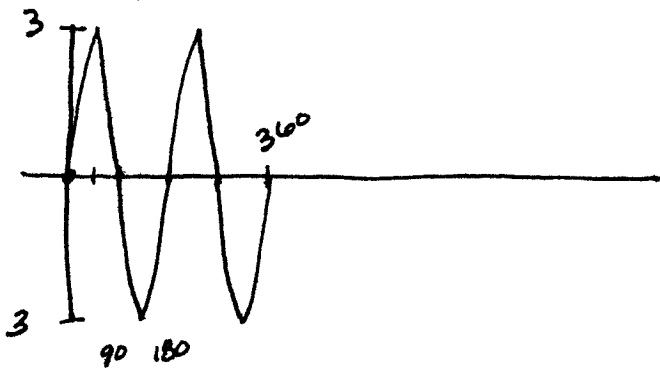
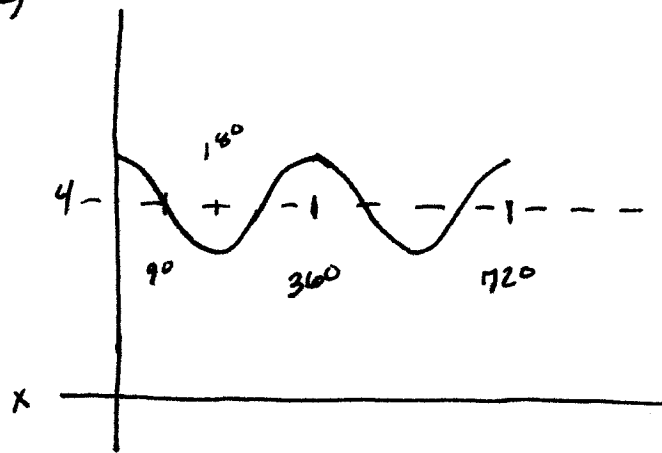


