SUPER 12s

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

2 ALGEBRA
2.2 WRITING EQUATIONS
2.2 LEVEL 4

NAME: _____

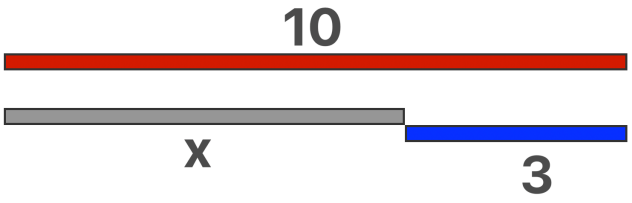
Skill description: Writing algebraic equations from word problems that involve two operations.

Essential Revision

1. Solve the following.

$$x + 5 = 11$$

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



3. If twenty-two is combined with an unknown number x the result is thirty-eight. Write an equation, that includes addition, and then determine the value of x.

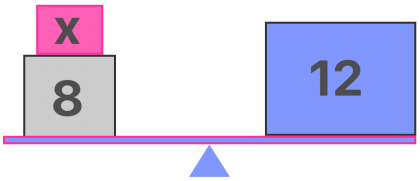
4. Write an equation, then solve.

A number y is multiplied by eight and the result is seventy-two.

5. Solve the following.

$$x - 9 = 17$$

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



7. Twenty-four is the total when an unknown number x is added to nine. Write an equation, that includes addition, and then determine the value of x.

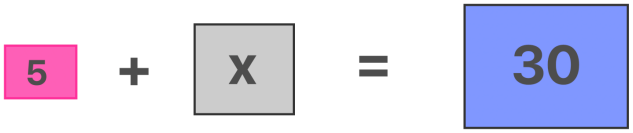
8. Write an equation, then solve.

A number b is reduced by four and the result is forty-one.

9. Solve the following.

$$2x + 3 = 17$$

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



11. Sixty-seven is obtained when an unknown number x is increased by twelve. Write down an equation, that includes addition, and then determine the unknown number x.

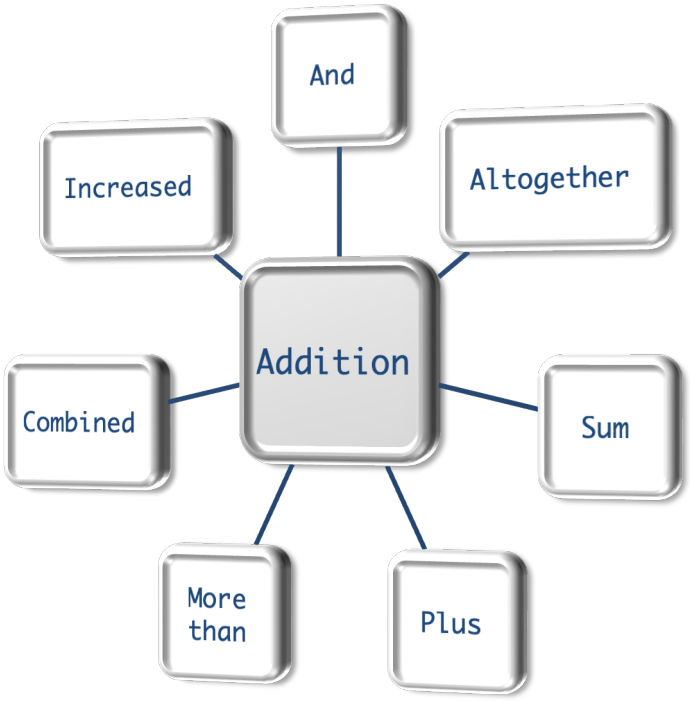
12. Write an equation, then solve. A number c is divided by eight and the result is six.

