Solving Linear Equations with Brackets and Fractions

1. Solve $2(t + 1) = 6$

2. Solve $2(a - 2) = 11$

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

4. Solve $3(x - 2) = 42$

5. Solve $\frac{2x + 5}{9} = 3$

6. Solve $\frac{3b - 4}{7} = 2$

7. Solve $2(k + 5) = 20$

8. Solve $2(j + 4) = 2$

9. Solve $\frac{a}{3} + 1 = 4$

10. Solve $2(a - 3) = 2(4 + 1)$

Solving Linear Equations with Brackets and Fractions **Answers**

1. $t = 2$
2. $a = 7.5$
3. $x = 4$
4. $x = 16$
5. $x = 11$
6. $b = 6$
7. $k = 5$
8. $j = -3$
9. $a = 9$
10. $a = 8$

Solving Linear Equations with Brackets and Fractions

1. Solve $2(t + 1) = 6$

	$2(t + 1) = 6$	
	$2t + 2 = 6$	
$- 2$		$- 2$
$\div 2$	$t =$	$\div 2$

2. Solve $2(a - 2) = 11$

	$2(a - 2) = 11$	
	$2a - 4 = 11$	
$+ 4$		$+ 4$
$\div 2$	$a =$	$\div 2$

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

	$\frac{2x + 1}{3} = 3$	
$\times 3$	$2x + 1 = 9$	$\times 3$
$- 1$		$- 1$
$\div 2$	$x =$	$\div 2$

4. Solve $3(x - 2) = 42$

	$3(x - 2) = 42$	
	$3x - 6 = 42$	
$+ 6$		$+ 6$
$\div 3$	$x =$	$\div 3$

5. Solve $\frac{2x + 5}{9} = 3$

	$\frac{2x + 5}{9} = 3$	
$\times 9$		$\times 9$
$- 5$		$- 5$
$\div 2$	$x =$	$\div 2$

6. Solve $\frac{3b - 4}{7} = 2$

	$\frac{3b - 4}{7} = 2$	
× 7		× 7
+ 4		+ 4
÷ 3	$b =$	÷ 3

7. Solve $2(k + 5) = 20$

	$2(k + 5) = 20$	
− 10		− 10
÷ 2	$k =$	÷ 2

8. Solve $2(j + 4) = 2$

	$2(j + 4) = 2$	
− 8		− 8
÷ 2	$j =$	÷ 2

9. Solve $\frac{a}{3} + 1 = 4$

	$\frac{a}{3} + 1 = 4$	
− 1		− 1
× 3	$a =$	× 3

10. Solve $2(a - 3) = 2(4 + 1)$

	$2(a - 3) = 2(4 + 1)$	
+ 6		+ 6
÷ 2	$a =$	÷ 2

Solving Linear Equations with Brackets and Fractions **Answers**

1. $t = 2$
2. $a = 7.5$
3. $x = 4$
4. $x = 16$
5. $x = 11$
6. $b = 6$
7. $k = 5$
8. $j = -3$
9. $a = 9$
10. $a = 8$

