SUPER 12s

SUPER 12s CAN BE USED AS AN INDIVIDUALISED MASTERY LEARNING PROGRAM.

2 ALGEBRA
2.2 WRITING EQUATIONS
2.2 LEVEL 2

NAME : _____

Skill description: Writing algebraic equations from word problems that involve one entity equated with a total by addition.

Essential Revision

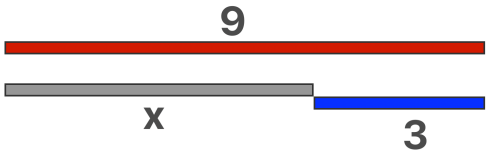
1. Solve the following.

$$x + 4 = 17$$

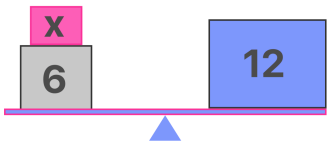
2. Solve the following.

$$x - 7 = 9$$

3. Write an equation that represents the unknown, then solve.



4. Write an equation that represents the unknown, then solve.



5. Solve the following.

$$2x + 3 = 21$$

6. Solve the following.

$$\frac{x}{9} = 3$$

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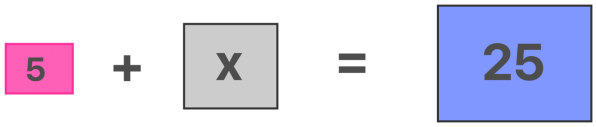
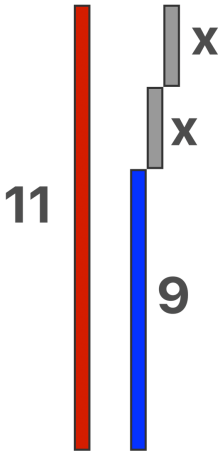
7. Write an equation that represents the unknown, then solve.



8. Write an equation that represents the unknown, then solve.



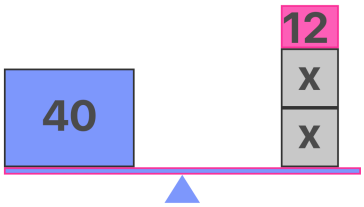
9. Solve the following.

$$x + 11 = 34$$

10. Solve the following.

$$3x = 60$$

11. Write an equation that represents the unknown, then solve.



12. Write an equation that represents the unknown, then solve.

Solutions can be found at the end of the booklet.

score $\frac{\quad}{12}$

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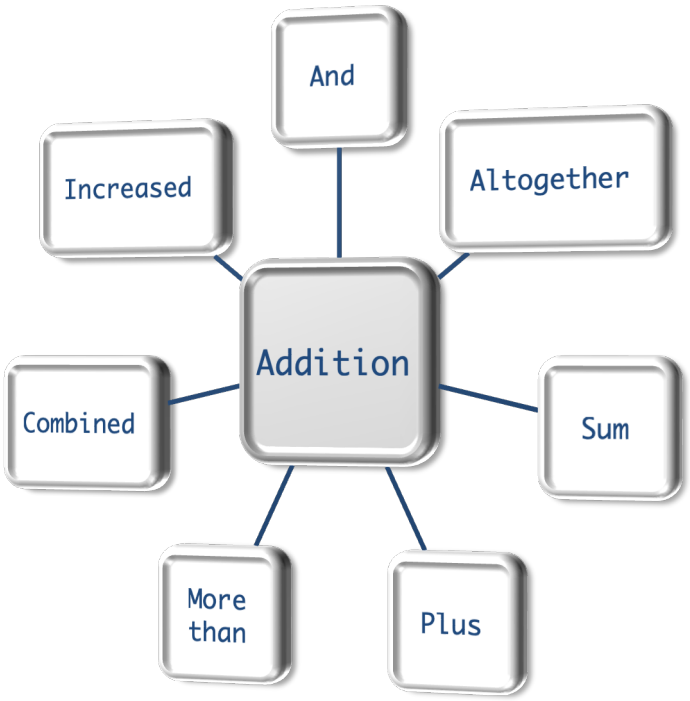
STRATEGIES TO SOLVE THE PROBLEMS

Keywords

If you see these words used in a word problem, the problem usually involves addition.



Use the following strategies to write the equations.

Step 1: Identify the unknown.

Step 2: Link information mathematically to the unknown.

Step 3: Look for equality.

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Example 1

Eleven more than an unknown number x totals twenty-two.
Write an equation and then solve for the unknown number.

Step 1

Identify the unknown.

unknown number x

$$x$$

Step 2

Link information mathematically to the unknown.

