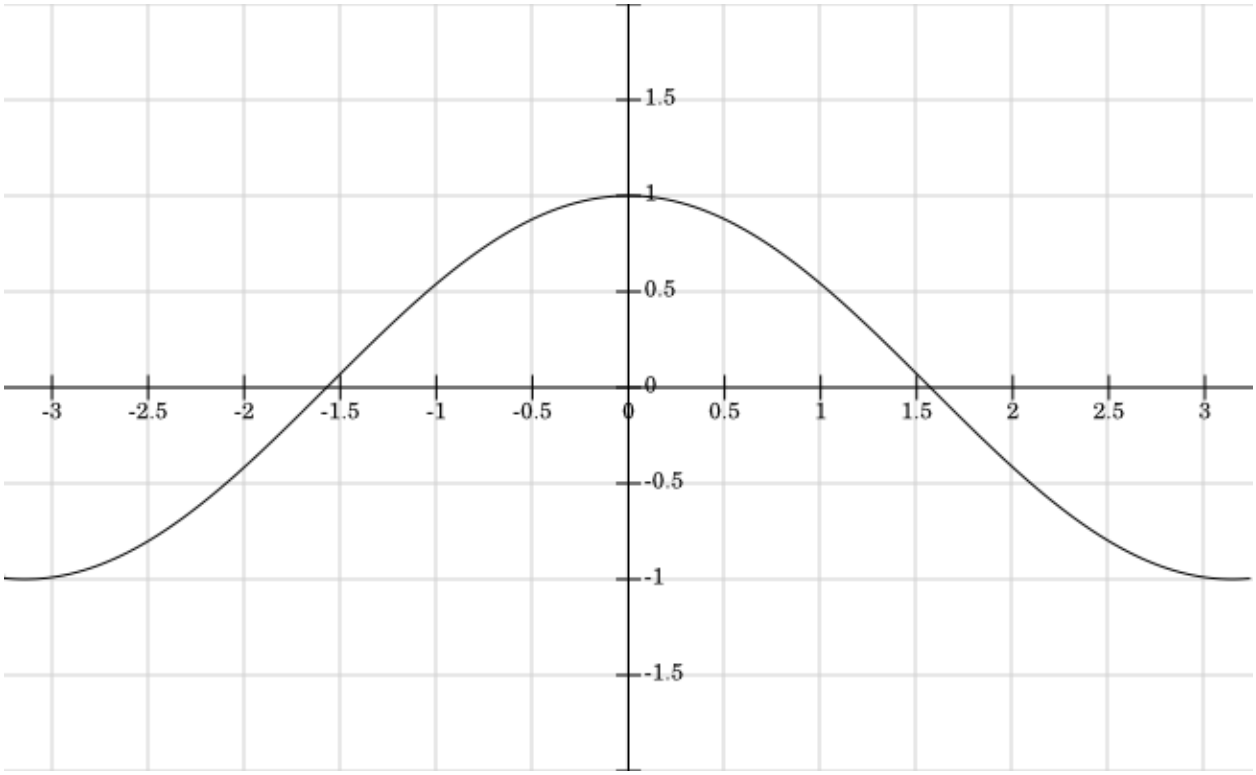
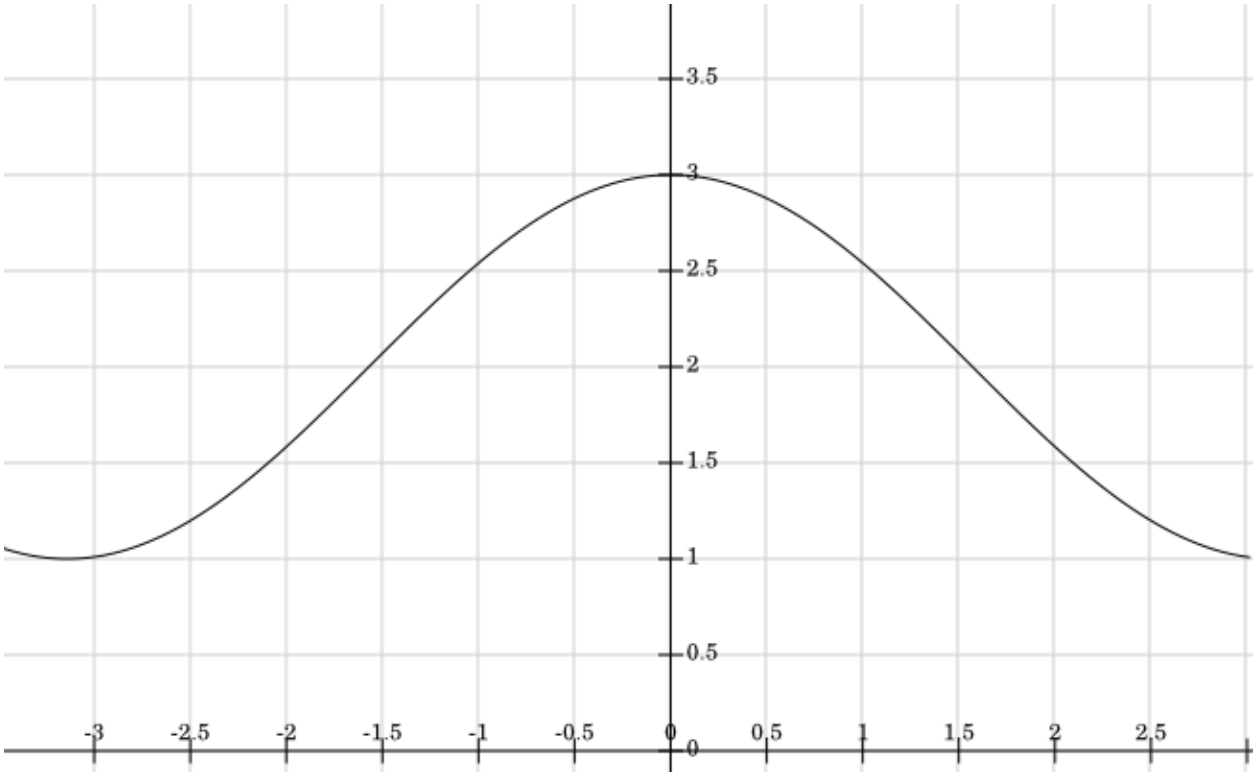
Start with f(x) = cos(x).



