The trigonometric functions

The graph of $y = \tan x$ (1)
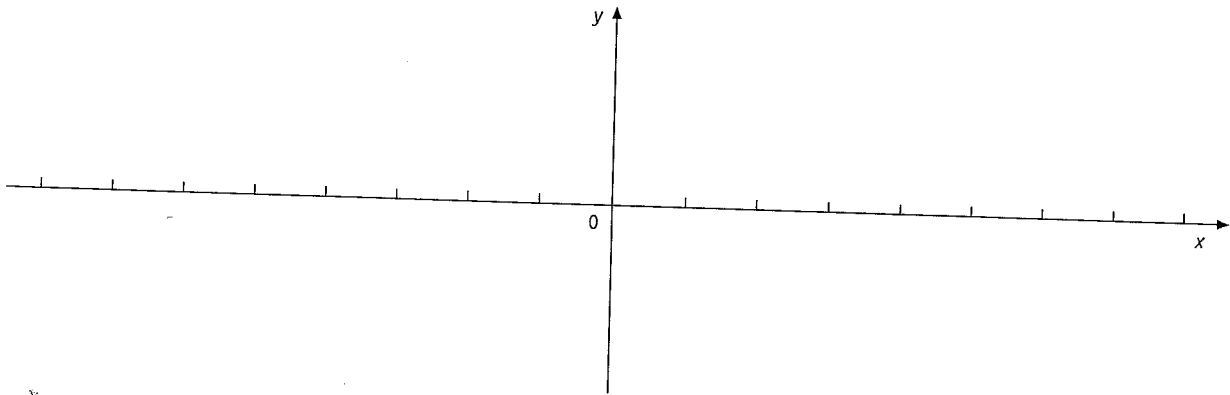
QUESTION **1**   Complete:

a   For what values of x is $y = \tan x$ undefined? _____

b   The range of the function $y = \tan x$ is _____

c   The graph of $y = \tan x$ has period _____

d   The graph of $y = a \tan nx$ has period _____
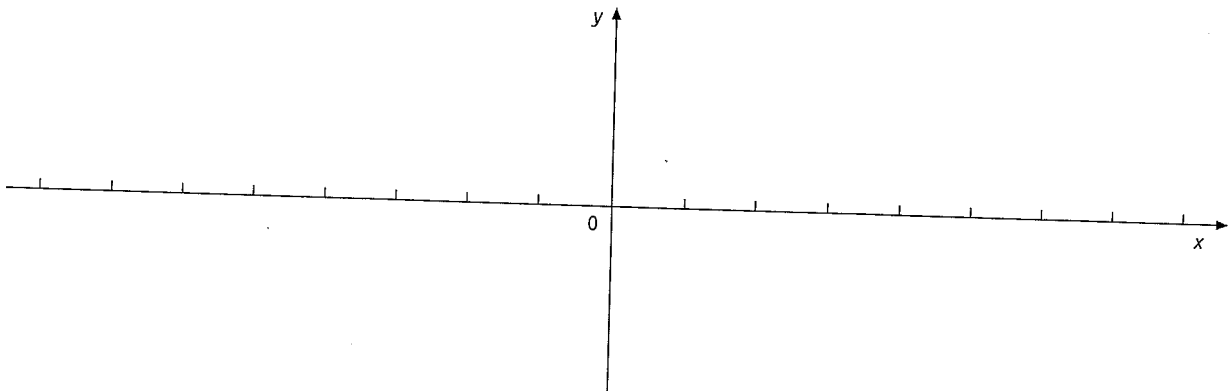
QUESTION **2**   Write down the period:

a $y = \tan 4x$ **b** $y = 3 \tan x$ **c** $y = -\tan \pi x$ **d** $y = 2 \tan \dfrac{x}{2}$

_____   _____   _____   _____

QUESTION **3**   Sketch the graph of:

