



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Drawing Graphs

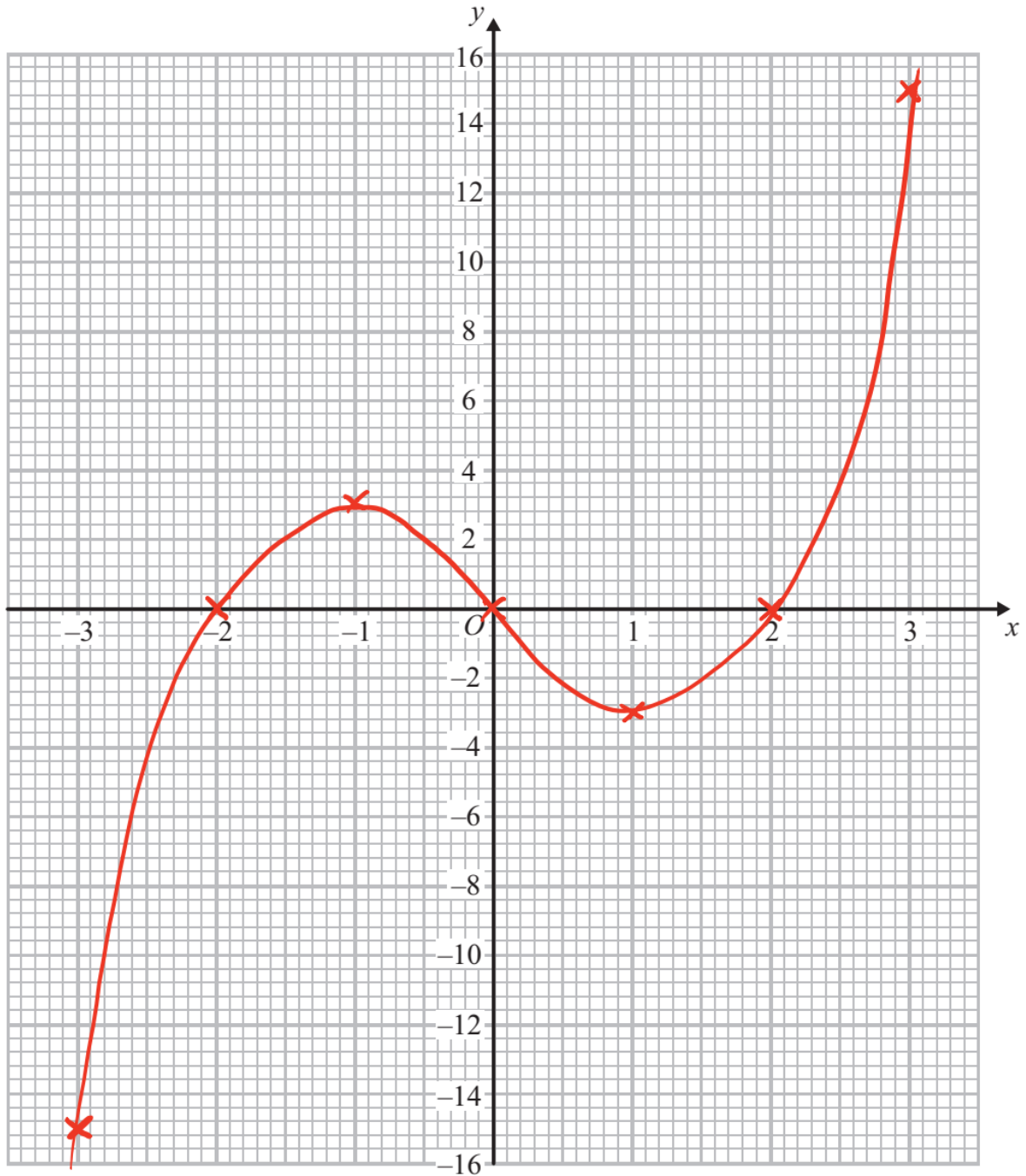
Answers

*"We will help you to
achieve A Star "*



Answer 1

(b) On the grid, draw the graph of $y = x^3 - 4x$ from $x = -3$ to $x = 3$

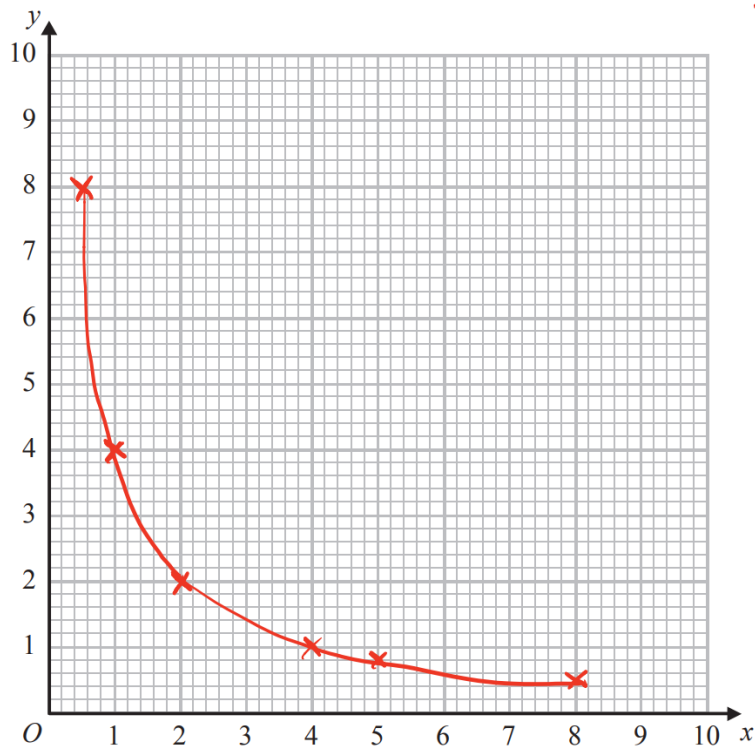
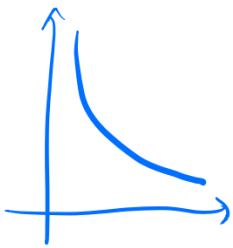




