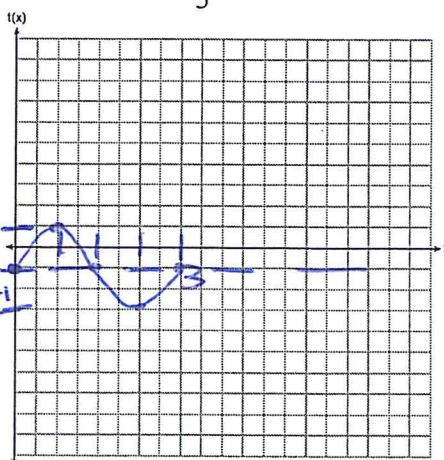


$p = \frac{2\pi}{f}$
 $p = \frac{2\pi}{\frac{\pi}{10}} = 20$

11. $y = -3 \cos \frac{\pi}{6} x + 1$ amp=3 freq= $\frac{\pi}{6}$ shift=1
 $-cos$ $p = \frac{2\pi}{f}$



12. $y = 2 \sin \frac{2\pi}{3} x - 1$ amp=2 freq= $\frac{2\pi}{3}$ shift=-1
 $+sin$ $p = \frac{2\pi}{f}$



$p = \frac{2\pi}{f}$
 $p = \frac{2\pi}{\frac{2\pi}{3}} = 3$
 $p = \frac{2\pi}{1} \cdot \frac{3}{2\pi} = 3$