The trigonometric functions

The graph of $y = \sin x$ (1)

QUESTION **1** Complete:

a The domain of the function $y = \sin x$ is _____.

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

c The graph of $y = \sin x$ has period _____ and amplitude _____

d The graph of $y = a \sin nx$ has period _____ and amplitude _____

QUESTION **2** Write down the period and amplitude:

a $y = \sin 4x$

Period

_____

Amplitude

_____

b $y = 4 \sin x$

Period

_____

Amplitude

_____

c $y = \dfrac{1}{2} \sin 2x$

Period

_____

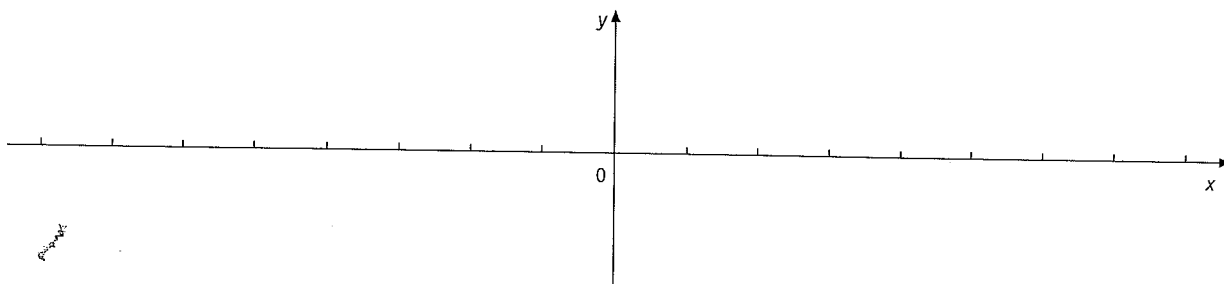Amplitude

_____

d $y = -2 \sin \dfrac{x}{4}$

Period

_____
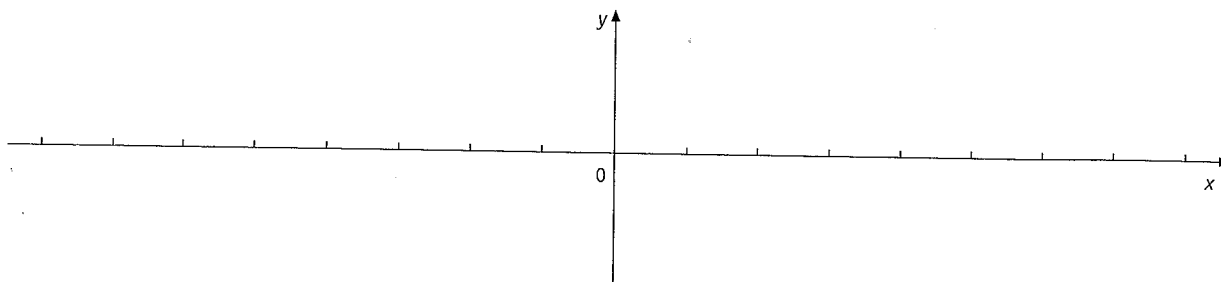
Amplitude

_____

QUESTION **3** Sketch the graph of:

