

AFM 6.2 Day 1 Worksheet

NAME _____

I. Determine the amplitude, b value, and period for each function.

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

2. $y = 2 \cos 6x$

3. $y = -4 \sin \frac{\pi}{4} x$

4. $y = 3 \sin \frac{3}{2} x$

5. $y = -\cos \frac{5\pi}{3} x$

6. $y = \cos 2x$ $y = \cos 2x$

Amplitude	b - value	period
$\frac{1}{2}$	1	2π
2	6	$\frac{\pi}{3}$
4	$\frac{\pi}{4}$	8
3	$\frac{3}{2}$	$\frac{4\pi}{3}$
1	$5\frac{\pi}{3}$	$\frac{6}{5}$
1	2	π

II. Find the following and then graph at least 2 cycles of each function on GRAPH paper.

7. $y = 3 \sin x$

8. $y = 5 \cos x$

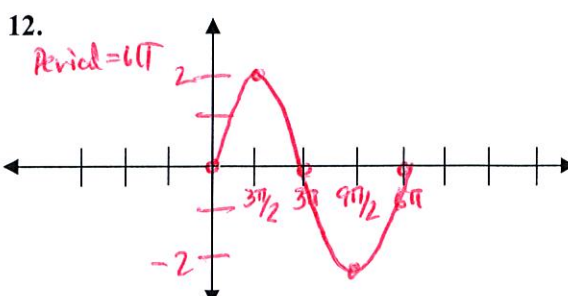
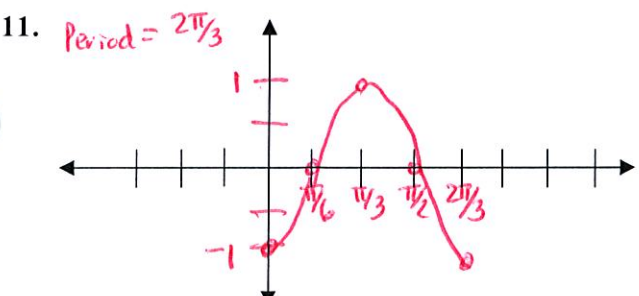
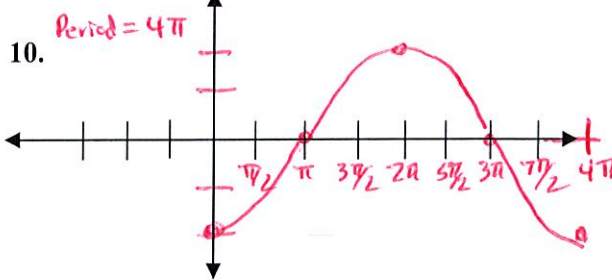
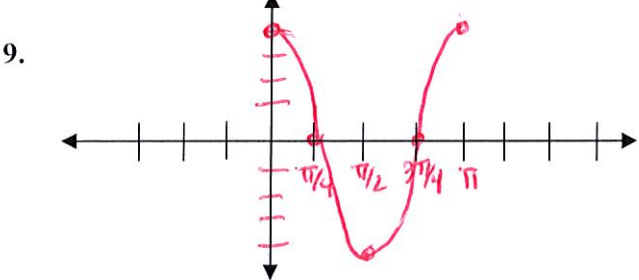
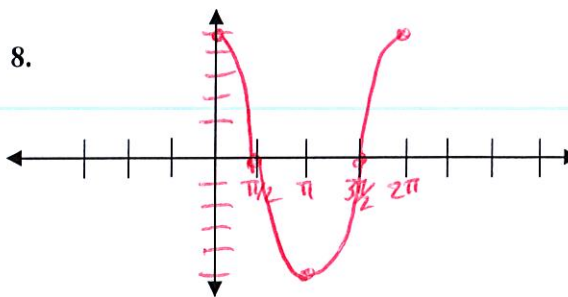
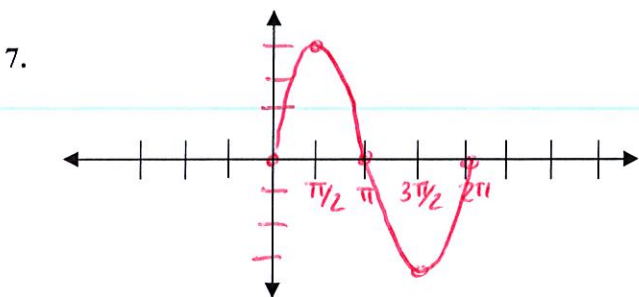
9. $y = 4 \cos 2x$