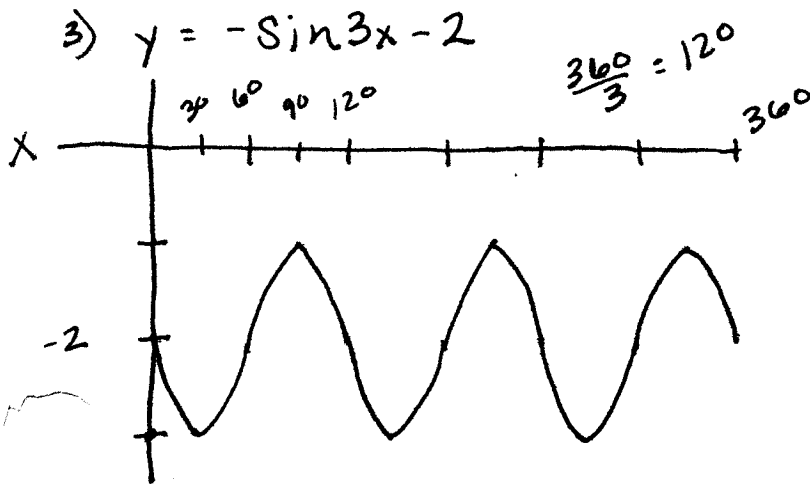
1)  $y = 3\sin 2x$  190



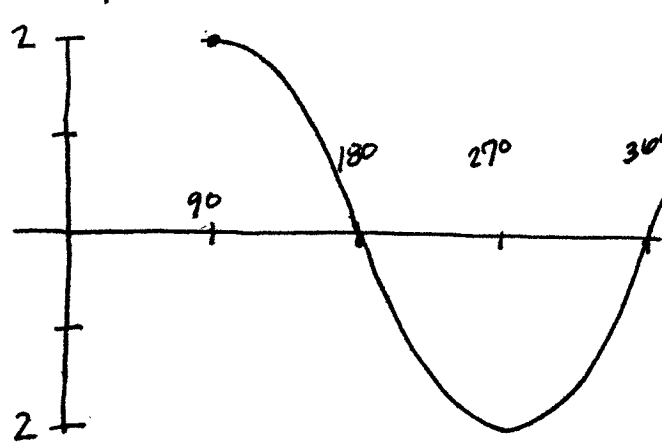
2)  $y = \cos x + 4$



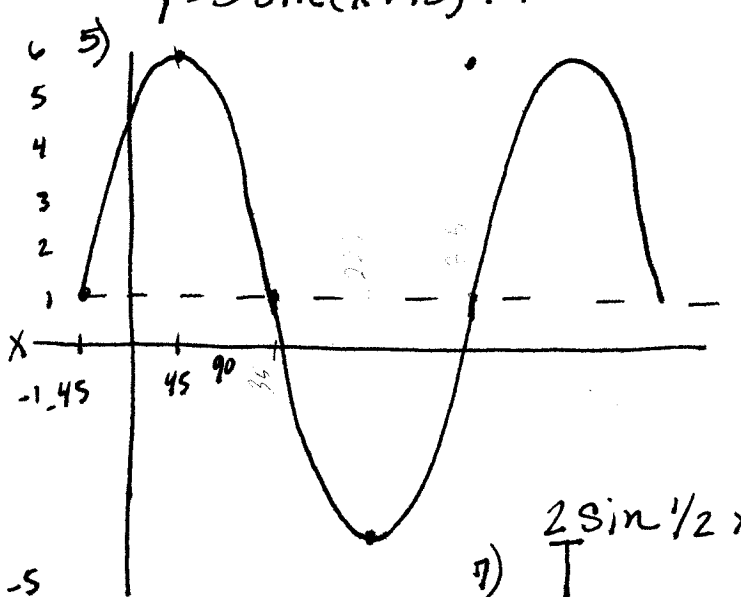
3)  $y = -\sin 3x - 2$



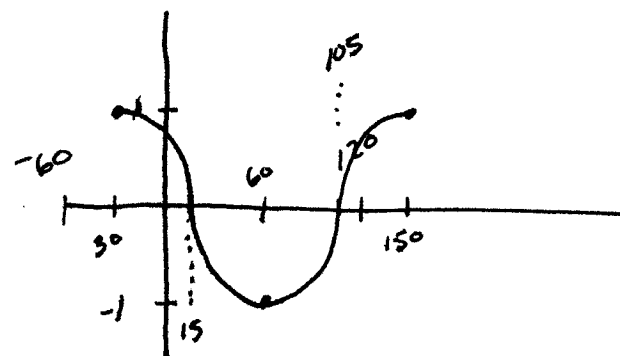
4)  $y = 2\cos(x - 90)$



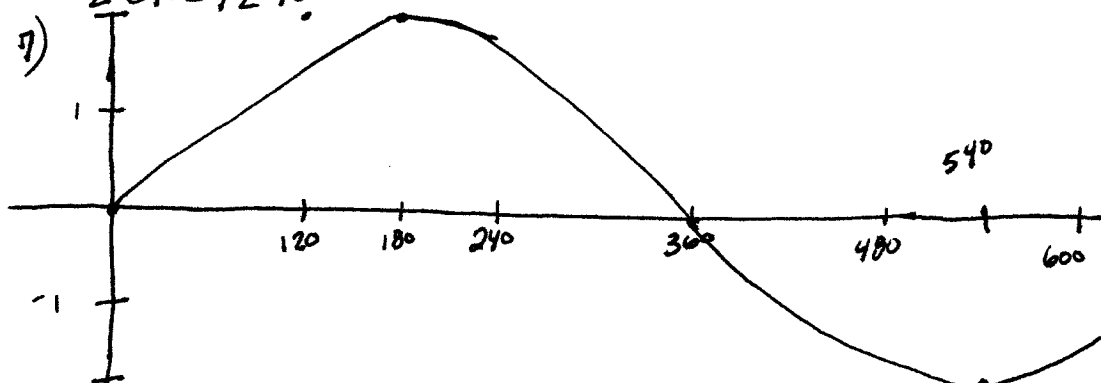
5)  $y = 5\sin(x + 45) + 1$



6)  $y = \cos 2(x + 30)$  period = 180



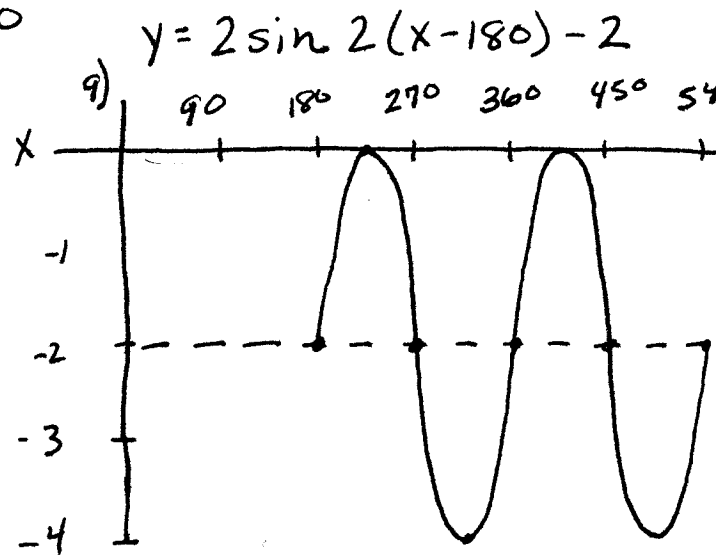
7)  $2\sin \frac{1}{2}x$



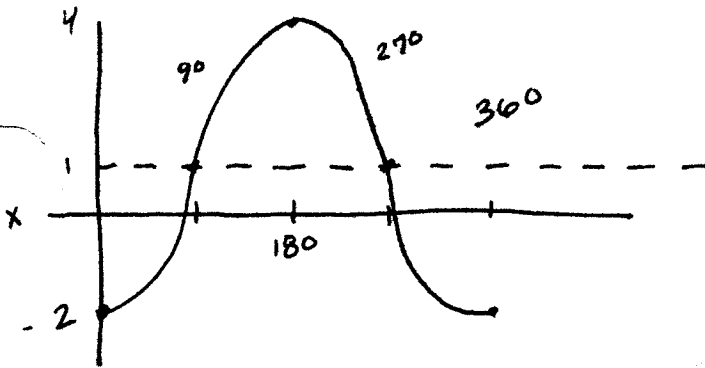
per sheet  
 $6 \cos 4x$



$\frac{360}{6} = 60$

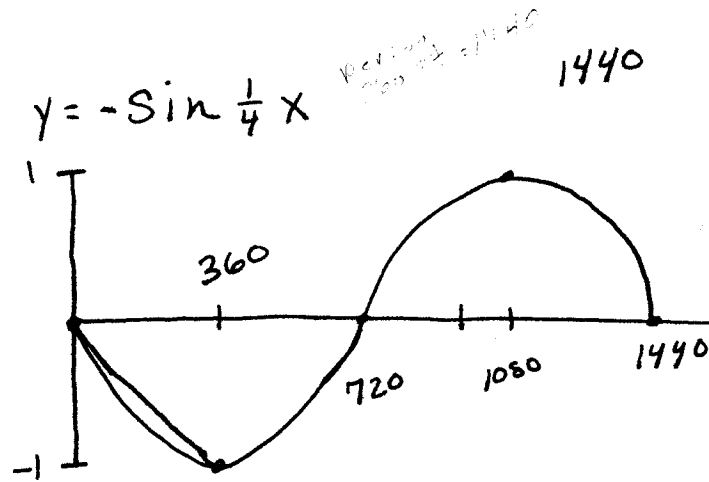


10)  $y = -3 \cos x + 1$



