ALGEBRA: DRAWING & USING CUBIC GRAPHS

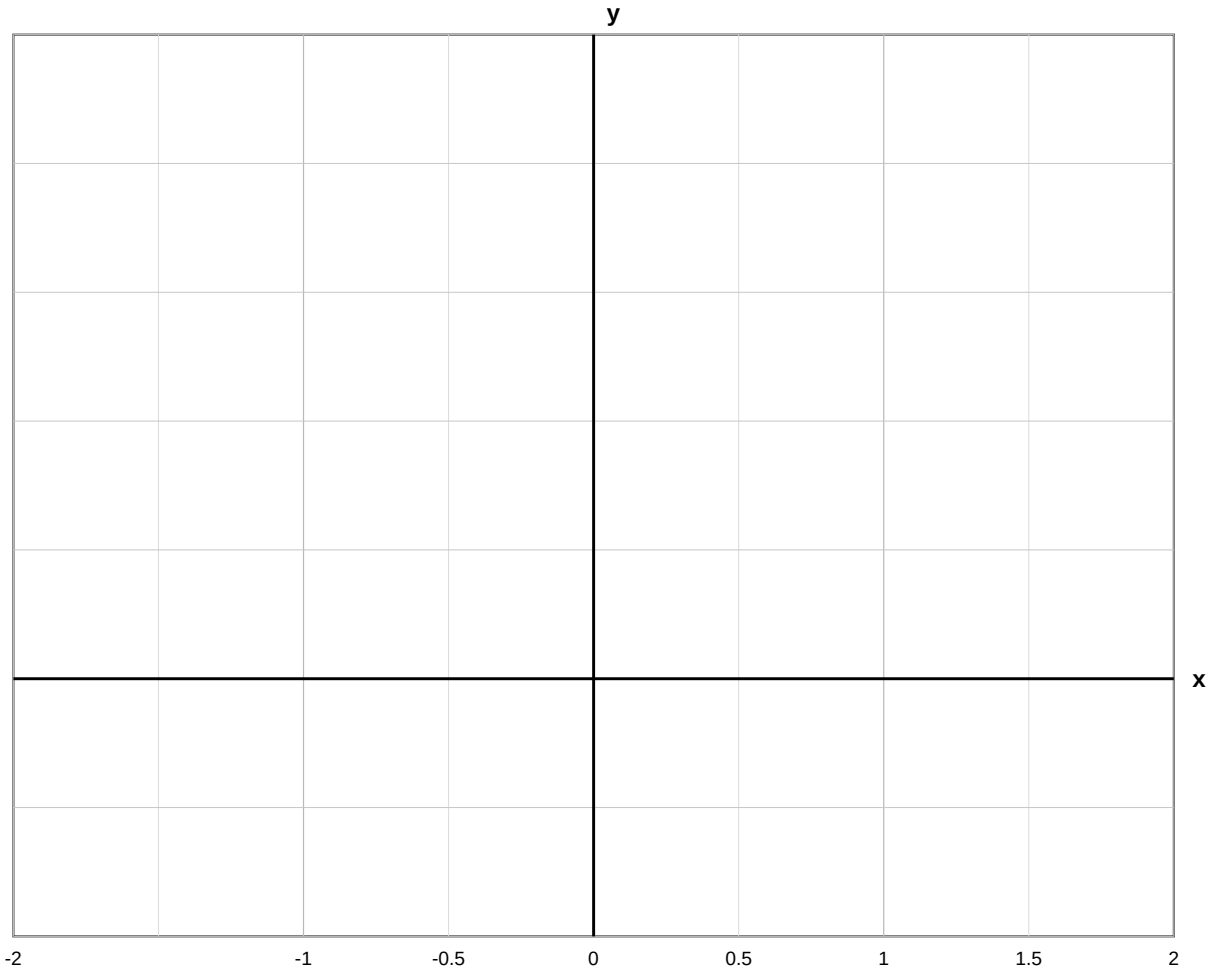
Best Guess Mastery Worksheet (Target Grade 6/7)

I Do

(a) Complete the table of values for y = x^3 - 3x + 1.

x	-2	-1	-0.5	0	0.5	1	1.5	2
y		3	2.4			-1	-0.1	

(b) On the grid, draw y = x^3 - 3x + 1 for -2 <= x <= 2.