Answer 2

(b) On the grid, draw the graph of $y = \frac{4}{x}$ for $0.5 \leq x \leq 8$

RECIPROCAL
GRAPH



$$\frac{4}{0.5} = 8$$

$$\frac{4}{4} = 1$$

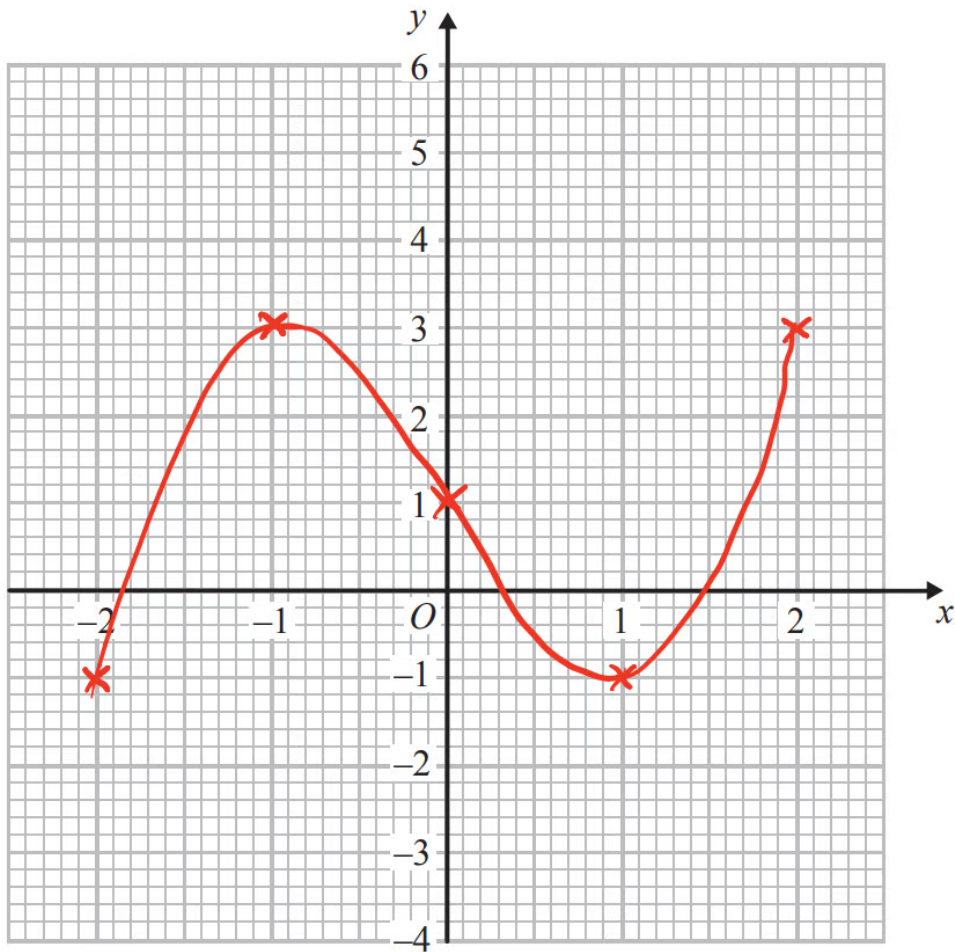