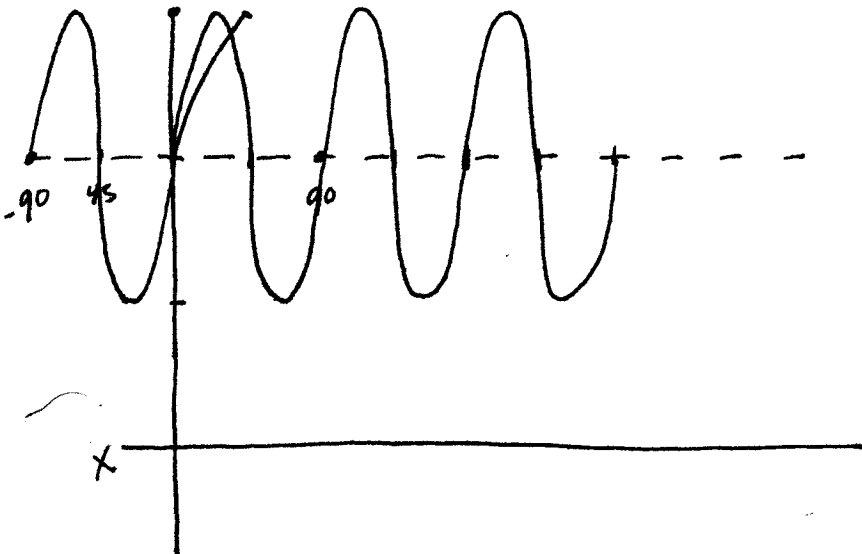
11)

$y = -\sin \frac{1}{4} x$



12)  $y = 3 \sin 4(x + 90) + 6$

per = 90  
 $\frac{90}{4} = 22.5$



- Sine / Cosine Graphs

Accurately sketch each graph. Write the equation and label the axes.

1.  $y = 3\sin 2x$

2.  $y = \cos x + 4$

3.  $y = -\sin 3x - 2$

4.  $y = 2\cos(x - 90)$

5.  $y = 5\sin(x + 45) + 1$

6.  $y = \cos 2(x + 30)$

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

8.  $y = 6\cos 4x$

9.  $y = 2\sin 2(x - 180) - 2$

10.  $y = -3\cos x + 1$

11.  $y = -\sin \frac{1}{4}x$

12.  $y = 3\sin 4(x + 90) + 6$

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