Solving Linear Equations with Brackets and Fractions

1. Solve $2(t + 1) = 6$

	$2(t + 1) = 6$	
	$2t + 2 = 6$	
−		−
÷	$t =$	÷

2. Solve $2(a - 2) = 11$

	$2(a - 2) = 11$	
Expand		
+		+
÷	$a =$	÷

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

	$\frac{2x + 1}{3} = 3$	
×		×
−		−
÷	$x =$	÷

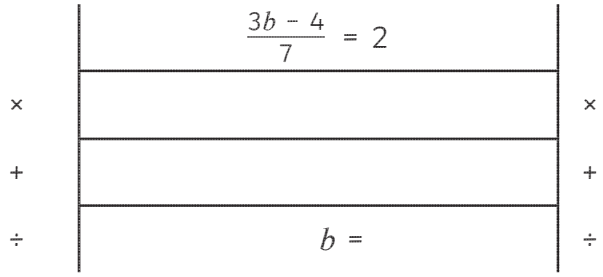
4. Solve $3(x - 2) = 42$

	$3(x - 2) = 42$	
Expand		
+		+
÷	$x =$	÷

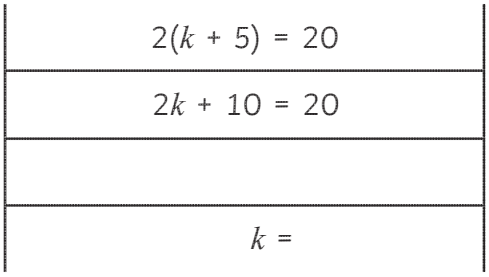
5. Solve $\frac{2x + 5}{9} = 3$

	$\frac{2x + 5}{9} = 3$	
×		×
−		−
÷	$x =$	÷

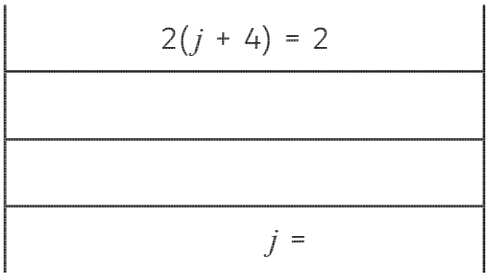
6. Solve $\frac{3b - 4}{7} = 2$



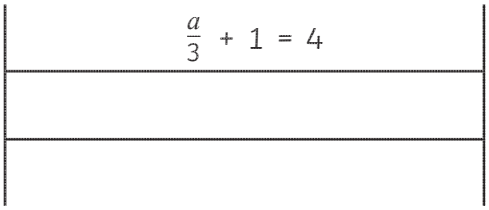
7. Solve $2(k + 5) = 20$



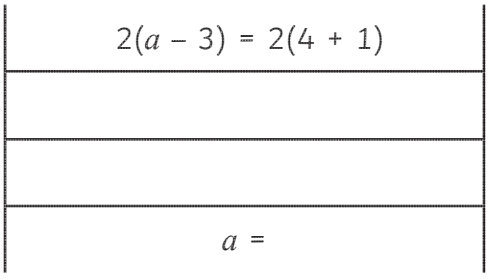
8. Solve $2(j + 4) = 2$



9. Solve $\frac{a}{3} + 1 = 4$



10. Solve $2(a - 3) = 2(4 + 1)$



Solving Linear Equations with Brackets and Fractions **Answers**

1. $t = 2$
2. $a = 7.5$
3. $x = 4$
4. $x = 16$
5. $x = 11$
6. $b = 6$
7. $k = 5$
8. $j = -3$
9. $a = 9$
10. $a = 8$

