2.9 Solving One Step Equations: 1-hour Pack

EDEXCEL 1MA1 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Solve y - 5 = 9.

(Total for Question 1 is 1 mark)

2 Solve t - 8 = 2.

(Total for Question 2 is 1 mark)

3 Solve each equation.

(a) -x = 7 **(2)**

(b) -2x = 10 **(2)**

(Total for Question 3 is 4 marks)

4 Solve

20 / x = 4

(Total for Question 4 is 2 marks)

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5 Solve

$7x = 3.5$

(Total for Question 5 is 2 marks)

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6 Solve $7x = 5$. Give your answer as a fraction or a decimal.

(Total for Question 6 is 2 marks)

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7 Solve $x/12 = 11$

(Total for Question 7 is 2 marks)

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8 Solve $x - 8 = -13$

(Total for Question 8 is 2 marks)

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9 Solve $x + 6 = 4$.

(Total for Question 9 is 2 marks)

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10 The perimeter of an equilateral triangle is 135 cm. Each side has length $5x$ cm. Work out the value of x.

(Total for Question 10 is 2 marks)

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11 Solve x + 4 = 22

(Total for Question 11 is 2 marks)

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12 The perimeter of an equilateral triangle is 378 cm. Each side has length 9x cm. Work out the value of x.

(Total for Question 12 is 2 marks)

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13 Solve x + 8 = 7.

(Total for Question 13 is 2 marks)

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14 Solve x + 2 = 20

(Total for Question 14 is 2 marks)

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15 I think of a number. I subtract 14 from it. The answer is 40. What is my number?

(Total for Question 15 is 2 marks)

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16 The perimeter of an equilateral triangle is 90 cm. Each side has length 5x cm. Work out the value of x.

(Total for Question 16 is 2 marks)

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17 Solve x + 2 = 1.

(Total for Question 17 is 2 marks)

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18 I think of a number. I subtract 15 from it. The answer is 27. What is my number?

(Total for Question 18 is 2 marks)

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19 The perimeter of an equilateral triangle is 360 cm. Each side has length 8x cm. Work out the value of x.

(Total for Question 19 is 2 marks)

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20 Solve x + 2 = 23

(Total for Question 20 is 2 marks)

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21 Solve 8x = 4. Give your answer as a fraction or a decimal.

(Total for Question 21 is 2 marks)

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22 In a 400 m relay race, Aaliyah runs a distance of L metres before passing the baton to her teammate, who then runs the remaining 250 m to finish the race.

Form an equation in terms of L and solve it to find how far Aaliyah ran.

(Total for Question 22 is 2 marks)

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23 Solve $2x = 7$. Give the exact value of x.

(Total for Question 23 is 2 marks)

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Mark scheme · 2.9 Solving One Step Equations: 1-hour Pack

Question 1

y = 14 cao **B1**

Answer: 14

Question 2

t = 10 cao **B1**

Answer: 10

Question 3

(a) both sides multiplied (or divided) by -1 oe **M1**

(a) x = -7 cao **A1**

(a) Answer: x = -7

(b) both sides divided by -2 oe **M1**

(b) x = -5 cao **A1**

(b) Answer: x = -5

Question 4

both sides multiplied by x, or 20 divided by 4, oe **M1**

x = 5 cao **A1**

Answer: x = 5

Question 5

both sides divided by 7 oe **M1**

x = 0.5 cao **A1**

Answer: x = 0.5

Question 6

divides both sides by 7 **M1**

x = 5/7 oe **A1**

Answer: x = 5/7

Question 7

multiplies both sides by 12 **M1**

x = 132 cao **A1**

Answer: x = 132

Question 8

uses the inverse operation on both sides **M1**

x = -5 cao **A1**

Answer: x = -5

Question 9

subtracts 6 from both sides **M1**

x = -2 cao **A1**

Answer: x = -2

Question 10

3 x 5x = 135 or 5x = 45 **M1**

x = 9 cao **A1**

Answer: x = 9

Question 11

uses the inverse operation on both sides **M1**

x = 18 cao **A1**

Answer: x = 18

Question 12

3 x 9x = 378 or 9x = 126 **M1**

x = 14 cao **A1**

Answer: x = 14

Question 13

subtracts 8 from both sides **M1**

x = -1 cao **A1**

Answer: x = -1

Question 14

uses the inverse operation on both sides **M1**

x = 18 cao **A1**

Answer: x = 18

Question 15

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

54 cao **A1**

Answer: 54

Question 16

3 x 5x = 90 or 5x = 30 **M1**

x = 6 cao **A1**

Answer: x = 6

Question 17

subtracts 2 from both sides **M1**

x = -1 cao **A1**

Answer: x = -1

Question 18

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

42 cao **A1**

Answer: 42

Question 19

3 x 8x = 360 or 8x = 120 **M1**

x = 15 cao **A1**

Answer: x = 15

Question 20

uses the inverse operation on both sides **M1**

x = 21 cao **A1**

Answer: x = 21

Question 21

divides both sides by 8 **M1**

x = 0.5 oe **A1**

Answer: x = 0.5

Question 22

correct equation formed, L + 250 = 400 oe **M1**

L = 150 (m) cao **A1**

Answer: L = 150 m

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Question 23

divide both sides by 2 or show 2x/2 = 7/2 **M1**

x = 7/2 cao **A1**

Answer: 7/2

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