GCSE Maths Linear Equations (Higher): check-up and exam-style questions: answers

GCSE Maths - Linear Equations - Higher - Test yourself

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at **websink.site/gcse/maths/ch09-linear-equations/higher/check-up-and-exam-style-questions/**

Exercise 9Z Check-up (non-calculator) Non-calculator

1 Solve $x + 9 = 20$

Answer: $x = 11$

2 Solve $4x = 36$

Answer: $x = 9$

3 Solve $3x + 7 = 25$

Answer: $x = 6$

4 Solve $5x - 8 = 12$

Answer: $x = 4$

5 Solve $2x + 9 = 3$

Answer: $x = -3$

6 Solve $7x - 5 = 3x + 11$

Answer: $x = 4$

7 Solve $4(x - 3) = 20$

Answer: $x = 8$

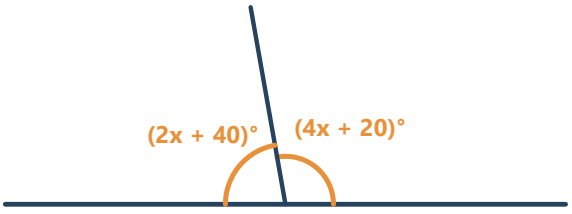
8 Solve $\frac{x + 5}{3} = 4$

Answer: $x = 7$

9 Tom thinks of a number. He multiplies it by 3 and then subtracts 4. The answer is 17. Find Tom's number.

Answer: 7

10 The angles are on a straight line. Work out the value of x.



Answer: $x = 20$

Exercise 9X Exam-style questions Non-calculator

1 Solve $5x + 3 = 38$ [2 marks]

Answer: $x = 7$

2 Solve $\frac{x}{4} + 3 = 8$ [2 marks]

Answer: $x = 20$

3 Solve $7x - 3 = 3x + 17$ [3 marks]

Answer: $x = 5$

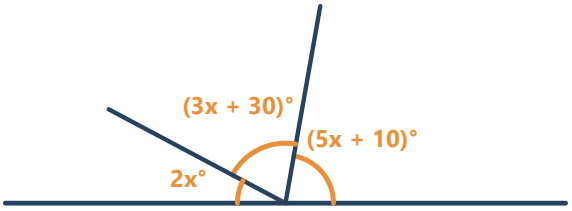
4 Solve $3(2x - 1) = 21$ [3 marks]

Answer: $x = 4$

5 Solve $5(x - 2) = 3(x + 4)$ [3 marks]

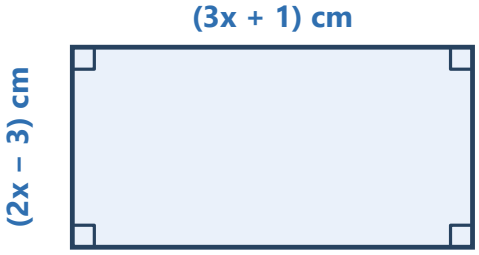
Answer: $x = 11$

6 Three angles on a straight line are $(5x + 10)°$, $(3x + 30)°$ and $2x°$. Work out the value of x. You must show your working. [3 marks]



Answer: $x = 14$

7 The rectangle has a perimeter of 46 cm. (a) Work out the value of x. (b) Work out the area of the rectangle. [4 marks]



Answer: $x = 5$, area 112 cm^2

8 Sia buys 4 identical T-shirts. Delivery costs £3 and is added once. The total is £35. Work out the cost of one T-shirt. [3 marks]

Answer: £8

9 Amy is 3 years older than Ben. Cal is twice as old as Ben. The total of their ages is 39. Work out the age of each person. [4 marks]

Answer: Ben 9, Amy 12, Cal 18

10 Show that $x = 4$ is the solution of $5x - 7 = 3x + 1$. [2 marks]

Answer: Both sides equal 13

11 Phone deal A costs 1000 pence a month plus 4 pence per minute of calls. Phone deal B costs 400 pence a month plus 10 pence per minute. For how many minutes of calls do the two deals cost the same? [4 marks]

Answer: 100 minutes

12 Chen says that $x = 3$ is the solution of $2x + 5 = 4x - 1$. Is Chen correct? You must show your working. [2 marks]

Answer: Yes: both sides equal 11

13 Solve $\frac{4x - 3}{5} - \frac{2x + 2}{4} = 1$. [4 marks]

Answer: $x = 7$

14 Dan is 4 times as old as Eli. In 6 years' time Dan will be 3 times as old as Eli. Work out how old each of them is now. [5 marks]

Answer: Eli 12, Dan 48

15 Solve $\frac{12}{x - 1} = 3$. [3 marks]

Answer: $x = 5$

16 Show that the equation $4(x + 2) - 2x = 2(x + 5)$ has no solution. [3 marks]

Answer: It simplifies to $8 = 10$, which is false.

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