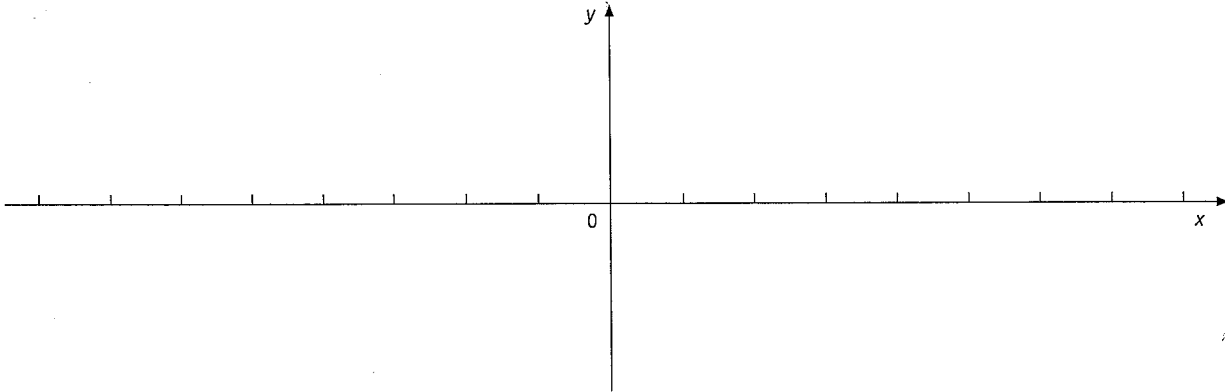**a** $y = \tan x$

b $y = \tan 2x$

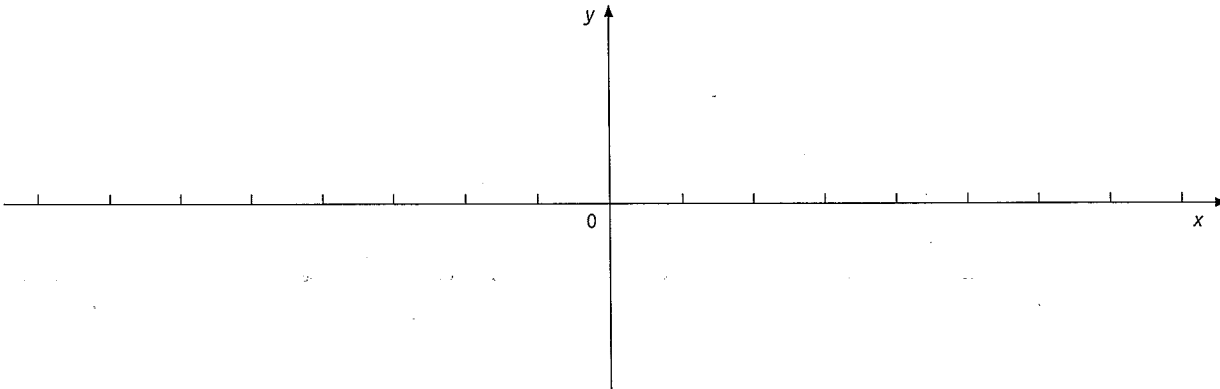# The trigonometric functions

The graph of $y = \tan x$ (2)
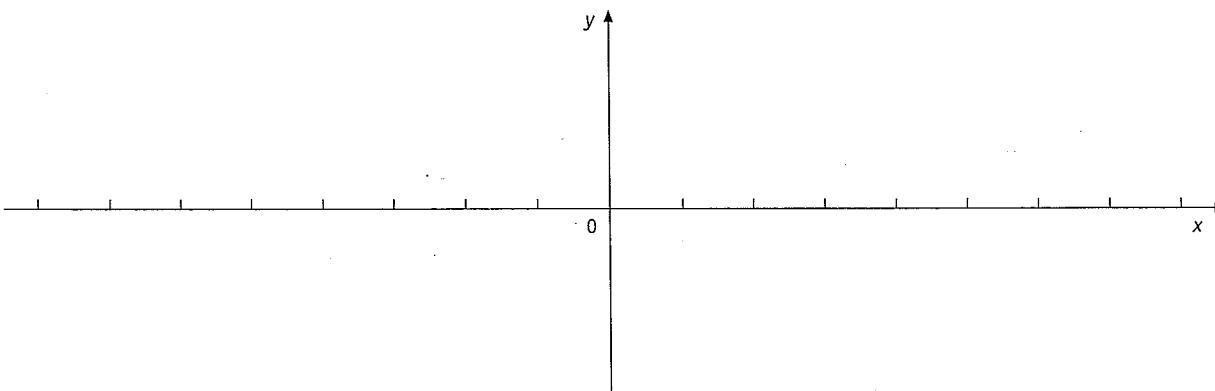
QUESTION **1**   Sketch the graph of:
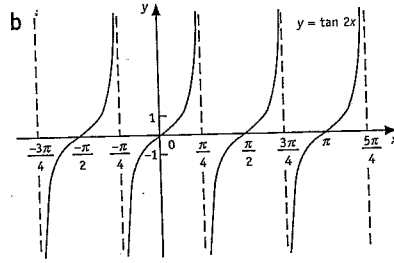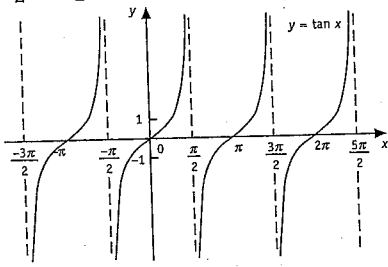
a $y = 3 \tan x$

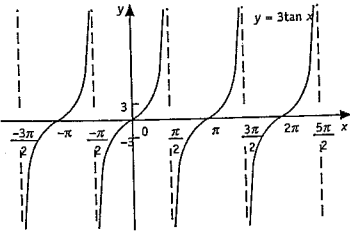**b** $y = -\tan x$

c $y = 2 \tan \dfrac{x}{2}$

1 a $x = \pm\dfrac{\pi}{2}, \pm\dfrac{3\pi}{2}, \pm\dfrac{5\pi}{2}, \pm\dfrac{7\pi}{2}, \ldots$ b all real y c π d $\dfrac{\pi}{n}$ 2 a $\dfrac{\pi}{4}$ b π c 1 d 2π
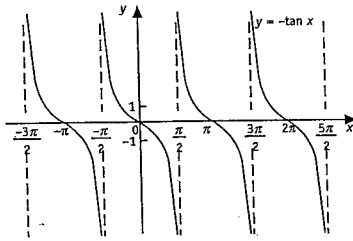
3 a

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