Linear Equations
Brackets and Fractions

Start

$3(x + 1) = 15$

Linear Equations
Brackets and Fractions

$x = 4$

$2(t + 1) = 6$

Linear Equations
Brackets and Fractions

$t = 2$

$2(a - 2) = 11$

Linear Equations
Brackets and Fractions

$a = 7.5$

$\frac{2x + 5}{9} = 3$

Linear Equations
Brackets and Fractions

$x = 11$

$4(2y + 3) = 26$

Linear Equations
Brackets and Fractions

$y = 1.75$

$\frac{a}{3} + 1 = 4$

Linear Equations
Brackets and Fractions

$a = 9$

$\frac{x}{3} - 2 = 12$

Linear Equations
Brackets and Fractions

$x = 42$

$2(k + 5) = 20$

Linear Equations
Brackets and Fractions

$k = 5$

$2(t + 4) = 2$

Linear Equations
Brackets and Fractions

$t = -3$

$3(a + 7) = 30$

Linear Equations
Brackets and Fractions

$a = 3$

$2(3 + x) = 2$

Linear Equations
Brackets and Fractions

$x = -2$

$\frac{k}{5} + 3 = 7$

Linear Equations
Brackets and Fractions

$k = 20$

$3 = 2x + 14$

Linear Equations
Brackets and Fractions

$x = -5.5$

$4 = 4(2a + 3)$

Linear Equations
Brackets and Fractions

$a = -1$

$2(x + 5) = 30$

Linear Equations
Brackets and Fractions

$x = 10$

$3(x - 2) = 42$

Linear Equations
Brackets and Fractions

$x = 16$

$\frac{3y - 4}{7} = 2$

Linear Equations
Brackets and Fractions

$y = 6$

$\frac{2k - 6}{2} = 7$

Linear Equations
Brackets and Fractions

$k = 10$

$3(2t - 4) = 24$

Linear Equations
Brackets and Fractions

$t = 6$

$2(y - 15) = 3$

Linear Equations
Brackets and Fractions

$y = 16.5$

$\frac{2a + 1}{3} = 3$

Linear Equations
Brackets and Fractions

$a = 4$

$4(x + 1) = 12$

Linear Equations
Brackets and Fractions

$x = 2$

$2(x + 3) = 7$

Linear Equations
Brackets and Fractions

$x = 0.5$

$2(x - 1) = -4$

Linear Equations Brackets and Fractions	$\frac{x}{10} + 7 = 82$
$x = -1$	

Linear Equations Brackets and Fractions	$\frac{x}{25} - 7 = 30$
$x = 750$	

Linear Equations Brackets and Fractions	$\frac{y}{3} + 1 = 12$
$x = 925$	

Linear Equations Brackets and Fractions	$2(5k - 3) = 14$
$y = 33$	

Linear Equations Brackets and Fractions	$2(2x - 1) = 4$
$k = 2$	

Linear Equations Brackets and Fractions	End
$x = 1.5$	

Linear Equations
Brackets and Fractions

Start

$3(x + 1) = 15$

Linear Equations
Brackets and Fractions

$x = 4$

$2(t + 1) = 6$

Linear Equations
Brackets and Fractions

$t = 2$

$2(a - 2) = 11$

Linear Equations
Brackets and Fractions

$a = 7.5$

$\frac{2x + 5}{9} = 3$

Linear Equations
Brackets and Fractions

$x = 11$

$4(2y + 3) = 26$

Linear Equations
Brackets and Fractions

$y = 1.75$

$\frac{a}{3} + 1 = 4$

Linear Equations
Brackets and Fractions

$a = 9$

$\frac{x}{3} - 2 = 12$

Linear Equations
Brackets and Fractions

$x = 42$

$2(k + 5) = 20$

Linear Equations
Brackets and Fractions

$k = 5$

$2(t + 4) = 2$

Linear Equations
Brackets and Fractions

$t = -3$

$3(a + 7) = 30$

Linear Equations
Brackets and Fractions

$a = 3$

$2(3 + x) = 2$

Linear Equations
Brackets and Fractions

$x = -2$

$\frac{k}{5} + 3 = 7$

Linear Equations
Brackets and Fractions

$k = 20$

$3 = 2x + 14$

Linear Equations
Brackets and Fractions

$x = -5.5$

$4 = 4(2a + 3)$

Linear Equations
Brackets and Fractions

$a = -1$

$2(x + 5) = 30$

Linear Equations
Brackets and Fractions

$x = 10$

$3(x - 2) = 42$

Linear Equations
Brackets and Fractions

$x = 16$

$\frac{3y - 4}{7} = 2$

Linear Equations
Brackets and Fractions

$y = 6$

$\frac{2k - 6}{2} = 7$

Linear Equations
Brackets and Fractions

$k = 10$

$3(2t - 4) = 24$

Linear Equations
Brackets and Fractions

$t = 6$

$2(y - 15) = 3$

Linear Equations
Brackets and Fractions

$y = 16.5$

$\frac{2a + 1}{3} = 3$

Linear Equations
Brackets and Fractions

$a = 4$

$4(x + 1) = 12$

Linear Equations
Brackets and Fractions

$x = 2$

$2(x + 3) = 7$

Linear Equations
Brackets and Fractions

$x = 0.5$

$2(x - 1) = -4$

Linear Equations
Brackets and Fractions

$x = -1$

$\frac{x}{10} + 7 = 82$

Linear Equations
Brackets and Fractions

$x = 750$

$\frac{x}{25} - 7 = 30$

Linear Equations
Brackets and Fractions

$x = 925$

$\frac{y}{3} + 1 = 12$

Linear Equations
Brackets and Fractions

$y = 33$

$2(5k - 3) = 14$

Linear Equations
Brackets and Fractions

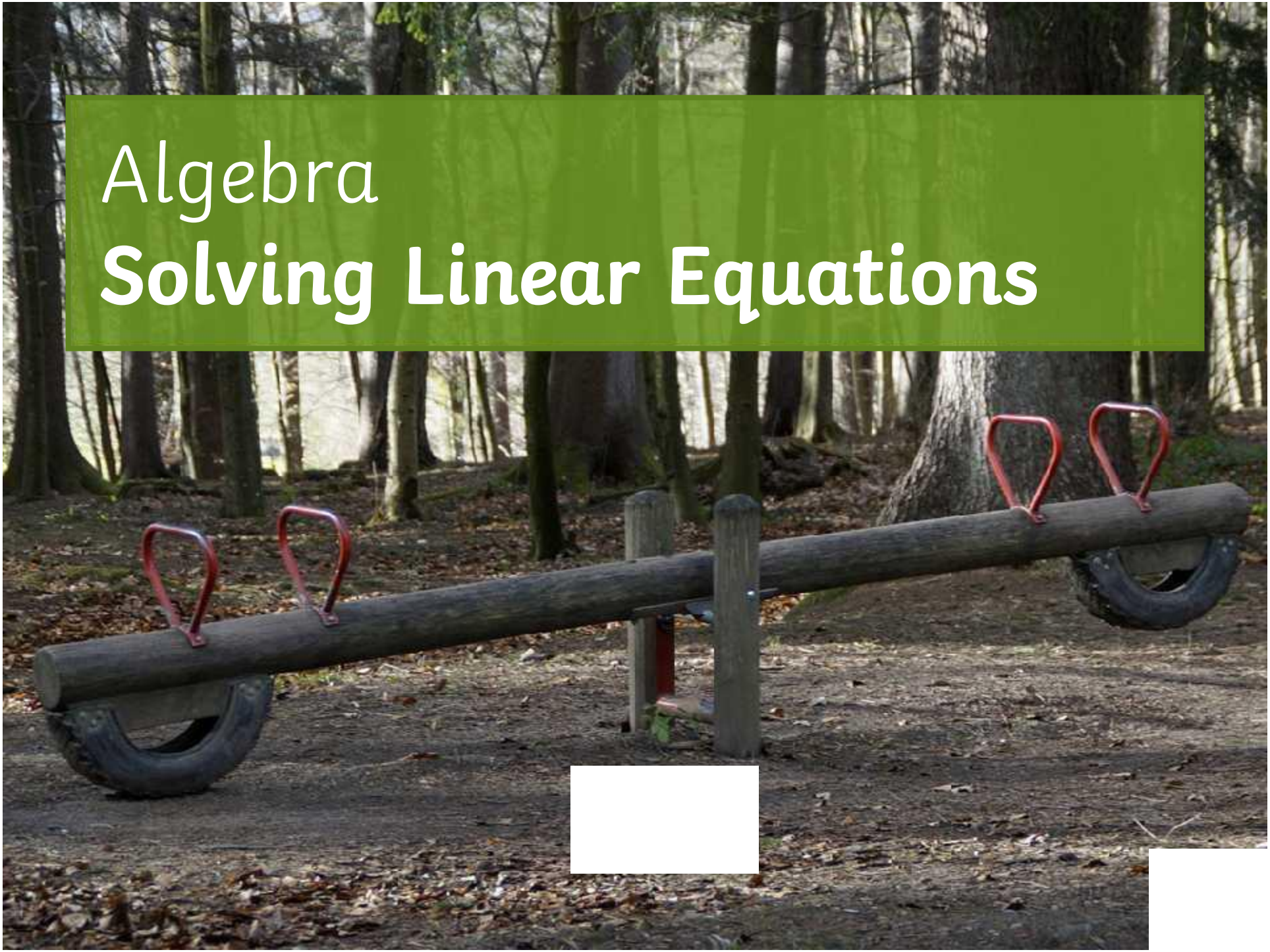
$k = 2$

$2(2x - 1) = 4$

Linear Equations
Brackets and Fractions

$x = 1.5$

End



Algebra
Solving Linear Equations

Learning Objective

To solve linear equations.

