Functions: inputs, domains, tables and graphs

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Name: _____ Class: _____ Date: _____

Worked example 1

Does this table define y as a function of x? Explain using each input.

x	y
-1	1
0	0
1	1
2	4

Use the stated conditions and the labelled scales.

Guided attempt 2

An initially empty 60 L tank fills at 3 L/min, stopping when full. Write V in terms of t while filling and state the time domain.

1. During filling, $V = \square t$ L, with t measured in minutes.
2. At capacity, $3t = 60$, so $t = \frac{60}{\square} = \square$ minutes.
3. Time domain: $0 \le t \le \square$; explain both endpoints.

Prerequisite 3

For the given relation, find y when $x = 3$.

$$y = 2x + 1$$

Prerequisite 4

The relation contains only the pair $(2, -1)$. On its stated input domain $\{2\}$, is it a function?

x	y
2	-1

Use the stated conditions and the labelled scales.

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Independent practice 5

Does this table define y as a function of x? Explain using each input.

x	y
0	1
0	2
1	3

Use the stated conditions and the labelled scales.

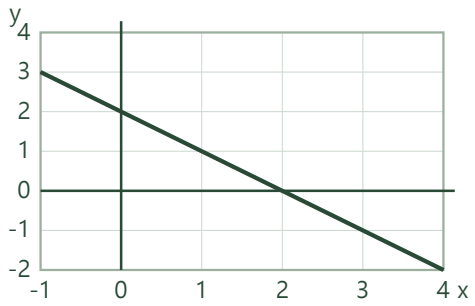
Independent practice 6

For the given relation, find y when $x = -1$.

$$y = 3x - 2$$

Independent practice 7

Read the x-coordinate where the shown graph meets the x-axis. Check it in the relation.



Use the stated conditions and the labelled scales.

Independent practice 8

State the real input that must be excluded from this relation.

$$y = \frac{1}{x - 2}$$

Exit question 9

Does this table define y as a function of x? Explain using each input.

x	y
1	5
2	5
3	5

Use the stated conditions and the labelled scales.

Exit question 10

A ticket costs 4 dollars. At most 20 tickets are available. State the possible ticket counts n and write the cost C.