2.9 Solving One Step Equations: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Solve each equation.

(a) x + 9 = 15 **(1)**

(b) x - 5 = 2 **(1)**

(Total for Question 1 is 2 marks)

2 Solve each equation.

(a) x + 8 = 15 **(1)**

(b) x - 6 = 9 **(1)**

(c) 10 + x = 16 **(1)**

(Total for Question 2 is 3 marks)

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3 Solve each equation.

(a) $x + 14 = 20$ **(1)**

.....

(b) $x - 7 = 5$ **(1)**

.....

(Total for Question 3 is 2 marks)

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4 Solve $x + 7 = 12$.

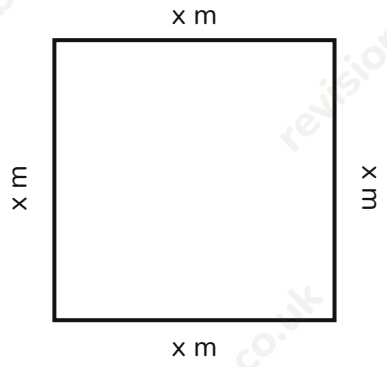
(Total for Question 4 is 1 mark)

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5 Aisha is tiling a square patio with side length x metres.

The perimeter of the patio is 32 m.

Form an equation in terms of x and solve it to find the side length.



(Total for Question 5 is 2 marks)

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6 I think of a number. I subtract 13 from it. The answer is 20. What is my number?

(Total for Question 6 is 2 marks)

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7 Match each equation to its solution. Each solution on the right is used exactly once: 7, 13, 10, 30

(a) $x + 3 = 10$ **(1)**

- ☐ 7
- ☐ 13
- ☐ 10
- ☐ 30

(b) $x - 3 = 10$ **(1)**

- ☐ 7
- ☐ 13
- ☐ 10
- ☐ 30

(c) $3x = 30$ **(1)**

- ☐ 7
- ☐ 13
- ☐ 10
- ☐ 30

(d) $x / 3 = 10$ **(1)**

- ☐ 7
- ☐ 13
- ☐ 10
- ☐ 30

(Total for Question 7 is 4 marks)

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8 Show that x = -3.5 is the solution to the equation

$2x = -7$

(Total for Question 8 is 2 marks)

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9 A small company's total loss for the year, L pounds, is shared equally between 5 investors.

Each investor's share of the loss is recorded as -£620 on their year-end statement.

Form an equation for L and solve it to find the company's total loss for the year.

(Total for Question 9 is 3 marks)

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10 Solve -4x = -10. Give your answer as a fraction in lowest terms.

(Total for Question 10 is 2 marks)

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Mark scheme · 2.9 Solving One Step Equations: 30-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

(a) x = 6 cao **B1**

(a) Answer: x = 6

(b) x = 7 cao **B1**

(b) Answer: x = 7

Question 2

(a) x = 7 cao **B1**

(a) Answer: x = 7

(b) x = 15 cao **B1**

(b) Answer: x = 15

(c) x = 6 cao **B1**

(c) Answer: x = 6

Question 3

(a) x = 6 cao **B1**

(a) Answer: x = 6

(b) x = 12 cao **B1**

(b) Answer: x = 12

Question 4

x = 5 cao **B1**

Answer: 5

Question 5

correct equation formed, 4x = 32 oe **M1**

x = 8 (m) cao **A1**

Answer: x = 8 m

Question 6

forms an equation or uses an inverse operation **M1**

33 cao **A1**

Answer: 33

Question 7

(a) matched to 7 cao **B1**

(a) Answer: 7

(b) matched to 13 cao **B1**

(b) Answer: 13

(c) matched to 10 cao **B1**

(c) Answer: 10

(d) matched to 30 cao **B1**

(d) Answer: 30

Question 8

-3.5 substituted into 2x, 2 x -3.5 = -7 seen **M1**

-7 = -7 stated, so x = -3.5 is a correct solution, cso **A1**

Answer: 2 x -3.5 = -7, which equals the right-hand side, so x = -3.5 is correct.

Question 9

correct equation formed, L / 5 = -620 oe **M1**

L = -3100 cao **A1**

correct interpretation stated, the company's total loss for the year was £3100 (or -£3100) **C1**

Answer: L = -3100 (a loss of £3100)

Question 10

divide both sides by -4 or equivalent method **M1**

x = 5/2 cao **A1**

Answer: 5/2

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