Success Criteria

- To solve linear equations with an unknown on one side.
- To solve linear equations involving brackets and fractions.
- To create and then solve linear equations.

Starter: Match-Up

Match up the following keywords to their definitions:

formula

equation

expression

identity equation

linear equation

term

This has an equals sign and solution(s) for the unknown(s). For example, $3x = 12$ has the solution $x = 4$.

This has a solution and the powers of the variable are no greater than 1, for example, $3x + 1 = 13$.

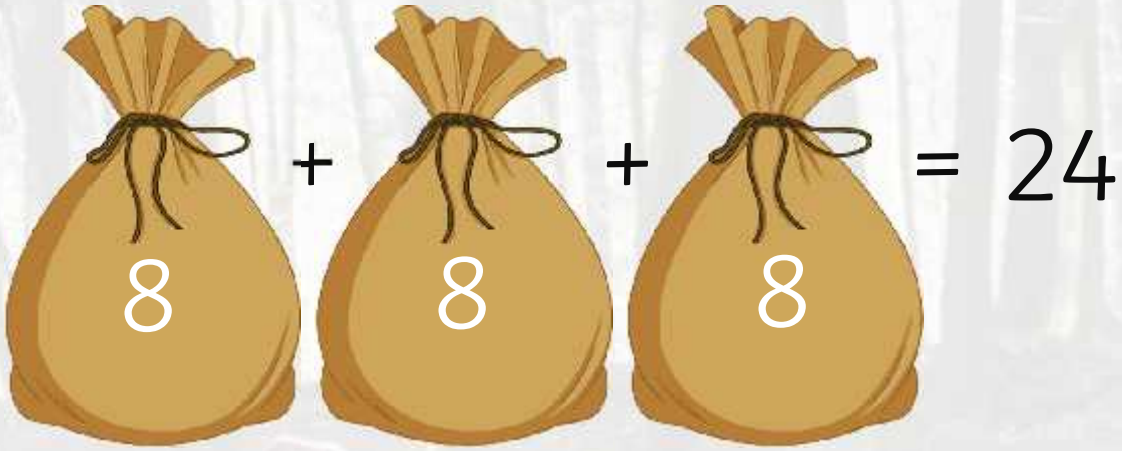
A mathematical phrase containing both letters and numbers, but never an equals sign.

A collection of numbers and letters but not + or −, for example x, $3y$, $2a^2$.

This is true no matter what values are used, for example $a + b = b + a$.

This has multiple unknowns. We use it to solve problems, for example, we can find the area of a circle using $A = \pi r^2$.

Solving Linear Equations



Assuming there are the same number of counters in each bag, how many counters does each bag hold?

There are 8 counters in each bag.

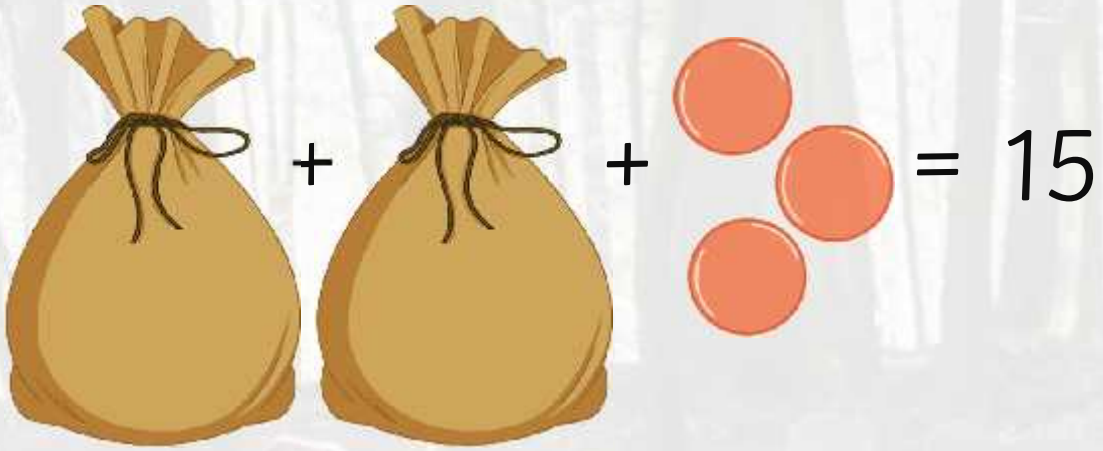
We can also use algebra to solve this problem...

$$3x = 24$$

$$x = 24 \div 3$$

$$x = 8$$

Solving Linear Equations



There are equal numbers of counters in both bags. I have 2 bags of counters and 3 extra counters. Altogether I have 15 counters. How many counters do I have in each bag?

We can use algebra to solve this problem...

$$2x + 3 = 15$$

-3	$2x = 12$	-3
$\div 2$	$x = 6$	$\div 2$

There are 6 counters in each bag.

