

The Quadratic Formula

For Pearson Edexcel GCSE Mathematics (1MA1) • Higher tier

Name _____

Total marks: **26**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

- 1** Solve $3x^2 + 2x - 4 = 0$
Give your solutions correct to 2 decimal places.

.....
(3)

(Total for Question 1 is 3 marks)

- 2** Solve $5x^2 - 3x - 1 = 0$
Give your solutions correct to 3 significant figures.

.....
(3)

(Total for Question 2 is 3 marks)

- 3** Solve $6x^2 + 7x - 4 = 0$
Give your solutions correct to 3 significant figures.

.....
(3)

(Total for Question 3 is 3 marks)

- 4** Solve $x(x - 2) = 5$
Give your solutions in the form $a \pm \sqrt{b}$

.....
(3)

(Total for Question 4 is 3 marks)

- 5** The length of a rectangle is $(x + 5)$ cm.
The width of the rectangle is $(x - 1)$ cm.
The area of the rectangle is 35 cm^2 .
Work out the value of x .
Give your answer correct to 3 significant figures.

$x =$
(3)

(Total for Question 5 is 3 marks)

- 6 The diagram shows a right-angled triangle.
The lengths of the sides are given in centimetres.

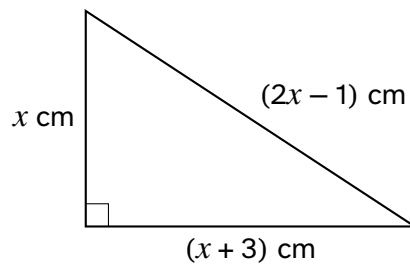


Diagram **NOT** accurately drawn

- (a) Show that $x^2 - 5x - 4 = 0$

(3)

- (b) Work out the perimeter of the triangle.
Give your answer correct to 3 significant figures.

..... cm
(3)

(Total for Question 6 is 6 marks)

7 Solve $\frac{2}{x+1} + \frac{3}{x} = 1$

Give your solutions correct to 2 decimal places.

.....
(5)

(Total for Question 7 is 5 marks)