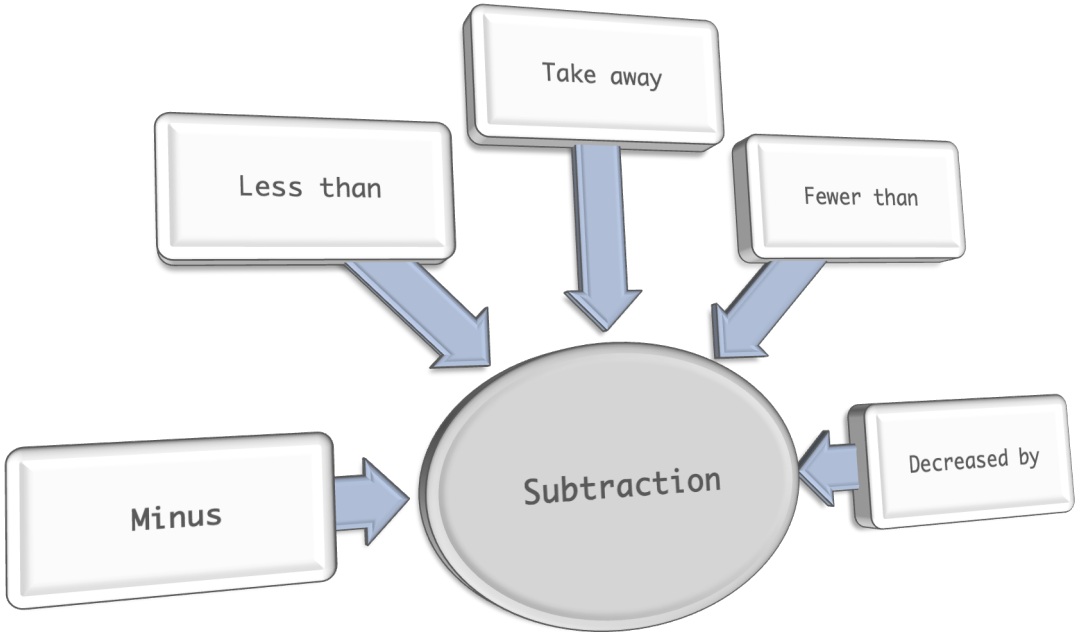
Solutions can be found at the end of the booklet.