Solving Linear Equations with an Unknown on One Side

Solve the following equation: $a + 4 = 12$

What is the question asking?

It is asking us to find out the value of a. Something add 4 is equal to 12.

Although this may seem straightforward and you can easily identify what the value of a is, we can also use something called 'The Funnel Method' to help us solve this equation.

This method involves 'funnelling' out the known values and leaving the unknown on it's own on one side of the equation.

Solving Linear Equations with an Unknown on One Side

Your aim is to get the letter on one side of the equals sign and the numbers on the other. You are only able to cancel one term or number at a time and you must use its inverse when cancelling.

$$a + 4 = 12$$

$$\begin{array}{|c|c|c|} \hline -4 & a = 8 & -4 \\ \hline \end{array}$$

Final answer: $a = 8$

Solving Linear Equations with an Unknown on One Side

Solve the following equation: $2x - 6 = 8$

What is the question asking?

It is asking us to find out the value of x.
Something multiplied by 2, subtract 6 is equal to 8.

Your aim is to gather the letter on one side and numbers on the other. Remember, you are only able to cancel one term or number at a time and you must use its inverse when cancelling.

$$2x - 6 = 8$$

+6	$2x = 14$	+6
÷2	$x = 7$	÷2

Final answer: $x = 7$

Solving Linear Equations with an Unknown on One Side

Solve each of the following equations:

1. $a - 5 = 20$ — **$a = 25$**
2. $5x = 30$ — **$x = 6$**
3. $2x + 4 = 12$ — **$x = 4$**
4. $3y - 5 = 25$ — **$y = 10$**
5. $9z + 8 = -10$ — **$z = -2$**

Hide answers

Solving Linear Equations Involving Brackets and Fractions

Solve the following equation: $3(2t - 4) = 24$

Step 1: Expand the bracket $6t - 12 = 24$

Step 2: Use 'The Funnel Method' to solve your equation.

$$6t - 12 = 24$$

+12	$6t = 36$	+12
÷6	$t = 6$	÷6

Final answer: $t = 6$

Solving Linear Equations Involving Brackets and Fractions

Solve the following equation: $\frac{y}{3} + 1 = 12$

$$\frac{y}{3} + 1 = 12$$

$$\begin{array}{lcl} & \frac{y}{3} = 11 & \\ -1 & & -1 \\ \times 3 & y = 33 & \times 3 \end{array}$$

Note that to cancel out the fraction, we must multiply by the denominator.

Final answer: $y = 33$

Solving Linear Equations Involving Brackets and Fractions

Solve each of the following equations:

1. $2(5m - 3) = 14$ — **$m = 1$**
2. $2(x + 3) = 7$ — **$x = 0.5$**
3. $\frac{2r + 1}{3} = 3$ — **$r = 4$**

Hide answers

Plenary

What is the value of x if the area of this rectangle is 110cm^2?

$10(3x - 1) = 110$

$30x - 10 = 110$

+10	$30x = 120$	+10
÷30	$x = 4$	÷30

Final answer: $x = 4$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Algebra Solving Linear Equations
Teaching Ideas

Learning Objective:	To solve linear equations.
Success Criteria:	• To solve linear equations with an unknown on one side. • To solve linear equations involving brackets and fractions. • To create and then solve linear equations.
Context:	This is the first lesson of two on solving linear equations and could be used in a sequence of lessons on the topic of Algebra in a wider context. Students should have a confident understanding of basic numeracy, including inverse operations as well as knowledge of how to expand a single bracket.

Starter

You should use the starter to ensure that students have a firm understanding of the differences between the keywords as well as what an equation is. The students must match up each keyword to its definition. You may wish to take time to discuss the students' answers before revealing them.

Main Activities

Solving Linear Equations with an Unknown on One Side

Slides 4 and 5 provide a visual representation of solving equations to put the objective into context for the students. For each slide, you should encourage students to discuss the question in pairs. Following a whole class discussion on students' different methods, algebra is introduced to bridge the gap between the visual representation and the objective of solving equations.

Slides 6–8 provide a detailed walk-through of how to solve linear equations with an unknown on one side. Students are encouraged to analyse an equation by asking them to describe what the equation is asking, followed by introducing 'The Funnel Method' to solve equations. You should highlight and emphasise how using the inverse of something will cause it 'disappear' on that particular side. For example, on **slide 6** when the 4 is subtracted, the left-hand side becomes $a + 0$, so just a. It is important that this is made clear to students so they understand the process thoroughly.

The practice questions on **slide 9** provide an opportunity for the students to apply what they have been told so far. Allow students time to complete this independently on whiteboards or in books. A clear method of how and why they've obtained their answer should be seen. Encourage verbal reasoning with students so they can use, apply and reason using their maths in preparation for problem-solving, for example, 'Why has that moved to the other side?'

Solving Equations Involving Brackets and Fractions

Use **slides 10 and 11** in the same way as the previous activities and focus on solving linear equations involving brackets and fractions. Each step can be revealed with a single click so you are able to work through the examples at a pace which suits the needs of your class. Ensure you continually check for understanding of how and why the equation has changed especially because the steps are trickier than before and can easily be done incorrectly.

