

## Exercise 1

For each of the following functions, state whether it is even or odd or periodic. If periodic, what is its smallest period?

(a)  $\sin ax$  ( $a > 0$ )

(b)  $e^{ax}$  ( $a > 0$ )

(c)  $x^m$  ( $m = \text{integer}$ )

(d)  $\tan x^2$

(e)  $|\sin(x/b)|$  ( $b > 0$ )

(f)  $x \cos ax$  ( $a > 0$ )