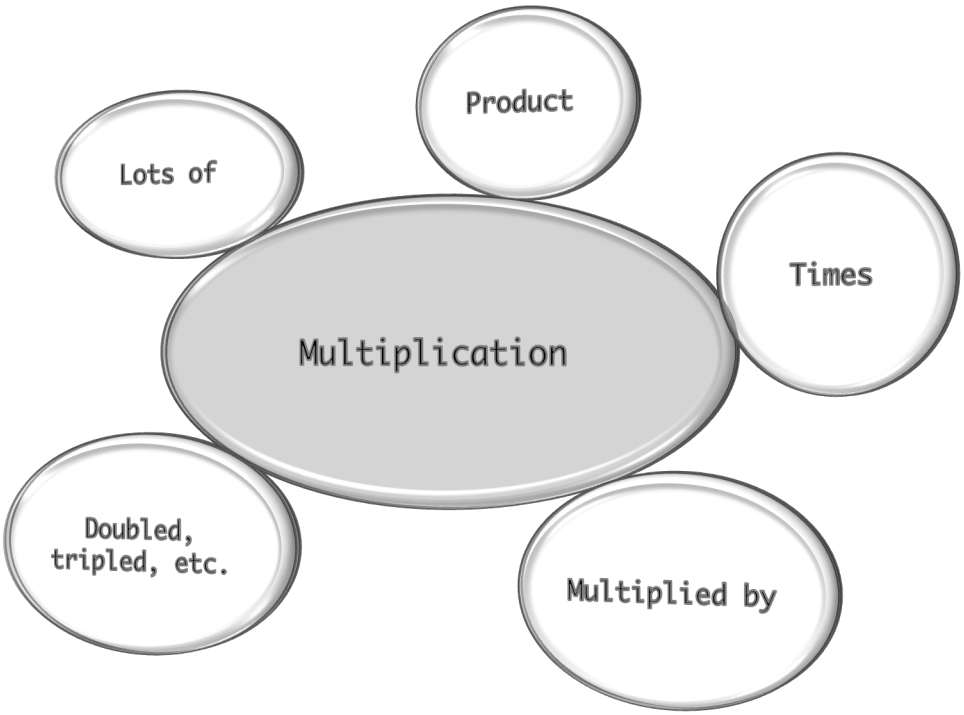
score $\frac{\quad}{12}$

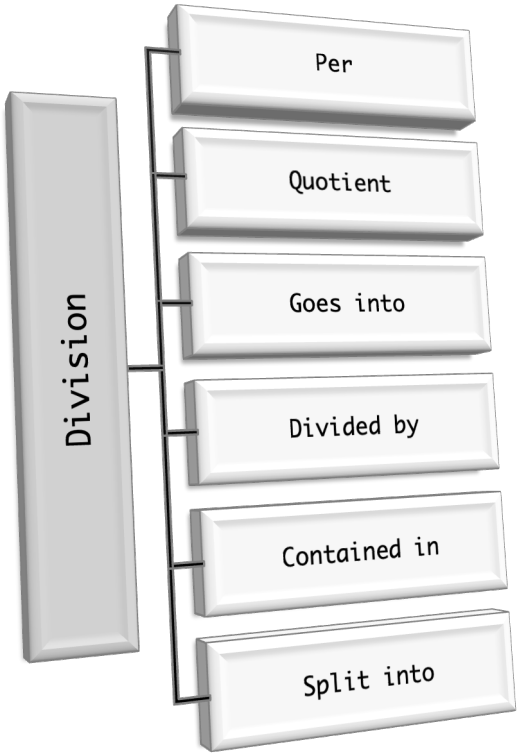
STRATEGIES TO SOLVE THE PROBLEMS

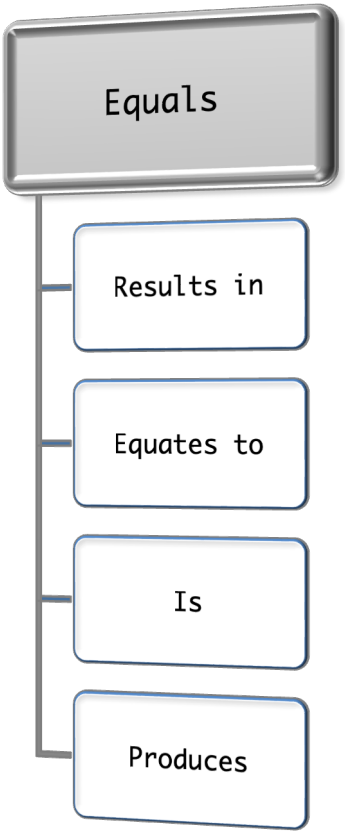
Look for the keywords that describe the operations.











Example 1

Write an equation, then solve it. When one-third of x is summed with five, the result is ten.

Step 1

Identify the unknown.

$$x$$

Step 2

Look for the keywords that describe the operations.

one-third of x

$$\frac{x}{3}$$

summed with five

$$\frac{x}{3} + 5$$

Step 3

Look for equality.

result is ten.

$$\frac{x}{3} + 5 = 10$$

Step 4

Solve.

$$x = 15$$

Example 2

Write an equation, then solve it. Twenty-nine is obtained when you sum nine with the product of four and x.

Step 1

Identify the unknown.

$$x$$

Step 2

Look for the keywords that describe the operations.

product of four and x.

$$4x$$

sum nine

$$4x + 9$$

Step 3

Look for equality.

Twenty-nine is obtained

$$4x + 9 = 29$$

Step 4

Solve.

$$x = 5$$

QUESTIONS

Write an equation, then solve it.

1. When a number x is multiplied by three and then eleven added, the result is twenty-six.

2. When seven is subtracted from half the number x, the solution is three.

3. If twenty-two is subtracted from the product of p and four, it produces eighteen.

4. When a number x is divided evenly six ways, then nine added, it equates to seventeen.

5. When the product of a number m and two is added to five the result is twenty-one.

6. When five is subtracted from the division of x by eight it equates to zero.

7. When four is subtracted from the product of s and three it equals forty-one.

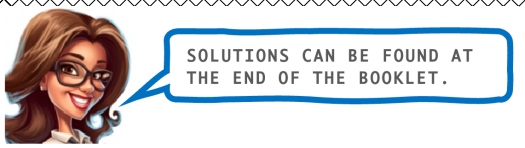
8. When one third the value of x is added to fifteen, the answer is twenty-two.

9. When quadruple the value of x is summed with sixteen the result is twenty-four.

10. If one half the value of p is reduced by four the result is one.

11. If the product of x and nine is subtracted from eighteen, the result is nine.

12. If five is added to one-fifth the value of d, it equals ten.



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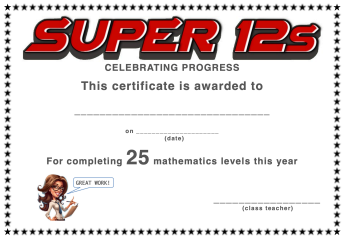
MASTERY TEST

Teacher's signature

I'VE COMPLETED

_____

LEVELS THIS YEAR



Solutions to Essential Revision

1. $x = 6$

2. $x + 3 = 10$
   $x = 7$

3. $x + 22 = 38$
   $x = 16$

4. $8y = 72$
   $y = 9$

5. $x = 26$

6. $x + 8 = 12$
   $x = 4$

7. $x + 9 = 24$
   $x = 15$

8. $b - 4 = 41$
   $b = 45$

9. $x = 7$

10. $x + 5 = 30$
    $x = 25$

11. $x + 12 = 67$
    $x = 55$

12. $\frac{c}{8} = 6$
    $c = 48$

Solutions to Questions

1. $3x + 11 = 26$
   $x = 5$

2. $\frac{x}{2} - 7 = 3$
   $x = 20$

3. $4p - 22 = 18$
   $p = 10$

4. $\frac{x}{6} + 9 = 17$
   $x = 48$

5. $2m + 5 = 21$
   $m = 8$

6. $\frac{x}{8} - 5 = 0$
   $x = 40$

7. $3s - 4 = 41$
   $s = 15$

8. $\frac{x}{3} + 15 = 22$
   $x = 21$

9. $4x + 16 = 24$
   $x = 2$

10. $\frac{p}{2} - 4 = 1$
    $p = 10$

11. $18 - 9x = 9$
    $x = 1$

12. $\frac{d}{5} + 5 = 10$
    $d = 25$