(c) Draw a suitable straight line and use your graph to solve x^3 - 3x - 1 = 0. Give each answer correct to one decimal place.

x = _____

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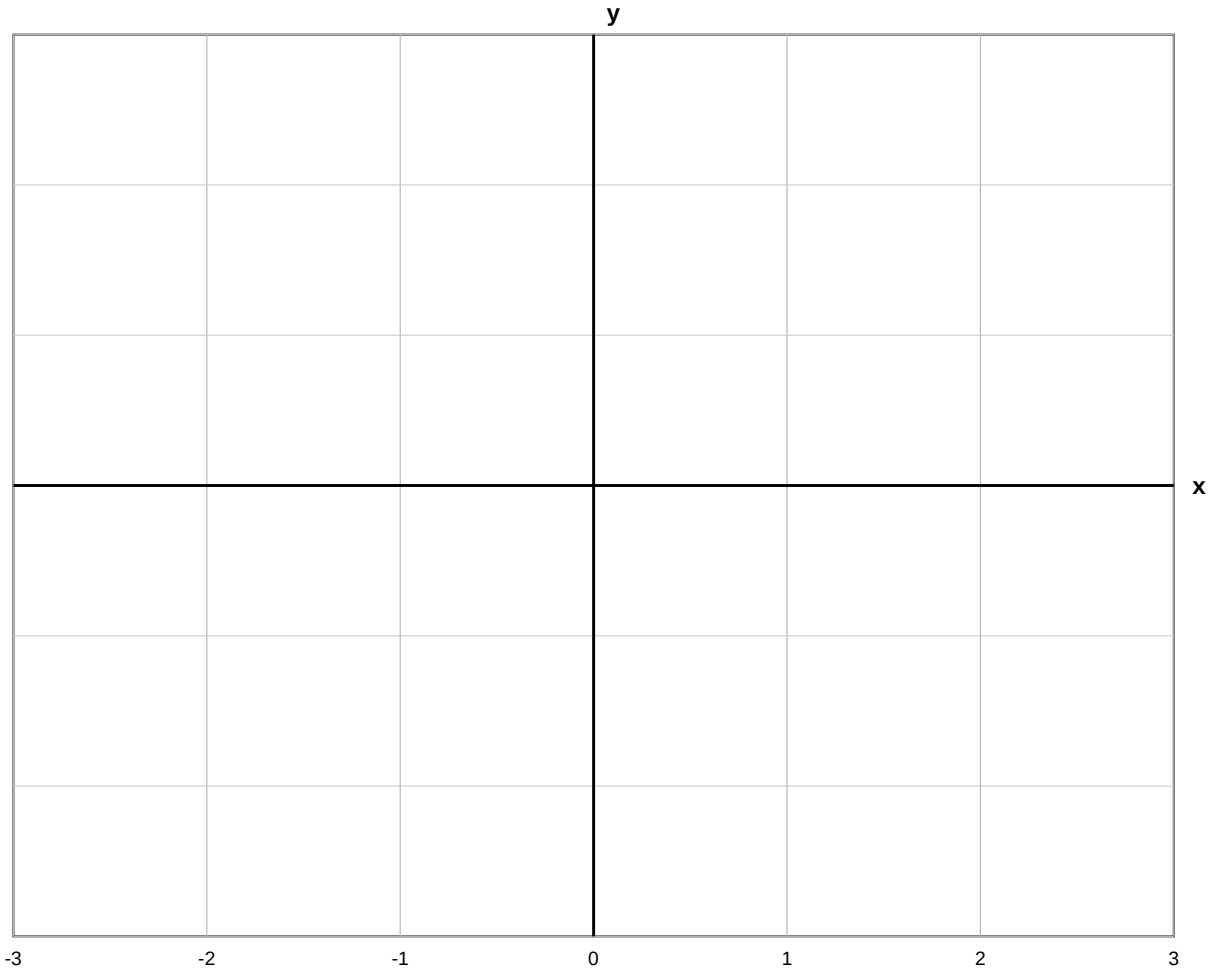
Best Guess Mastery Worksheet (Target Grade 6/7)

We Do

(a) Complete the table of values for y = x^3 - 4x.

x	-3	-2	-1	0	1	2	3
y	-15		3		-3		15

(b) On the grid, draw y = x^3 - 4x for -3 <= x <= 3.



