

2) Given $f(x) = \sin x$

Explain how the graph of $f(x)$ was transformed to give the following functions.

a) $h(x) = \sin x - 2$

b) $m(x) = \frac{1}{2} \sin x$

c) $g(x) = -\sin x$

d) $k(x) = 3 \sin x + 1$

3) Write down equation if $f(x) = \cos x + 1$ is transformed in following manner;

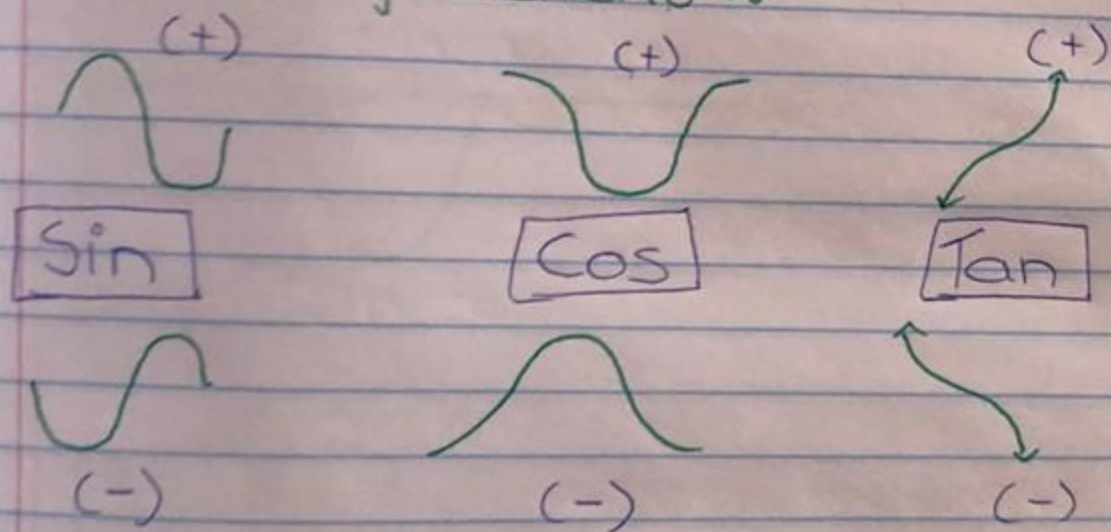
a) $f(x)$ is moved 3 units down

b) $f(x)$ is reflected round x -axis.

c) $f(x)$ is reflected around x -axis and shifted 2 units up.

Determine the equation of the graph

* Know the shape/form of the 3 "mother functions"!!

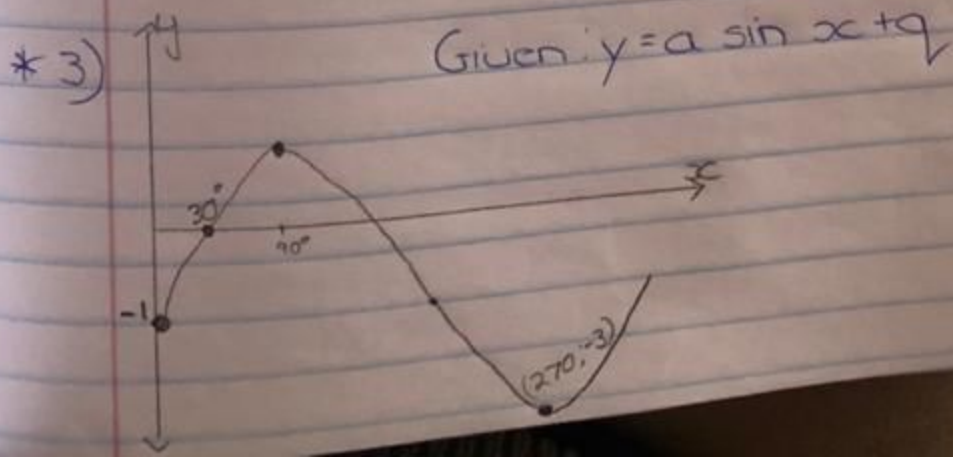
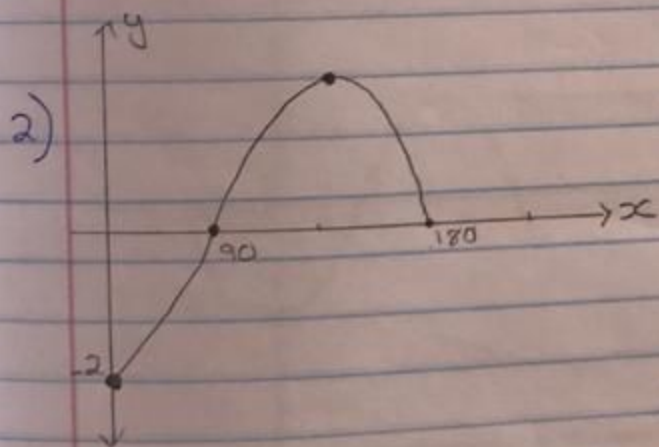
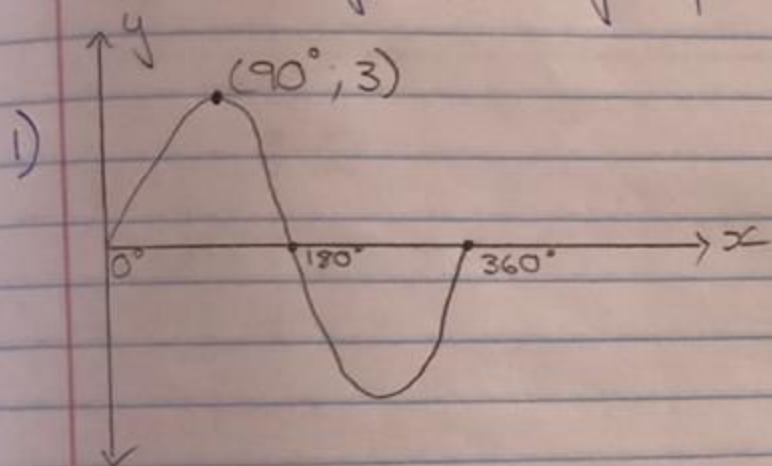