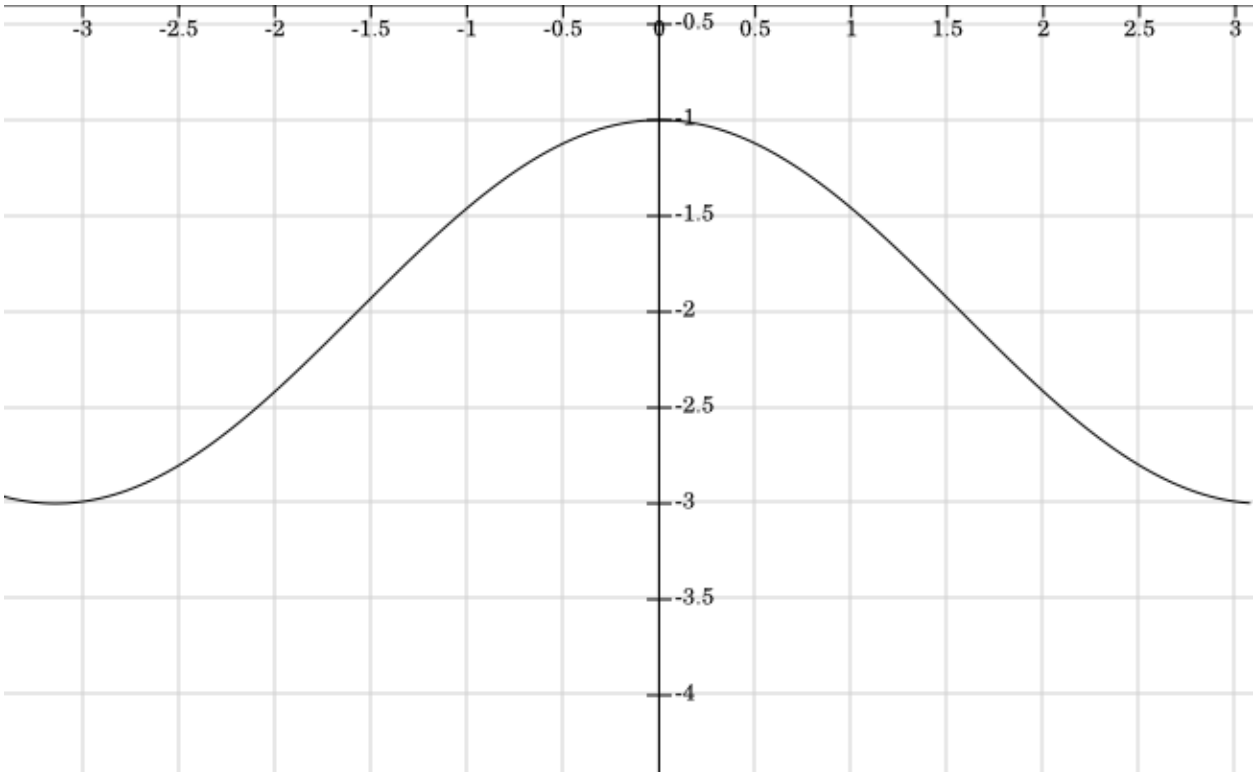
Hint: Make sure you got the correct function by graphing it on some electronic gadget.
a) Define fA(x) so that cos is translated up by 2.