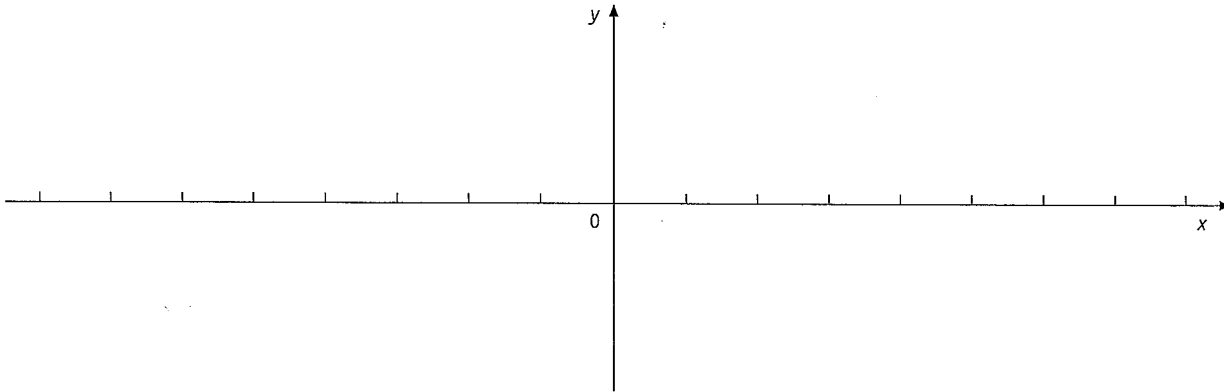a $y = 2 \sin x$

b $y = \sin 2x$

The trigonometric functions
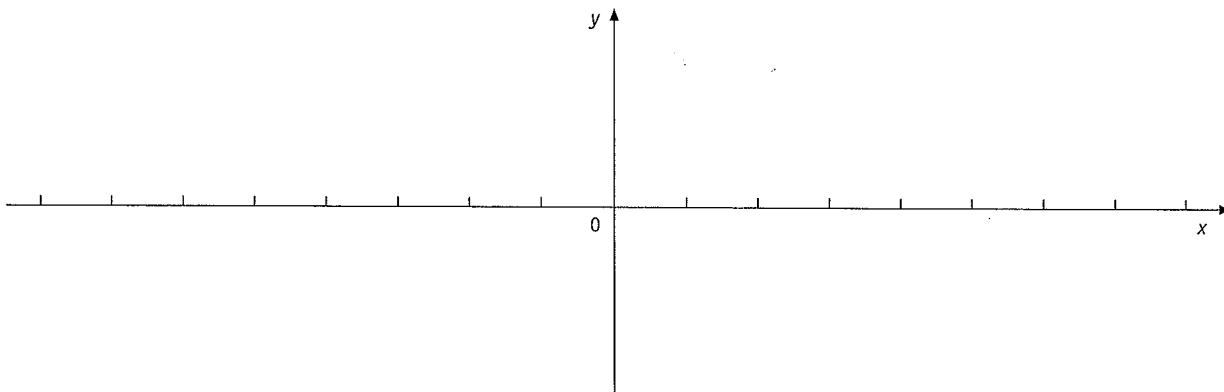
The graph of $y = \sin x$ (2)
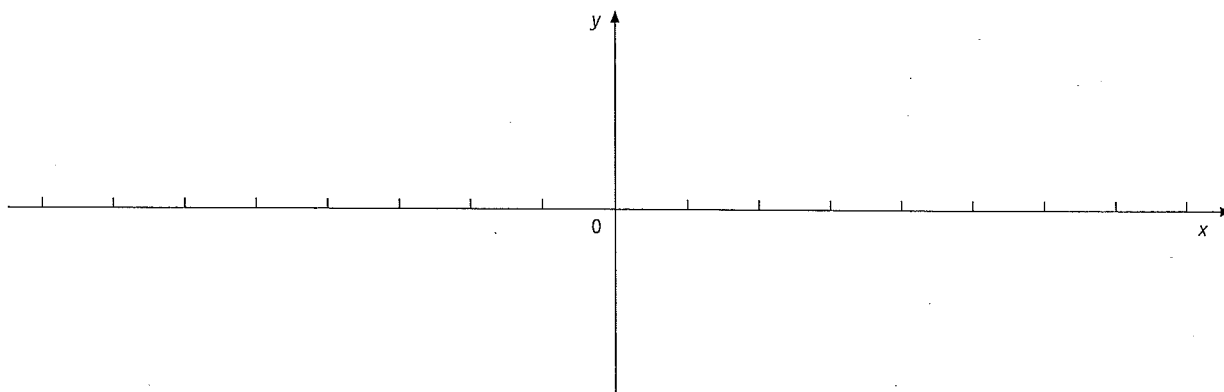
QUESTION **1**   Sketch the graph of:

a $y = \sin \pi x$

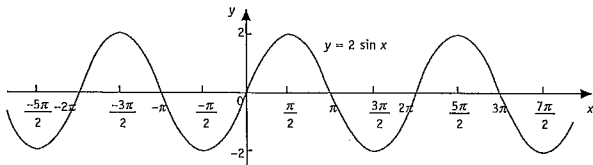**b** $y = 4 \sin \dfrac{x}{2}$

c $y = 3 \sin \left(x - \dfrac{\pi}{4} \right)$

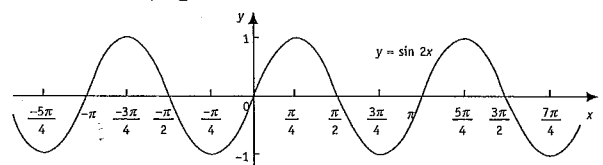**Page 72**   1   a all real x b $-1 \le y \le 1$ c 2π, 1   d $\dfrac{2\pi}{n}$, a 2   a $\dfrac{\pi}{2}$, 1   b 2π, 4   c π, $\dfrac{1}{2}$ d 8π, 2
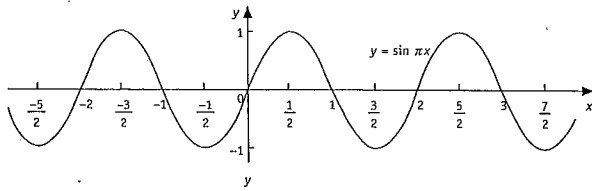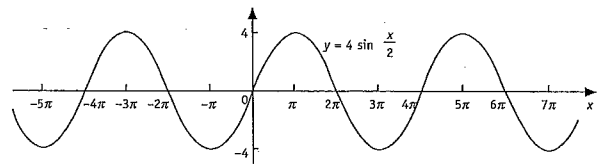
3   a

b

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1   a

b

c