$$\frac{4}{5} = 0.8$$

$$\frac{4}{8} = 0.5$$



Answer 3

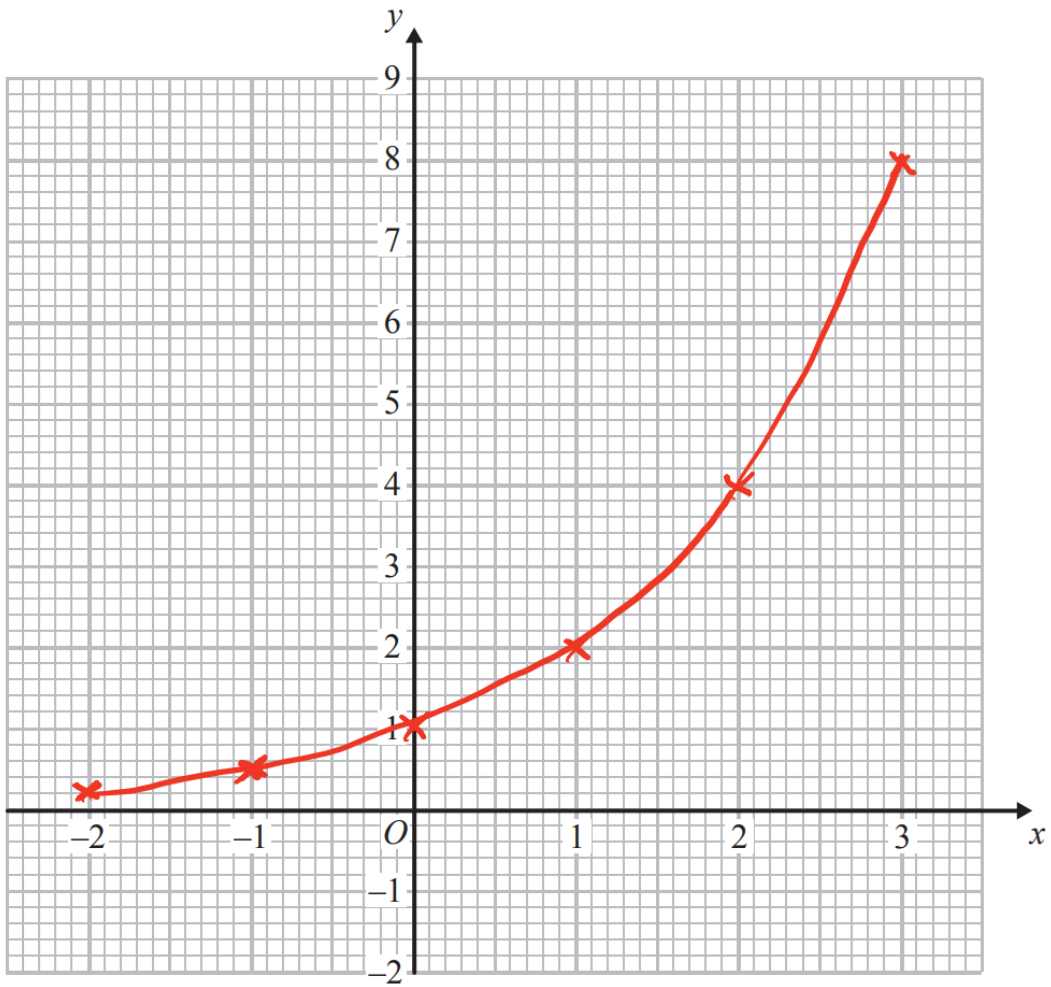
(b) On the grid, draw the graph of $y = x^3 - 3x + 1$ for values of x from -2 to 2