(c) Draw a suitable straight line and use your graph to solve x^3 - 4x - 2 = 0. Give each answer correct to one decimal place.

x = _____

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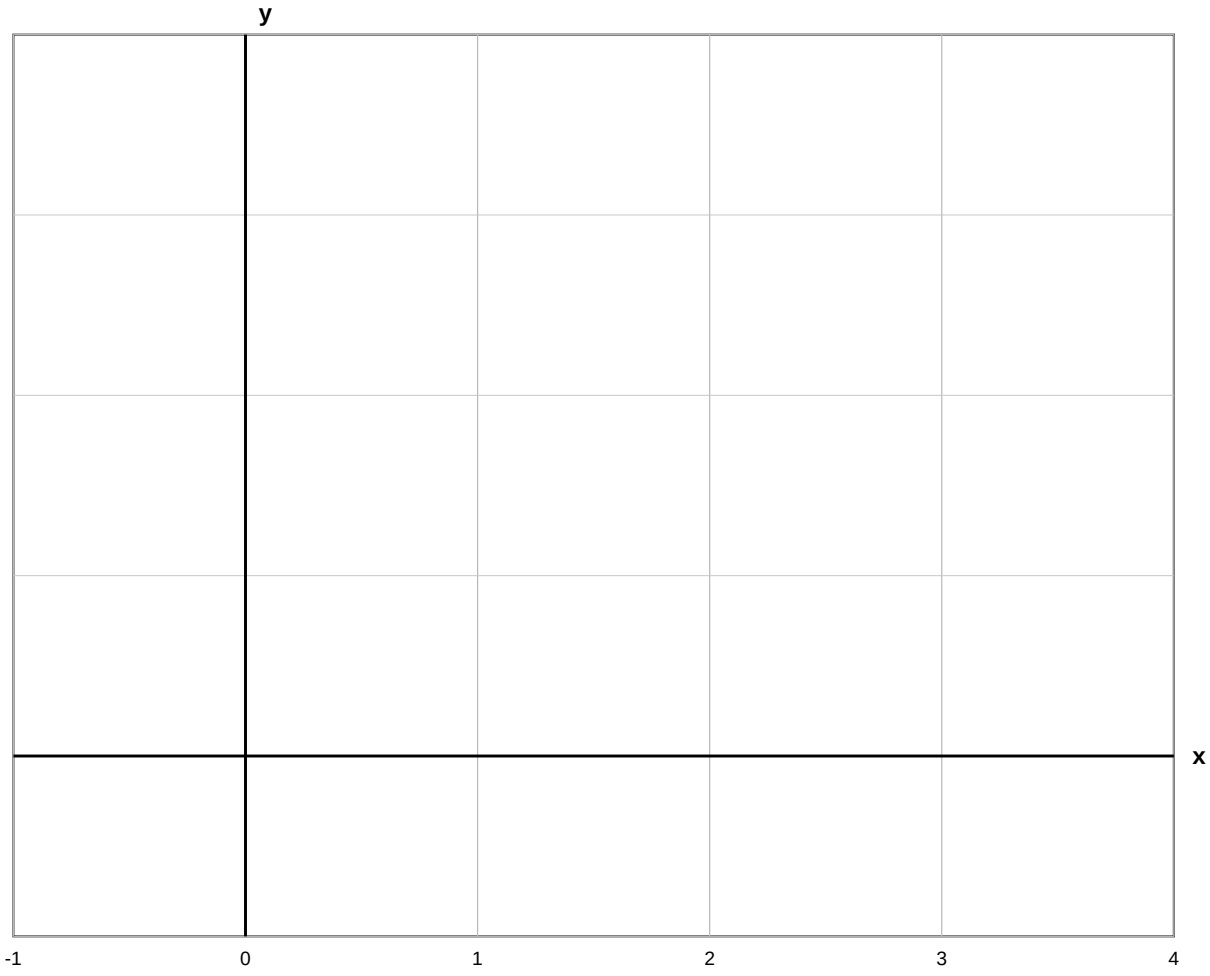
Best Guess Mastery Worksheet (Target Grade 6/7)

You Do 1

(a) Complete the table of values for y = x^3 - 3x^2 + 2.

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

(b) On the grid, draw y = x^3 - 3x^2 + 2 for -1 <= x <= 4.



