5.8 Solving Quadratics: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out the value of x.

$(x + 3)(x - 2) = 0$

(Total for Question 1 is 1 mark)

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2 Solve $x^2 + 6x + 8 = 0$

(Total for Question 2 is 2 marks)

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3 Priya is making a rectangular flowerbed. The length is 3 metres more than the width. The area is 70 m².

Let the width be x metres.

(a) Write down an equation in x. **(1)**

.....

(b) Solve the equation and give the width of the flowerbed. **(5)**

.....

(Total for Question 3 is 6 marks)

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Mark scheme · 5.8 Solving Quadratics: 10-minute Pack

Question 1

x = -3 or x = 2 cao	**B1**

Answer: x = -3 or x = 2

Question 2

correct factorisation (x + 2)(x + 4) = 0 oe	**M1**
x = -2 and x = -4 cao	**A1**

Answer: x = -2 or x = -4

Question 3

(a) equation x(x + 3) = 70 or equivalent	**M1**

(a) Answer: x(x + 3) = 70

(b) expand to x^2 + 3x - 70 = 0 or rearrange to standard form	**M1**
(b) factorise to (x + 10)(x - 7) = 0 or equivalent	**M1**
(b) state both roots x = 7 and x = -10 or show solving each factor	**M1**
(b) x = 7 cao	**A1**
(b) width = 7 m stated as the positive practical solution	**A1**

(b) Answer: x = 7 (width = 7 m)

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