Answer 4

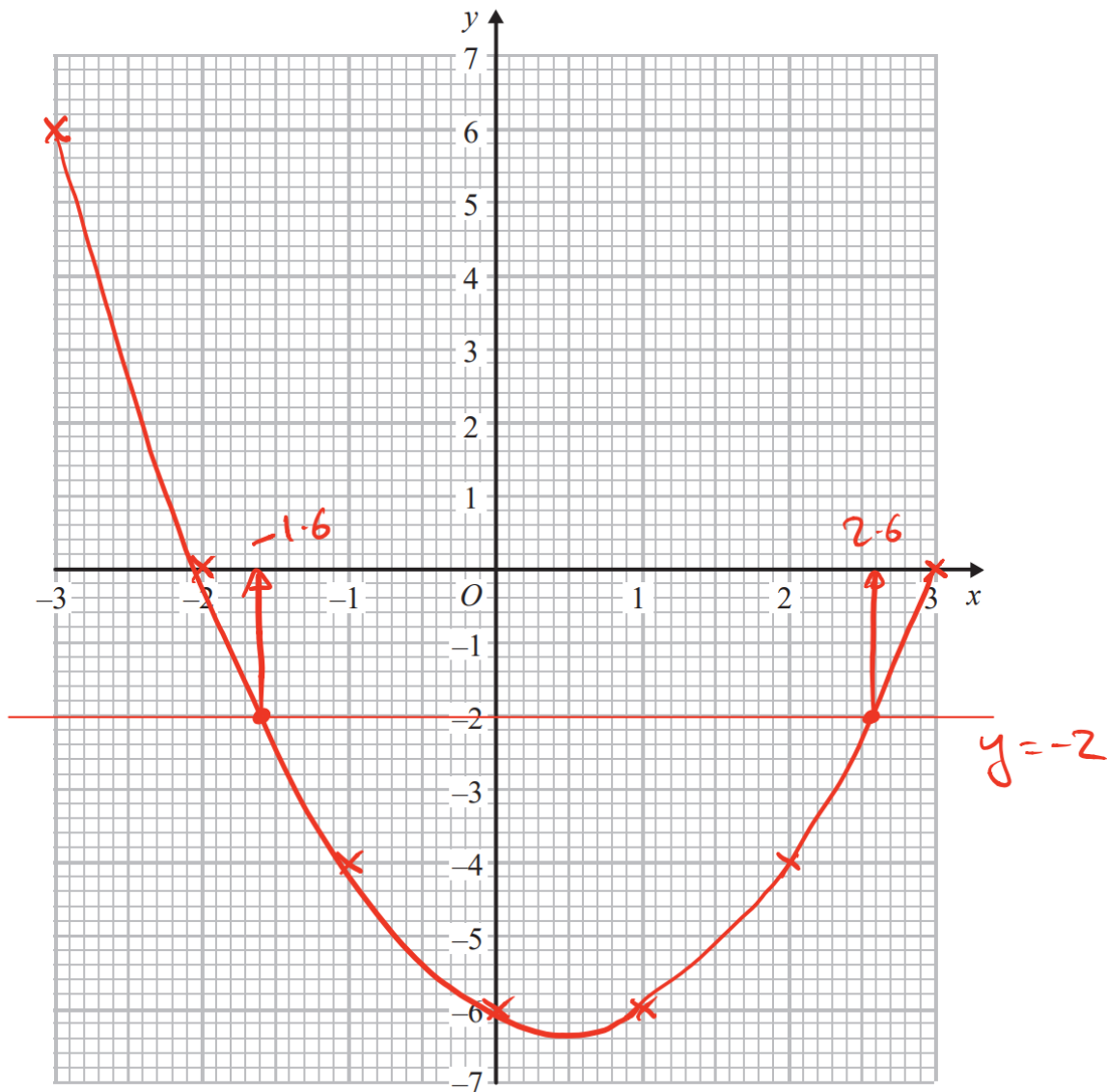
(b) On the grid, draw the graph of $y = 2^x$ for values of x from -2 to 3