Slide 12 has three practice questions on the slide. These can be done independently whilst you coach students, where appropriate. Students should offer their solutions an d justify and explain their method where necessary. Encourage this by asking questions such as 'Why did you do that?' and 'Can you prove that your answer is correct?'.

Following these activities, you can use the various differentiated activity sheets to help students consolidate their understanding. Sheets available include **Solving Linear Equations with an Unknown on One Side** and as an Extension Sheet, **Solving Linear Equations Involving Brackets and Fractions**. These activity sheets are differentiated through scaffolding. Additionally, the **Solving Linear Equations Worded Problems** will encourage students to create and solve their own linear equations.

Finally, the following loop cards are also available:

- **Solving Linear Equations with an Unknown on One Side Loop Cards**
- **Solving Linear Equations Involving Brackets and Fractions Loop Cards**

Plenary

The plenary requires students to apply their understanding of solving linear equations to a geometry problem which will require them to form and then solve an equation to find the value of x. You should give little guidance or scaffold at this point to encourage students to talk to each other and problem solve. Students could work in pairs or small groups on the plenary followed by a whole class discussion regarding the methods used to get to the answer. A clear and confident explanation of the process of finding the value of x should be heard.

Solving Linear Equations Worded Questions

Use your knowledge of how to solve linear equations to set up and then solve the equations for the following questions.

1. I think of a number. I multiply it by 8 and subtract 3. If my answer is 45, what number did I start with?

2. The mean average of 3 numbers is 12. If one number is 5 and the other is 11, write and solve an equation to find the third number.

3. There are exactly a apples in a bag. I buy 4 bags of apples. I have 72 apples altogether. How many apples are in each bag?

4. Holly has b books. She sells half of her books then buys 14 more. She now has 68 books. How many books did Holly have originally?

5. A cycle shop rents bicycles for £20 plus a charge of £4 per hour. Scott paid £52. For how long did he rent the bicycle?

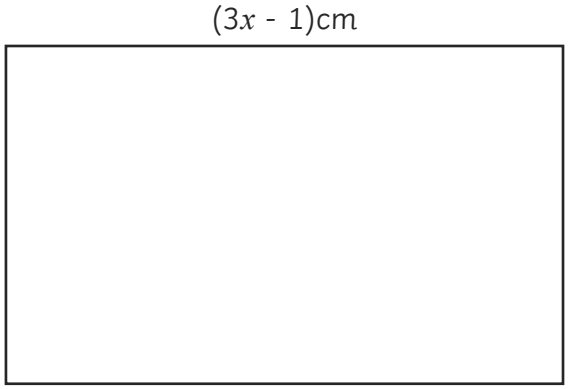
6. The sum of 3 consecutive numbers is 102. What is the smallest number?

7. The length of a football field is 30 metres greater than its width. If the perimeter of the field is 340 metres, find the width of the field.

8. Jane bought a magazine for £2.20 and 3 bags of the same sweet. She spent £3.40. How much did each bag of sweets cost?

Extension

If the area of this rectangle is 86cm^2, what is the value of x?



Solving Linear Equations Worded Questions **Answers**

1. $8x - 3 = 45$
   $8x = 48$
   $x = 6$
   6 was the starting number.

2. $\frac{5 + 11 + x}{3} = 12$
   $\frac{16 + x}{3} = 12$
   $16 + x = 36$
   $x = 20$
   The third number is 20.

3. $4a = 72$
   $a = 18$
   There are 18 apples in each bag.

4. $\frac{b}{2} + 14 = 68$
   $\frac{b}{2} = 54$
   $b = 108$
   Holly had 108 books originally.

5. $20 + 4h = 52$
   $4h = 32$
   $h = 8$
   He rented the bicycle for 8 hours.

6. $n + (n + 1) + (n + 2) = 102$
   $3n + 3 = 102$
   $3n = 99$
   $n = 33$
   33 is the smallest number.

7. $x + (x + 30) + x + (x + 30) = 340$
   $4x + 60 = 340$
   $4x = 280$
   $x = 70$
   The width of the field is 70 metres.

8. $2.20 + 3b = 3.40$
   $3b = 1.20$
   $b = 0.40$
   Each bag of sweets was 40p.

Extension

$4(3x - 1) = 86$
$12x - 4 = 86$
$12x = 90$
$x = 7.5$cm

Solving Linear Equations with an Unknown on One Side

1. Solve $a + 4 = 12$

2. Solve $x + 5 = 6$

3. Solve $y - 3 = 4$

4. Solve $5x = 15$

5. Solve $3x + 4 = 10$

6. Solve $2x - 6 = 14$

7. Solve $2x + 2 = 6$

8. Solve $2a + 3 = -3$

9. Solve $6x + 4 = 10$

10. Solve $4x + 3 = 9$

11. Solve $4x - 6 = 22$

12. Solve $2k - 7 = 11$

Solving Linear Equations with an Unknown on One Side
Answers

1. $a = 8$
2. $x = 1$
3. $y = 7$
4. $x = 3$
5. $x = 2$
6. $x = 10$
7. $x = 2$
8. $a = -3$
9. $x = 1$
10. $x = 1.5$
11. $x = 7$
12. $k = 9$