(c) Draw a suitable straight line and use your graph to solve x^3 - 3x^2 + 4 = 0. Give each answer correct to one decimal place.

x = _____

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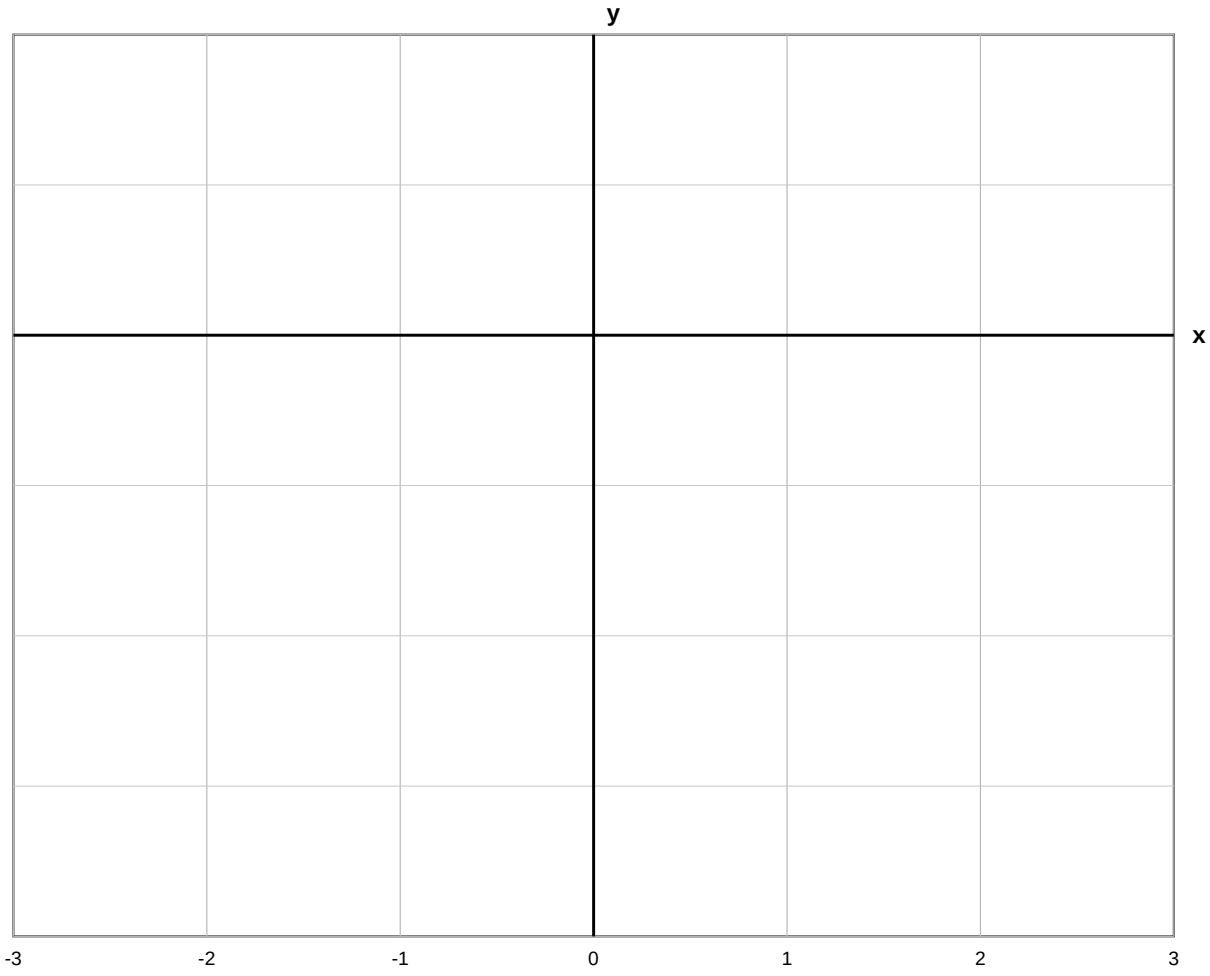
Best Guess Mastery Worksheet (Target Grade 6/7)

You Do 2

(a) Complete the table of values for y = x^3 - x^2 - 4x + 4.

x	-3	-2	-1	0	1	2	3
y		0	6		0		10

(b) On the grid, draw y = x^3 - x^2 - 4x + 4 for -3 <= x <= 3.



(c) Draw a suitable straight line and use your graph to solve x^3 - x^2 - 4x = 0. Give each answer correct to one decimal place.

x = _____

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Best Guess Mastery Worksheet (Target Grade 6/7)

Challenge 1

(a) Complete the table of values for y = -x^3 + 3x + 2.

x	-3	-2	-1	0	1	2	3
y	20		0		4		-16

(b) On the grid, draw y = -x^3 + 3x + 2 for -3 <= x <= 3.