Answer 5

(b) On the grid, draw the graph of $y = x^2 - x - 6$ for values of x from -3 to 3





Answer 6

(a) Complete the table of values for $y = \frac{6}{x}$

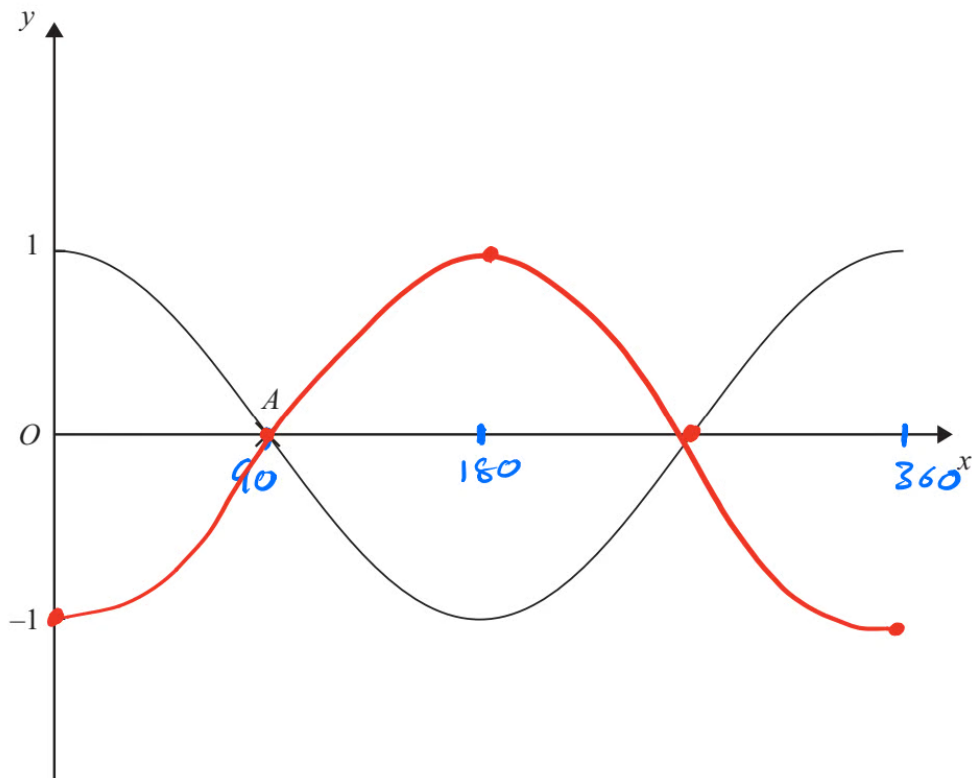
COULD USE TABLE
FUNCTION ON CALC.