Solving Linear Equations with an Unknown on One Side

1. Solve $a + 4 = 12$

	$a + 4 = 12$	
$- 4$	$a =$	$- 4$

2. Solve $x + 5 = 6$

	$x + 5 = 6$	
$- 5$	$x =$	$- 5$

3. Solve $y - 3 = 4$

	$y - 3 = 4$	
$+ 3$	$y =$	$+ 3$

4. Solve $5x = 15$

	$5x = 15$	
$\div 5$	$x =$	$\div 5$

5. Solve $3x + 4 = 10$

	$3x + 4 = 10$	
$- 4$		$- 4$
$\div 3$	$x =$	$\div 3$

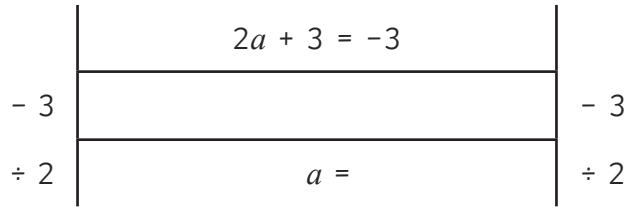
6. Solve $2x - 6 = 14$

	$2x - 6 = 14$	
$+ 6$		$+ 6$
$\div 2$	$x =$	$\div 2$

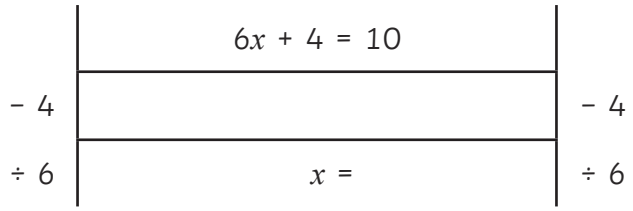
7. Solve $2x + 2 = 6$

	$2x + 2 = 6$	
$- 2$		$- 2$
$\div 2$	$x =$	$\div 2$

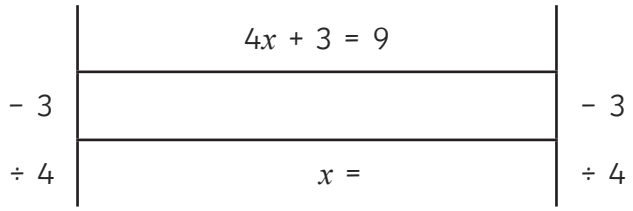
8. Solve $2a + 3 = -3$



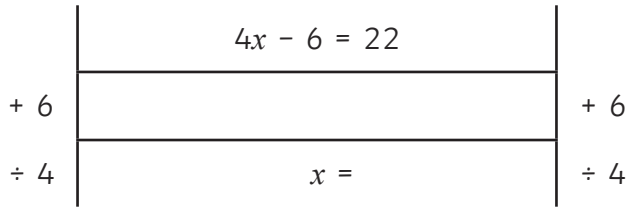
9. Solve $6x + 4 = 10$



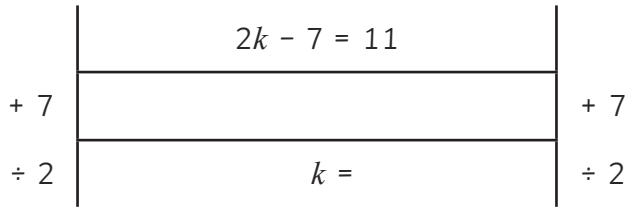
10. Solve $4x + 3 = 9$



11. Solve $4x - 6 = 22$



12. Solve $2k - 7 = 11$



Solving Linear Equations with an Unknown on One Side
Answers

1. $a = 8$
2. $x = 1$
3. $y = 7$
4. $x = 3$
5. $x = 2$
6. $x = 10$
7. $x = 2$
8. $a = -3$
9. $x = 1$
10. $x = 1.5$
11. $x = 7$
12. $k = 9$

Solving Linear Equations with an Unknown on One Side

1. Solve $a + 4 = 12$

	$a + 4 = 12$	
$-$	$a =$	$-$

2. Solve $x + 5 = 6$

	$x + 5 = 6$	
$-$	$x =$	$-$

3. Solve $y - 3 = 4$

	$y - 3 = 4$	
$+$	$y =$	$+$

4. Solve $5x = 15$

	$5x = 15$	
$\div$	$x =$	$\div$

5. Solve $3x + 4 = 10$

	$3x + 4 = 10$	
$-$		$-$
$\div$	$x =$	$\div$

6. Solve $2x - 6 = 14$

	$2x - 6 = 14$	
$+$		$+$
$\div$	$x =$	$\div$

7. Solve $2x + 2 = 6$

	$2x + 2 = 6$	
$-$		$-$
$\div$	$x =$	$\div$

8. Solve $2a + 3 = -3$

	$2a + 3 = -3$	
$-$		$-$
$\div$	$a =$	$\div$

9. Solve $6x + 4 = 10$

	$6x + 4 = 10$	
$-$		$-$
$\div$	$x =$	$\div$

10. Solve $4x + 3 = 9$

	$4x + 3 = 9$	
$-$		$-$
$\div$	$x =$	$\div$

11. Solve $4x - 6 = 22$

	$4x - 6 = 22$	
$+$		$+$
$\div$	$x =$	$\div$

12. Solve $2k - 7 = 11$

	$2k - 7 = 11$	
$+$		$+$
$\div$	$k =$	$\div$

Solving Linear Equations with an Unknown on One Side
Answers

1. $a = 8$
2. $x = 1$
3. $y = 7$
4. $x = 3$
5. $x = 2$
6. $x = 10$
7. $x = 2$
8. $a = -3$
9. $x = 1$
10. $x = 1.5$
11. $x = 7$
12. $k = 9$

