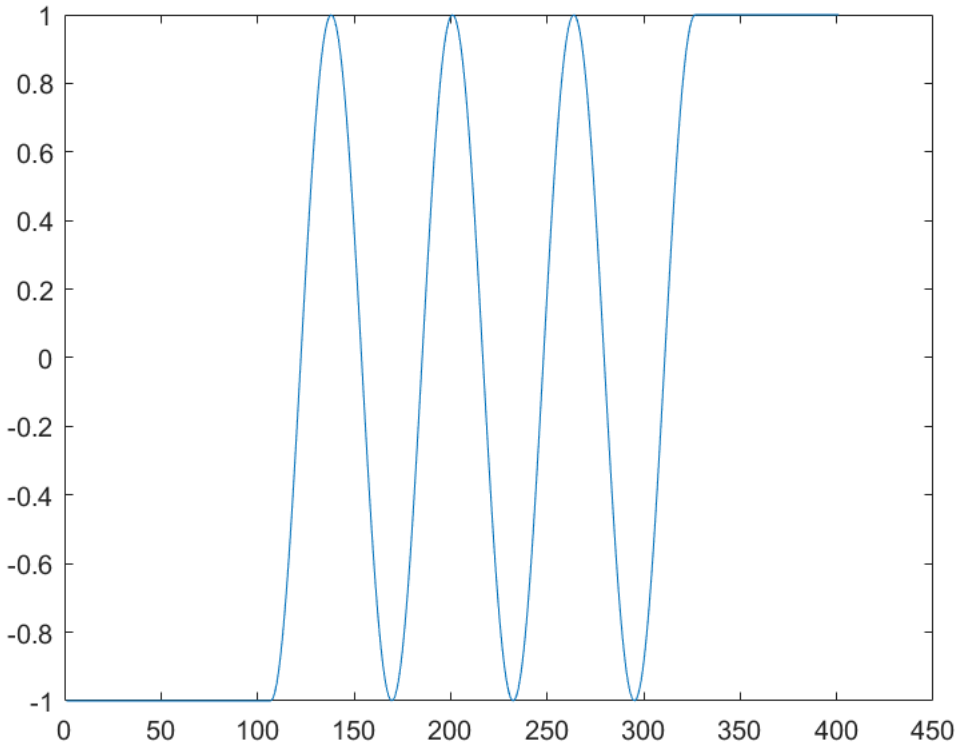
Exercise: MATLAB functions

The code below calculates function values $f(x)$ for a given vector *x*.

Task: Change the code into a MATLAB function that takes a vector *x* and returns the corresponding function values f.

Also save the function code into a seperate .m file and add some help or description lines. Then run the function from the command line.

```
plot(mathfunction([-20:0.1:20]))
```




```
function f=mathfunction(x)
%some help or description line
f=zeros(length(x),1);
for n=1:length(x)
    if x(n) < -3*pi
        f(n)=-1;
    elseif x(n)>4*pi
        f(n)=1;
    else
        f(n)=cos(x(n));
    end
end
end
```