* Check what changed in respect of "mother functions"

- did it shrink/stretch $\rightarrow$ amplitude
- did it move $\uparrow/\downarrow$ $\rightarrow$ $+/-$ constant at back.

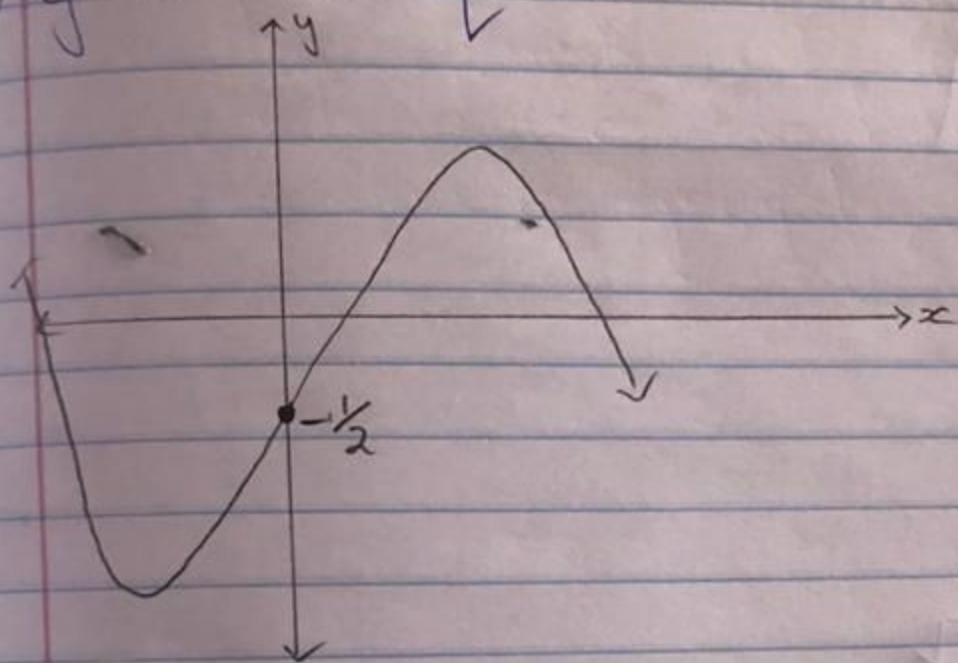
Examples:

Given in the diagrams below are the graphs of Trig functions. In each case, find the equation of the given graph;

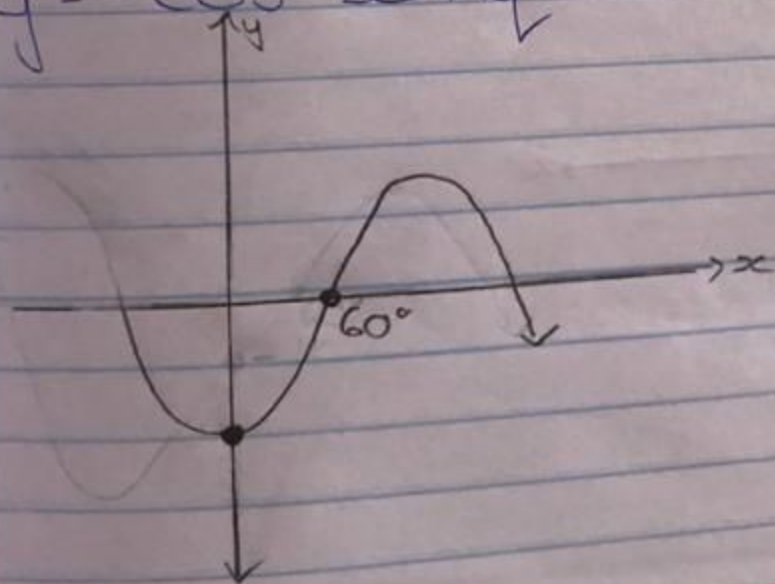


Determine equations of following;