fA(x) = cos(x)+2.



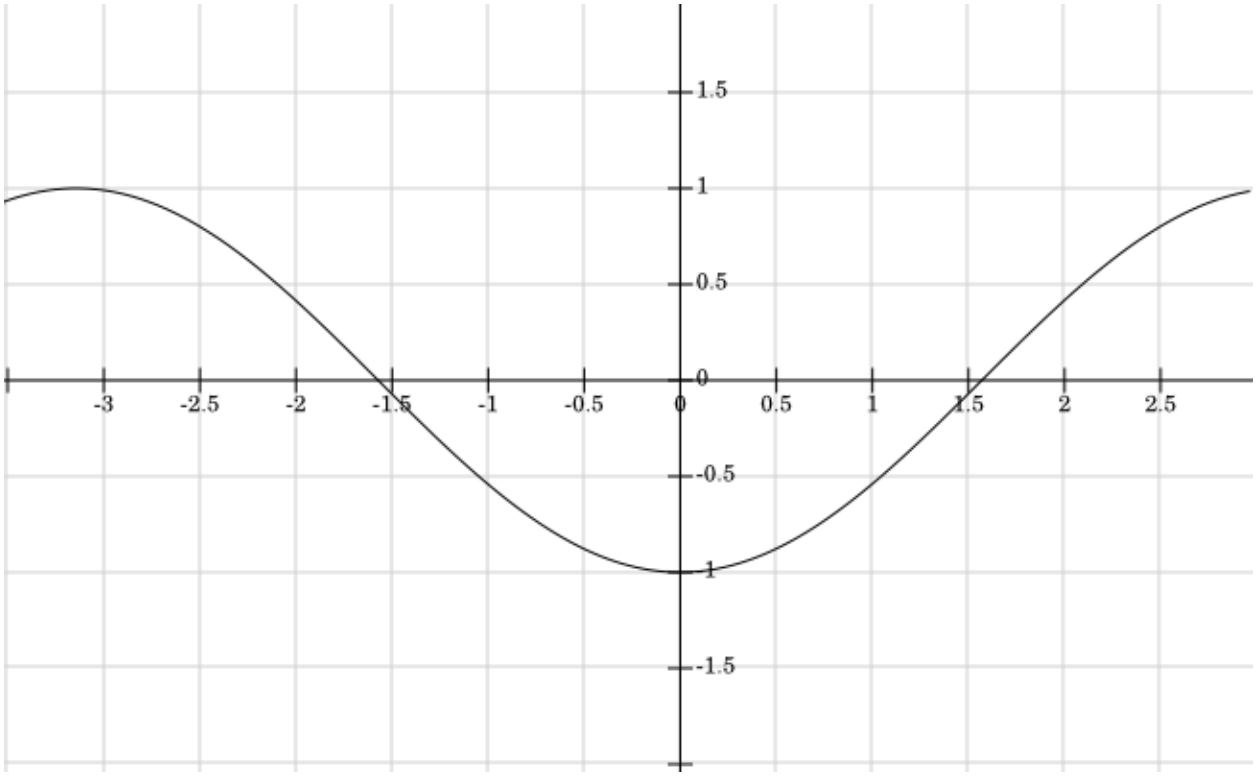
b) Define fB(x) so that cos is translated down by 2.

fB(x) = cos(x)-2.



c) Define fC(x) so that cos is translated right by π.

fC(x) = cos(x+ π)



d) Define fD(x) so that cos is translated left by π.

fD(x) = cos(x-π)