(c) Draw a suitable straight line and use your graph to solve -x^3 + 3x - 1 = 0. Give each answer correct to one decimal place.

x = _____

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Best Guess Mastery Worksheet (Target Grade 6/7)

Challenge 2

(a) Complete the table of values for y = -x^3 - 2x^2 + 5x + 6.

x	-4	-3	-2	-1	0	1	2	3
y	18		-4	0		8		-24

(b) On the grid, draw y = -x^3 - 2x^2 + 5x + 6 for -4 <= x <= 3.



(c) Draw a suitable straight line and use your graph to solve -x^3 - 2x^2 + 5x + 3 = 0. Give each answer correct to one decimal place.

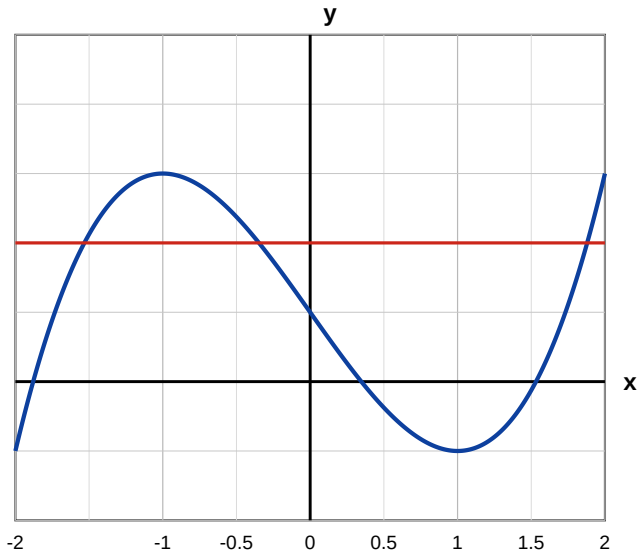
x = _____

ALGEBRA: DRAWING & USING CUBIC GRAPHS

Worked solutions and correctly plotted graphs - page 1 of 2

I Do

y = x^3 - 3x + 1



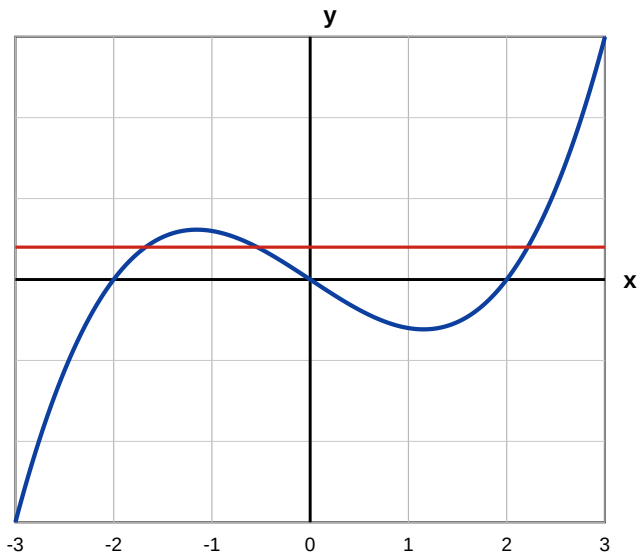
Completed y-values:
-1, 3, 2.4, 1, -0.4, -1, -0.1, 3

Suitable line: y = 2

Solutions: x = -1.5, -0.3, 1.9

We Do

y = x^3 - 4x



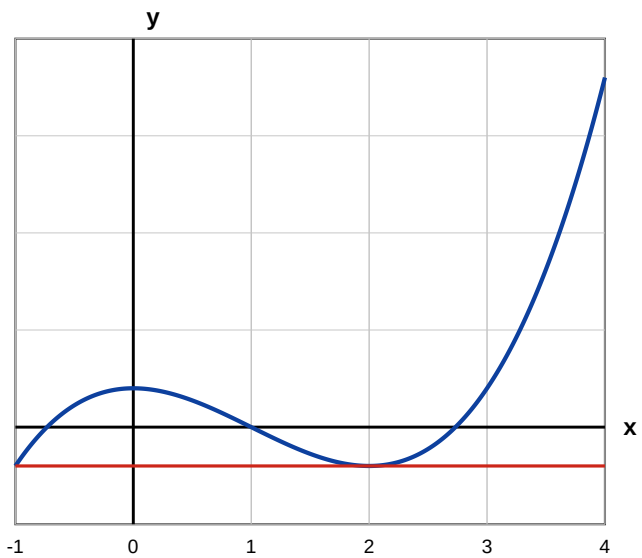
Completed y-values:
-15, 0, 3, 0, -3, 0, 15