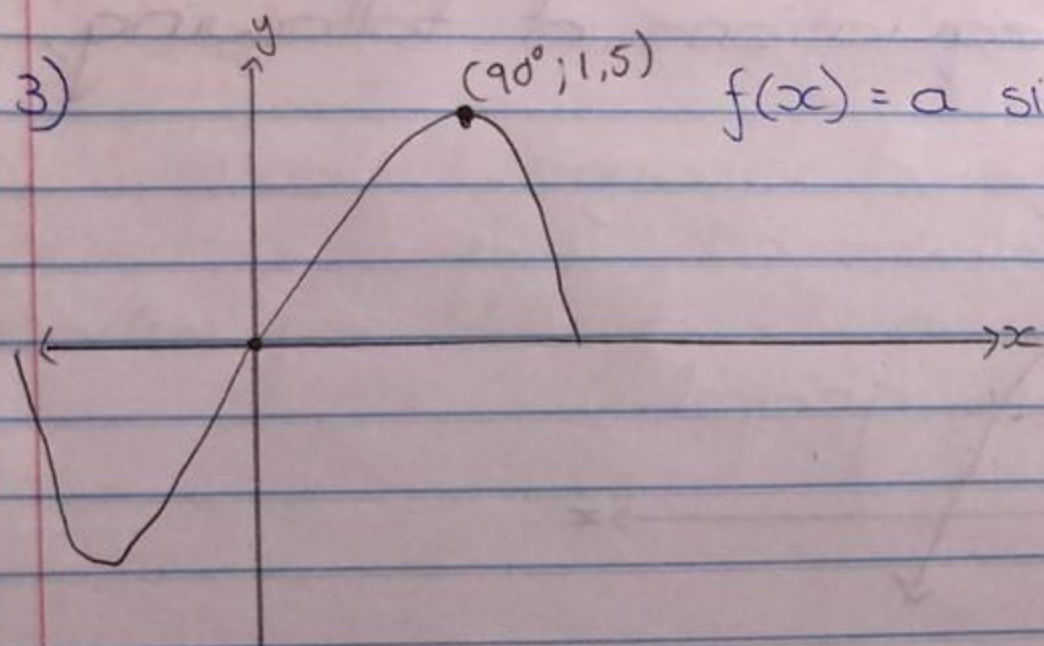
1) $y = \sin x + q$



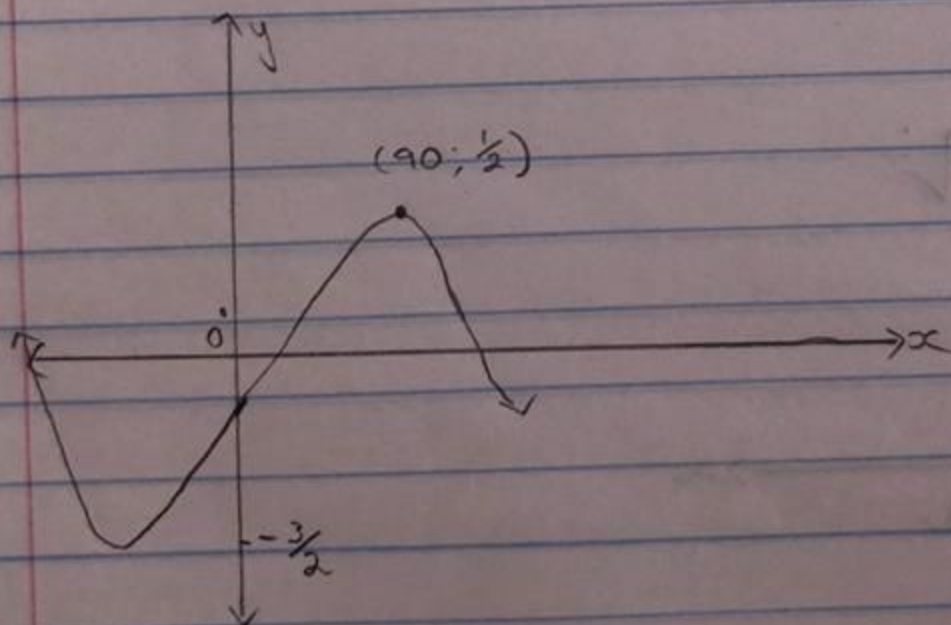
2) $y = -\cos x + q$



3)



4) $y = a \sin x + q$



5)

