Q1.

When $x^2 = 16$ the **only** value that x can be is 4

Is this true or false?

Tick a box.

True ☐ False ☐

Reason .....

.....

.....

(Total 1 mark)

Q2.(a) Factorise $x^2 + 5x - 24$

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Answer .....

(2)

(b) Solve $x^2 + 5x - 24 = 0$

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Answer .....

(1)

(Total 3 marks)

Q3.I am thinking of two numbers.

The first number is x.

The second number is 7.5 **more** than x.

(a) Write down an expression, in terms of x, for the second number.

Answer .....

(1)

(b) For the two numbers,

the product is double the sum.

Work out the numbers I could be thinking of.
Give **both** possible pairs of answers.

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Answer ..... and .....

or

..... and .....

(5)
(Total 6 marks)

Q4. The graph of $y = x^2 + 2x - 3$ is drawn on the opposite page.

Draw an appropriate **straight** line on the graph to work out the approximate solutions of

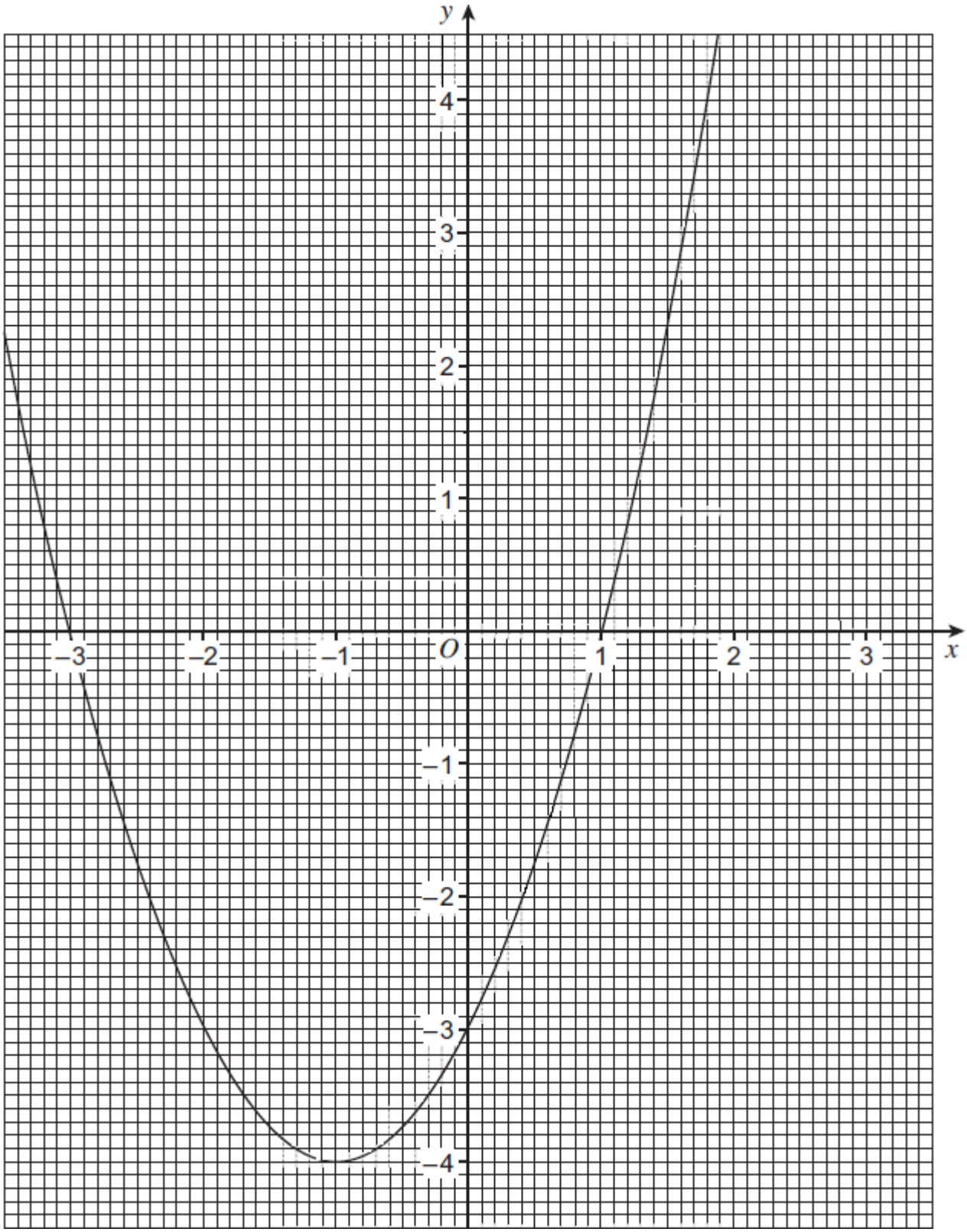
$x^2 + x - 3 = 0$

.....

.....

Answer .....

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



(Total 3 marks)

Q5. The expression $\frac{x^2 - 9}{x^2 + bx - 15}$ simplifies to $\frac{x+3}{x+5}$

Work out the value of b.

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b = ...

(Total 3 marks)

Q6. The diagram shows a rectangle.

The area of the rectangle is 90 cm^2.

Set up and solve a quadratic equation to work out the value of x.

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x = ... cm

(Total 5 marks)