x	0.5	1	2	3	4	5	6
y	12	6	3	2	1.5	1.2	1

$\frac{6}{0.5}$ $\frac{6}{3}$ $\frac{6}{5}$

Answer 7

The diagram shows a sketch of the graph of $y = \cos x^\circ$



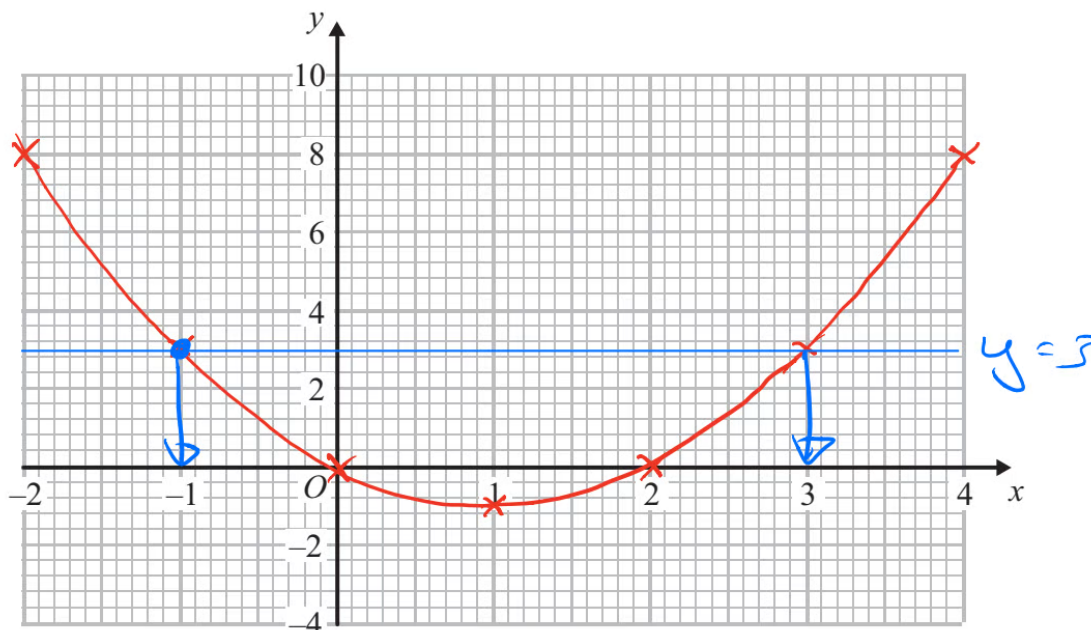
(a) Write down the coordinates of the point A.

(90 , 0)



Answer 8

(b) On the grid, draw the graph of $y = x^2 - 2x$ for values of x from -2 to 4



Answer 9

(a) Complete the table of values for $y = x^2 - 2x - 1$

x	-2	-1	0	1	2	3	4
y	7	2	-1	-2	-1	2	7



Answer 10

(c) Solve $x^2 - 2x - 1 = x + 3$

Draw $y = x + 3$
GRAPHS INTERSECT
AT
 $x = -1$, $x = 4$

OR

$$\begin{aligned}x^2 - 2x - 1 &= x + 3 \\x^2 - 2x - 1 - x - 3 &= 0 \\x^2 - 3x - 4 &= 0 \\(x + 1)(x - 4) &= 0 \\x &= -1 \text{ or } x = 4\end{aligned}$$

Answer 11

(b) Find estimates for the solutions of the simultaneous equations

"USE THE GRAPH..."

