

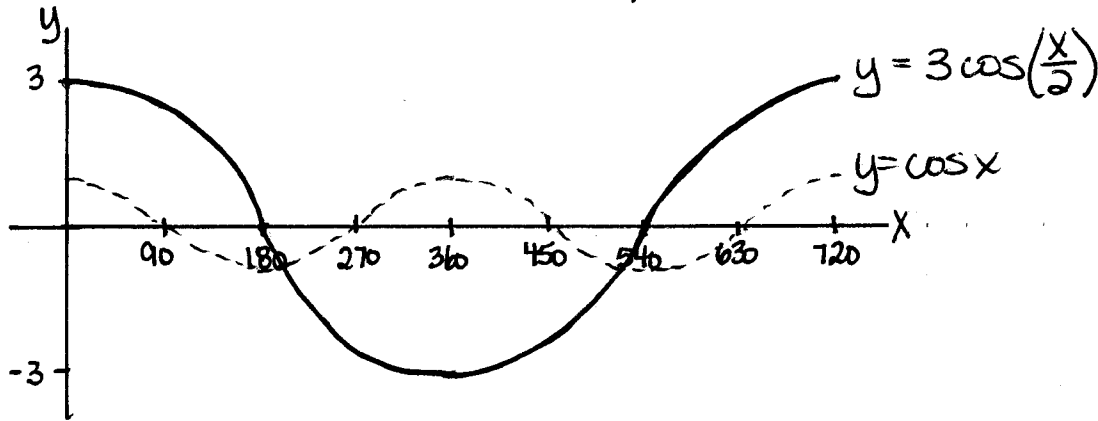
Transformations of Trig Functions

#1,2 \Rightarrow see answers on sheet

3. a) $y = 3 \cos\left(\frac{x}{2}\right)$

amp = 3 period = $\frac{360}{\frac{1}{2}} = 720^\circ$

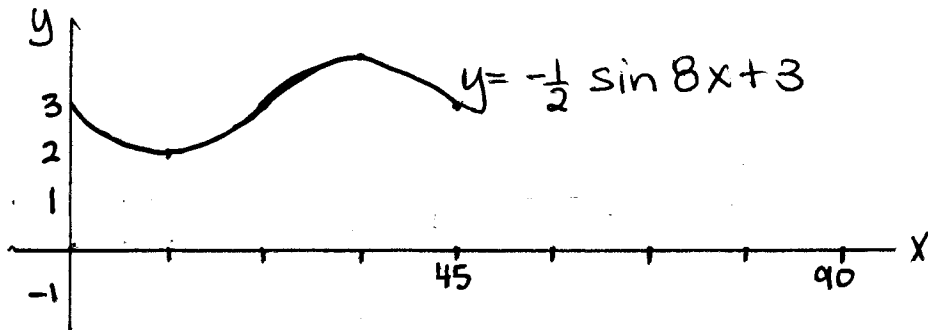
no phase shift or vertical shift



b) $y = -\frac{1}{2} \sin 8x + 3$

amp = $\frac{1}{2}$ period = $\frac{360}{8} = 45^\circ$

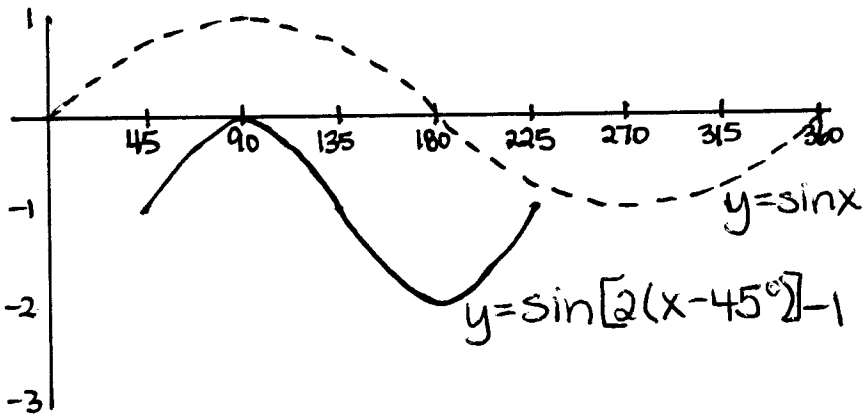
*reflection in x-axis
shift up 3



c) $y = \sin[2(x-45^\circ)] - 1$