10. $y = -2 \cos \frac{1}{2} x$

11. $y = -\cos 3x$

12. $y = 2 \sin \frac{1}{3} x$

a	b	period
3	1	2π
5	1	2π
4	2	π
2	$\frac{1}{2}$	4π
1	3	$\frac{2\pi}{3}$
2	$\frac{1}{3}$	6π



I. Determine the amplitude, b value, period, phase shift and vertical shift for each function.

1. $y = \cos(2x) - 5$
2. $y = \sin(x - \pi)$
3. $y = -2\sin(3x + 6\pi) + 4$
4. $y = 4\cos\left(3x - \frac{\pi}{3}\right) - 7$
5. $y = -\frac{1}{3}\cos(4x - 2\pi) - 6$
6. $y = 3\sin(6x) - 3$

a	b	p	PS	VS
1	2	π	NONE	Down 5
1	1	2π	Right π	NONE
2	3	$\frac{2\pi}{3}$	Left 2π	up 4
4	3	$\frac{2\pi}{3}$	Right $\frac{\pi}{9}$	Down 7
$\frac{1}{3}$	4	$\frac{\pi}{2}$	Right $\frac{\pi}{2}$	Down 6
3	6	$\frac{\pi}{3}$	NONE	Down 3

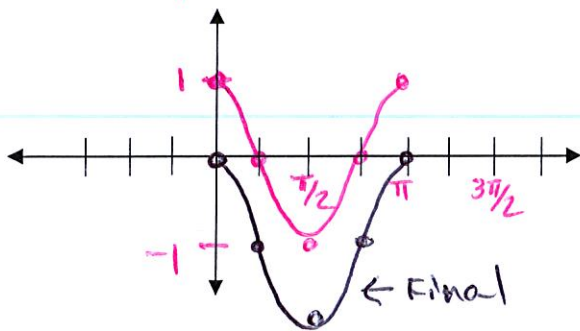
II. Find the following and then graph at least 1 cycle of each function on the grids provided or your own paper.

7. $y = \cos(2x) - 1$
8. $y = 2\sin(x + \pi)$
9. $y = 3\cos\left(\frac{1}{2}\left(x - \frac{\pi}{2}\right)\right) + 4$
10. $y = -4\sin(3x - 6\pi) - 2$

a	b	p	PS	VS
1	2	π	NONE	Down 1
2	1	2π	Left π	NONE
3	$\frac{1}{2}$	4π	Right $\frac{\pi}{2}$	up 4
4	3	$\frac{2\pi}{3}$	Right 2π	Down 2

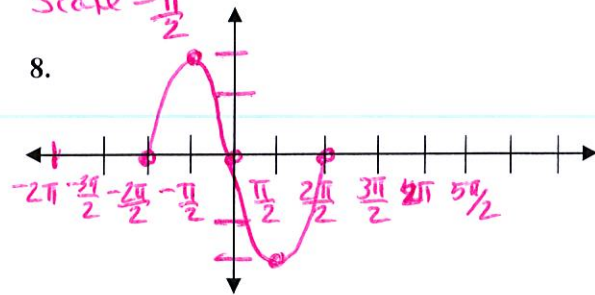
Scale = $\frac{\pi}{4}$

7.

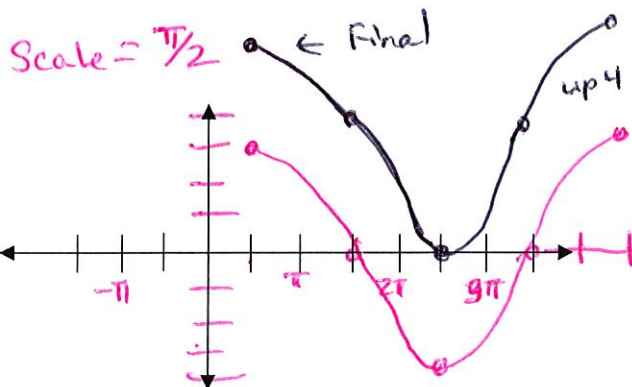


Scale = $\frac{\pi}{2}$

8.



9.



10.

Scale = $\frac{\pi}{6}$