$$\begin{aligned}x^2 + y^2 &= 16 \\y &= 2x + 1\end{aligned}$$

$$\begin{aligned}x &= -2.2, & x &= 1.4 \\y &= -3.4, & y &= 3.8\end{aligned}$$

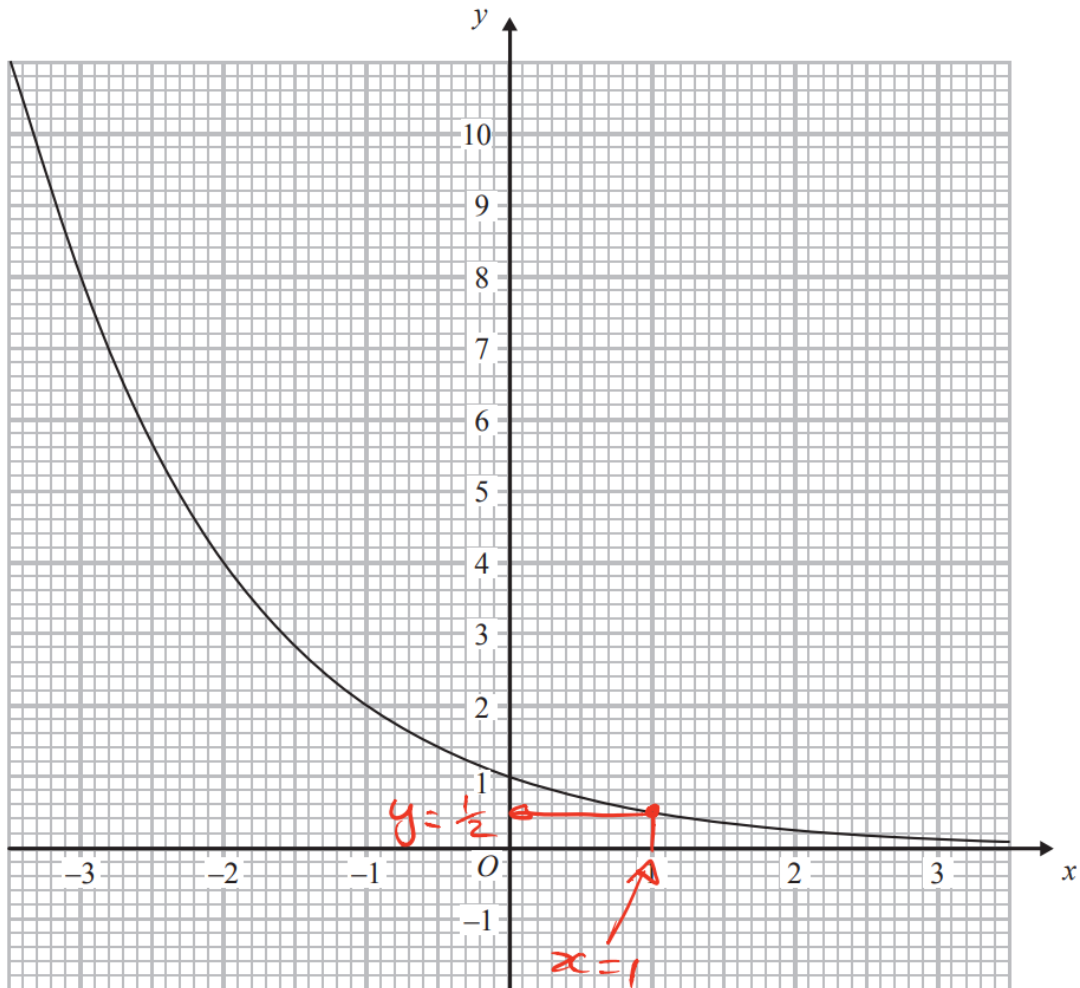
EQUATION OF A STRAIGHT LINE

$$y = mx + c$$

↑ ↑
GRADIENT y-INTERCEPT



Answer 12



The graph of $y = k^x$, where k is a positive constant, is shown above.