amp = 1 period = $\frac{360}{2} = 180^\circ$

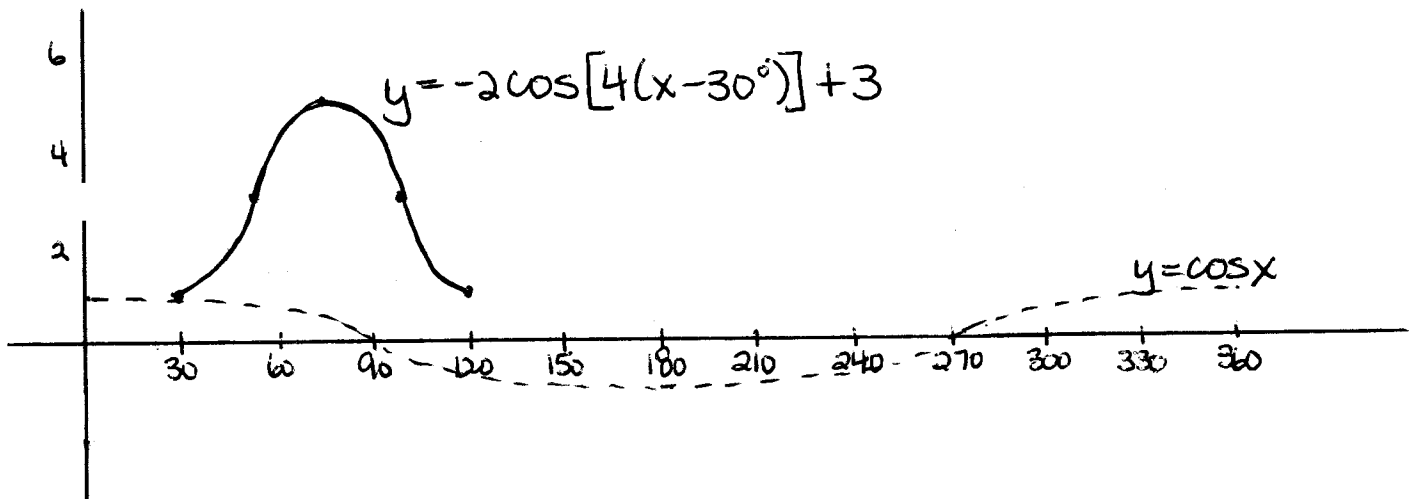
shift right 45°
shift down 1



d) $y = -2 \cos[4(x-30^\circ)] + 3$

*reflection in x axis
amp = 2 period = $\frac{360}{4} = 90^\circ$

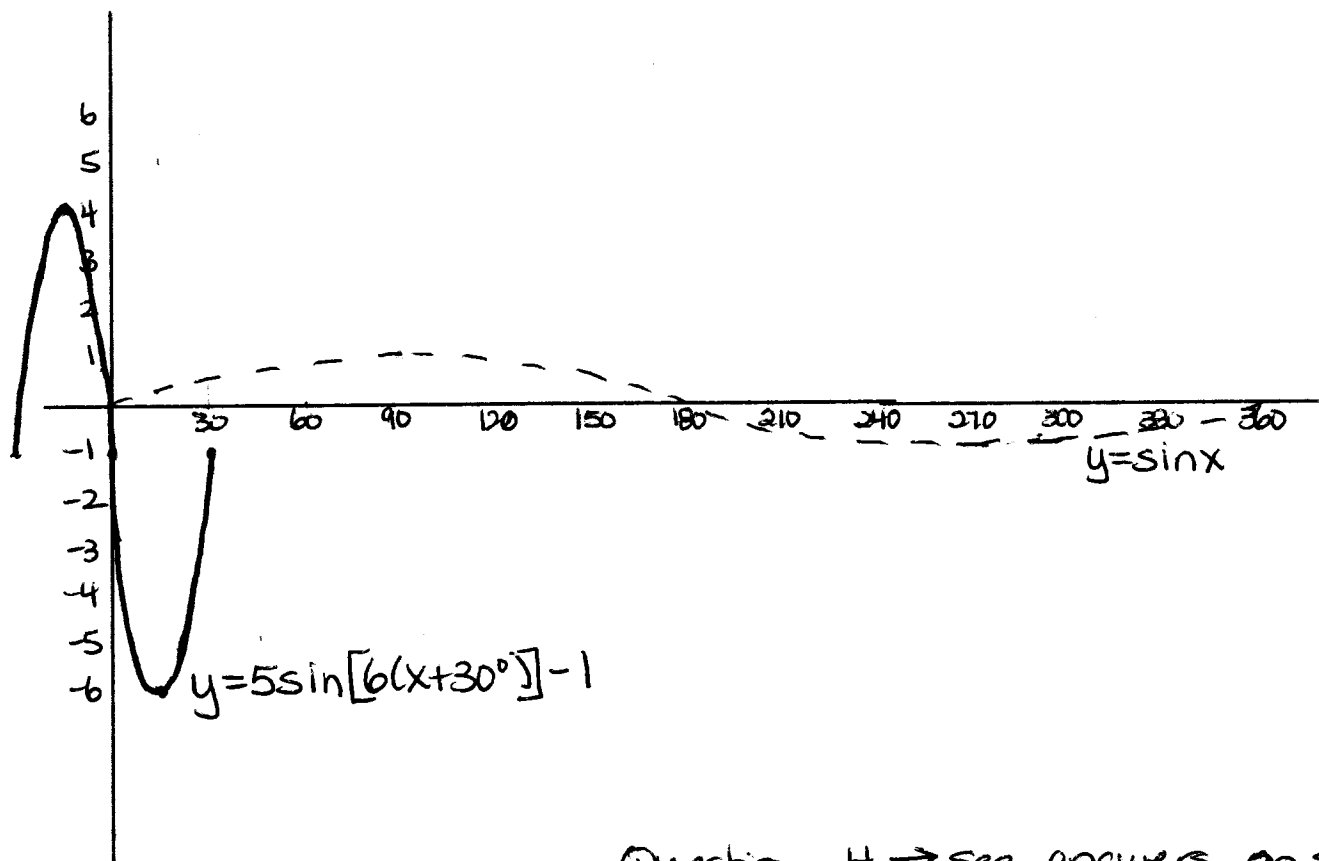
shift right 30°
shift up 3



$$e) \quad y = 5\sin[6x + 180^\circ] - 1$$

$$= 5\sin[6(x + 30^\circ)] - 1$$

amp = 5 period = $\frac{360}{6} = 60^\circ$
 shift left 30° , shift down 1



Question 4 → see answers on sheet