Linear Equations
Unknown on One Side

Start

$s + 5 = 6$

Linear Equations
Unknown on One Side

$s = 1$

$y - 3 = 4$

Linear Equations
Unknown on One Side

$y = 7$

$a + 4 = 12$

Linear Equations
Unknown on One Side

$a = 8$

$5x = 15$

Linear Equations
Unknown on One Side

$x = 3$

$3x + 4 = 10$

Linear Equations
Unknown on One Side

$x = 2$

$2x - 6 = 14$

Linear Equations
Unknown on One Side

$x = 10$

$2b + 2 = 6$

Linear Equations
Unknown on One Side

$b = 2$

$2a + 3 = -3$

Linear Equations
Unknown on One Side

$a = -3$

$6x + 4 = 10$

Linear Equations
Unknown on One Side

$x = 1$

$4x + 3 = 9$

Linear Equations
Unknown on One Side

$x = 1.5$

$4x - 6 = 22$

Linear Equations
Unknown on One Side

$x = 7$

$2k - 7 = 11$

Linear Equations
Unknown on One Side

$k = 9$

$3x = 12$

Linear Equations
Unknown on One Side

$x = 4$

$x - 7 = 7$

Linear Equations
Unknown on One Side

$x = 14$

$4x = 24$

Linear Equations
Unknown on One Side

$x = 6$

$y + 6 = 10$

Linear Equations
Unknown on One Side

$y = 4$

$2a - 3 = 4$

Linear Equations
Unknown on One Side

$a = 3.5$

$2m + 4 = 12$

Linear Equations
Unknown on One Side

$m = 4$

$6k + 3 = 21$

Linear Equations
Unknown on One Side

$k = 3$

$8x - 10 = 30$

Linear Equations
Unknown on One Side

$x = 5$

$5y + 1 = 11$

Linear Equations
Unknown on One Side

$y = 2$

$2t - 7 = 3$

Linear Equations
Unknown on One Side

$t = 5$

$2s = 18$

Linear Equations
Unknown on One Side

$s = 9$

$2a + 5 = 13$

Linear Equations
Unknown on One Side

$a = 4$

$3b - 4 = 17$

Linear Equations
Unknown on One Side

$b = 7$

$2m + 6 = 11$

Linear Equations
Unknown on One Side

$m = 2.5$

$5k - 1 = 9$

Linear Equations
Unknown on One Side

$k = 2$

$8y - 7 = 49$

Linear Equations
Unknown on One Side

$y = 7$

$2t + 8 = 20$

Linear Equations
Unknown on One Side

$t = 6$

End

Linear Equations
Unknown on One Side

Start

$s + 5 = 6$

Linear Equations
Unknown on One Side

$s = 1$

$y - 3 = 4$

Linear Equations
Unknown on One Side

$y = 7$

$a + 4 = 12$

Linear Equations
Unknown on One Side

$a = 8$

$5x = 15$

Linear Equations
Unknown on One Side

$x = 3$

$3x + 4 = 10$

Linear Equations
Unknown on One Side

$x = 2$

$2x - 6 = 14$

Linear Equations
Unknown on One Side

$x = 10$

$2b + 2 = 6$

Linear Equations
Unknown on One Side

$b = 2$

$2a + 3 = -3$

Linear Equations
Unknown on One Side

$a = -3$

$6x + 4 = 10$

Linear Equations
Unknown on One Side

$x = 1$

$4x + 3 = 9$

Linear Equations
Unknown on One Side

$x = 1.5$

$4x - 6 = 22$

Linear Equations
Unknown on One Side

$x = 7$

$2k - 7 = 11$

Linear Equations
Unknown on One Side

$k = 9$

$3x = 12$

Linear Equations
Unknown on One Side

$x = 4$

$x - 7 = 7$

Linear Equations
Unknown on One Side

$x = 14$

$4x = 24$

Linear Equations
Unknown on One Side

$x = 6$

$y + 6 = 10$

Linear Equations
Unknown on One Side

$y = 4$

$2a - 3 = 4$

Linear Equations
Unknown on One Side

$a = 3.5$

$2m + 4 = 12$

Linear Equations
Unknown on One Side

$m = 4$

$6k + 3 = 21$

Linear Equations
Unknown on One Side

$k = 3$

$8x - 10 = 30$

Linear Equations
Unknown on One Side

$x = 5$

$5y + 1 = 11$

Linear Equations
Unknown on One Side

$y = 2$

$2t - 7 = 3$

Linear Equations
Unknown on One Side

$t = 5$

$2s = 18$

Linear Equations
Unknown on One Side

$s = 9$

$2a + 5 = 13$

Linear Equations
Unknown on One Side

$a = 4$

$3b - 4 = 17$

Linear Equations
Unknown on One Side

$b = 7$

$2m + 6 = 11$

Linear Equations
Unknown on One Side

$m = 2.5$

$5k - 1 = 9$

Linear Equations
Unknown on One Side

$k = 2$

$8y - 7 = 49$

Linear Equations
Unknown on One Side

$y = 7$

$2t + 8 = 20$

Linear Equations
Unknown on One Side

$t = 6$

End