(a) Find the value of k .

$$k^1 = k$$

Use $x=1, y=\frac{1}{2}$

$$\rightarrow \frac{1}{2} = k^1$$

$$\text{so } \underline{\underline{k = \frac{1}{2}}}$$



Answer 13

(a) Complete the table of values for $y = x^2 - 2x$

x	-2	-1	0	1	2	3	4
y	8	3	0	-1	0	3	8

TABLE FUNCTION ON CALCULATOR:

$f(x) = x^2 - 2x$; START -2; END 4; STEP 1.

Answer 14

(c) Solve $x^2 - 2x - 2 = 1$

$+2 +2$

$x^2 - 2x = 3$

$y = \dots$

$y = \dots$

From Graph:

$x = -1$, $x = 3$

OR

$x^2 - 2x - 3 = 0$

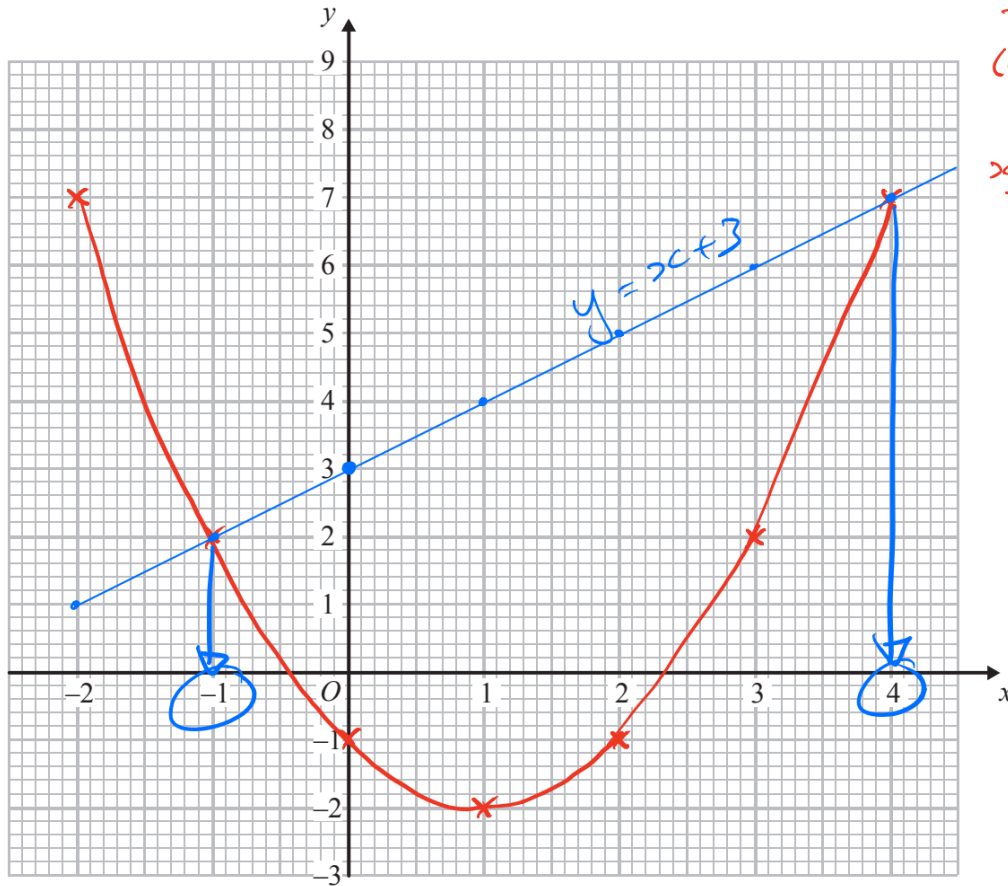
$(x+1)(x-3) = 0$

$x = -1$ or $x = 3$



Answer 15

(b) On the grid, draw the graph of $y = x^2 - 2x - 1$ for values of x from -2 to 4



$x = -1$
 $(-1)^2 - 2(-1) - 1$
 $= 2$

$x = 0$
 $0^2 - 2 \times 0 - 1$