Eleven more than an unknown number

$$x + 11$$

Step 3

Look for equality.

Totals twenty-two.

$$x + 11 = 22$$

Step 4

Solve.

$$x = 11$$

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Example 2

Over the last two days, Jackson has written a total of 600 words for an English task. If he wrote 234 words yesterday, write an equation that involves addition to show the number of words written today, then solve. Let w represent the number of words written today.

Step 1

Identify the unknown.

Let w represent the number of words written today.

$$w$$

Step 2

Link information mathematically to the unknown.

If he wrote 234 words yesterday

$$w + 234$$

Step 3

Look for equality.

Over the last two days, Jackson has written a total of 600 words

$$w + 234 = 600$$

Step 4

Solve.

$$w = 366$$

Final Solution

Jackson wrote 366 words today.

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QUESTIONS

1. Today Kiaan has twenty-two toy cars in total; yesterday he only had sixteen. Write an equation, that includes addition, and then determine how many toy cars he received today. Let t represent the number of toy cars received today.

2. When an unknown number x is increased by fourteen the total is twenty-nine. Write an equation, that includes addition, and then determine the unknown number.

3. Twenty-three more than an unknown number is forty-four. Write an equation, that includes addition, and then determine the unknown number. Let x represent the unknown number.

4. The combination of an unknown number s and seven totals sixty-three. Write an equation, that includes addition, and then determine the unknown number.

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5. When an unknown number t is increased by twelve the result is seventy-eight. Write an equation, that includes addition, and then determine the value of t.

6. If eighteen is combined with an unknown number x the result is ninety-two. Write an equation, that includes addition, and then determine the value of x.

7. Nineteen is the total when an unknown number x is added to eight. Write an equation, that includes addition, and then determine the value of x.

8. Seventy-two is obtained when an unknown number x is increased by eighteen. Write an equation, that includes addition, and determine the unknown number x.

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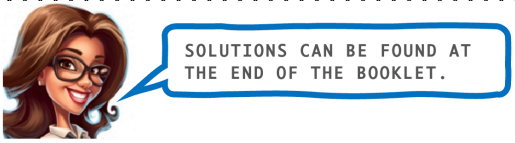
9. Seven more than an unknown amount x is thirty-four. Write an equation, that includes addition, and determine the unknown amount.

10. The sum of an unknown amount t and fifteen is thirty-nine. Write an equation, that includes addition, and determine the unknown amount.

11. Jess has read one hundred and twelve pages of her book. If she read fourteen pages yesterday, and none today, write an equation, that includes addition, and determine the number of pages read before yesterday. Let p represent the number of pages read before yesterday.

12. Blake arrived four minutes late to class. If a full lesson runs for fifty minutes, write an equation, that includes addition, and determine the amount of time Blake spent in class. Let t represent the amount of time Blake spent in class.



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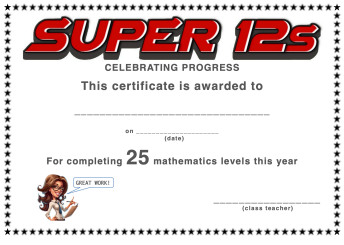
MASTERY TEST

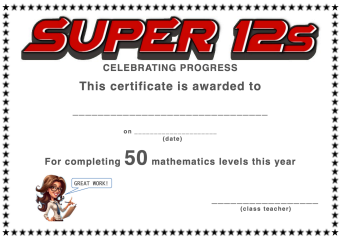
Teacher's signature

I'VE COMPLETED

_____

LEVELS THIS YEAR





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Solutions to Essential Revision

1. $x = 13$	2. $x = 16$
3. $x + 3 = 9$ $x = 6$	4. $x + 6 = 12$ $x = 6$
5. $x = 9$	6. $x = 27$
7. $x + 5 = 25$ $x = 20$	8. $2x + 9 = 11$ $x = 1$
9. $x = 23$	10. $x = 20$
11. $2x + 12 = 40$ $x = 14$	12. $x + 10 = 30$ $x = 20$

Solutions to Questions

1. $t + 16 = 22$ $t = 6$ toy cars	2. $x + 14 = 29$ $x = 15$
3. $x + 23 = 44$ $x = 21$	4. $s + 7 = 63$ $s = 56$
5. $t + 12 = 78$ $t = 66$	6. $x + 18 = 92$ $x = 74$
7. $x + 8 = 19$ $x = 11$	8. $x + 18 = 72$ $x = 54$
9. $x + 7 = 34$ $x = 27$	10. $t + 15 = 39$ $t = 24$
11. $p + 14 = 112$ $p = 98$ pages	12. $t + 4 = 50$ $t = 46$ minutes

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