Suitable line: y = 2

Solutions: x = -1.7, -0.5, 2.2

You Do 1

y = x^3 - 3x^2 + 2



Completed y-values:
-2, 2, 0, -2, 2, 18

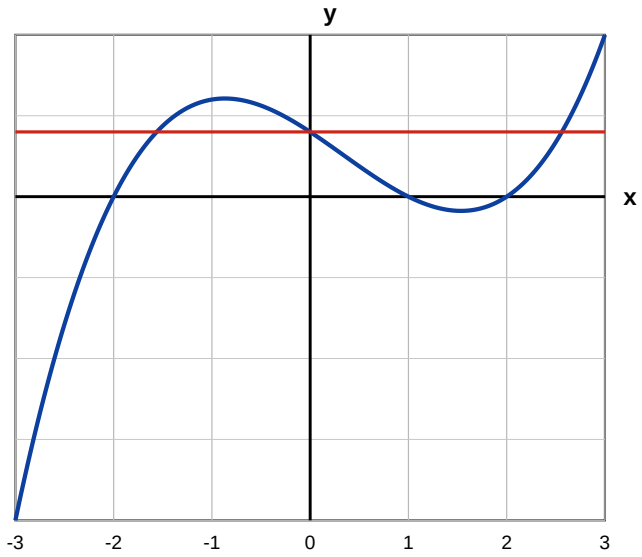
Suitable line: y = -2

Solutions: x = -1.0, 2.0

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Worked solutions and correctly plotted graphs - page 2 of 2

You Do 2 y = x^3 - x^2 - 4x + 4

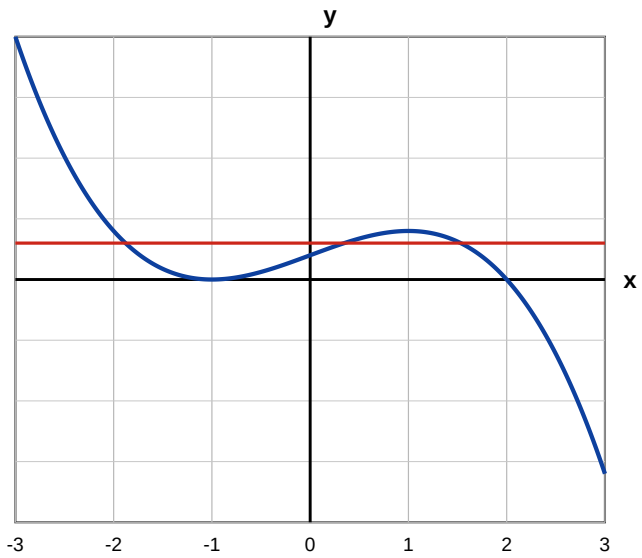


Completed y-values:
-20, 0, 6, 4, 0, 0, 10

Suitable line: y = 4

Solutions: x = -1.6, 0.0, 2.6

Challenge 1 y = -x^3 + 3x + 2

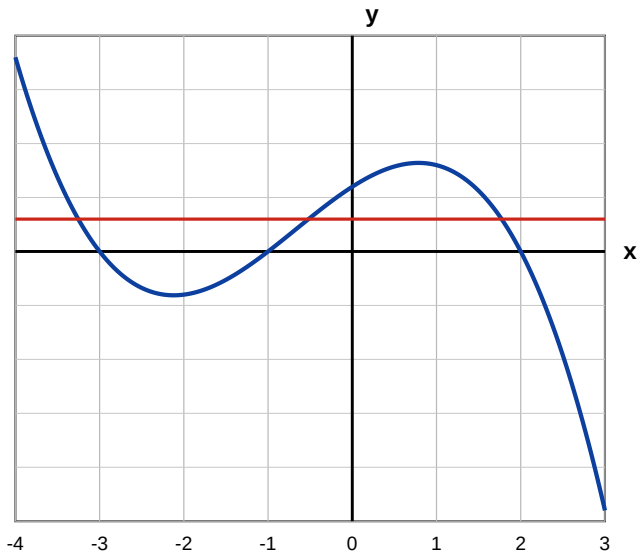


Completed y-values:
20, 4, 0, 2, 4, 0, -16

Suitable line: y = 3

Solutions: x = -1.9, 0.3, 1.5

Challenge 2 y = -x^3 - 2x^2 + 5x + 6



Completed y-values:
18, 0, -4, 0, 6, 8, 0, -24

Suitable line: y = 3

Solutions: x = -3.3, -0.5, 1.8