

SUPER 12s



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

2 ALGEBRA
2.9 SUBSTITUTION
2.9 LEVEL 1

NAME : _____

Skill description: Evaluating terms by substituting positive values for variables.

Essential Revision

1. Write the correct algebraic term for:

x divided by 15

2. Solve for the unknown.

$$\blacksquare + 6 = 12$$

3. Solve for the variable.

$$r + 9 = 17$$

- 4.

$$13 - 9 =$$

5. Write the correct algebraic term for:

12 multiplied by x

6. Solve for the variable.

$$x + 5 = 20$$

7. Write the correct algebraic term for:
 y divided by 8
8. Solve for the unknown.
 $h - 7 = 12$

9.
 $20 - 4 =$
10. Solve for the unknown.
 $f + 11 = 18$

11. Solve for the unknown.
 $\blacksquare + 17 = 22$
12. Write the correct algebraic term for:
 r multiplied by 22

Solutions can be found at the end of the booklet.

score 12

STRATEGIES TO SOLVE THE PROBLEMS

Substitution

Remember from algebraic conventions:

$$3p = 3 \times p$$

Indicates 3 multiplied by p .

Example 1

Evaluate.

$$3p \text{ if } p = 4$$

Step 1

Substitute the value of 4 in for p .

$$3p$$



$$3(4)$$



$$12$$



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Example 2

Evaluate.

$$6x \text{ if } x = 4$$

Step 1

Substitute the value of 4 in for x .

$$6x$$



$$6(4)$$



$$24$$

Example 3

Evaluate.

$$\frac{x}{18} \text{ if } x = 3$$

Step 1

Substitute the value of 3 in for x .

$$\frac{x}{18}$$



$$\frac{3}{18}$$

Simplify.



$$\frac{1}{6}$$

QUESTIONS

Evaluate and simplify your answer.

1.

$$7x \text{ if } x = 3$$

2.

$$\frac{y}{9} \text{ if } y = 3$$

3.

$$2p \text{ if } p = 4$$

4.

$$\frac{21}{y} \text{ if } y = 7$$

5.

$$8m \text{ if } m = 3$$

6.

$$\frac{t}{100} \text{ if } t = 25$$

7.

$$11n \text{ if } n = 5$$

8.

$$\frac{x}{4} \text{ if } x = 16$$

9.

$$5a \text{ if } a = 12$$

10.

$$\frac{v}{6} \text{ if } v = 16$$

11.

$$\frac{15}{t} \text{ if } t = 3$$

12.

$$8e \text{ if } e = 7$$



SOLUTIONS CAN BE FOUND AT
THE END OF THE BOOKLET.

score 12

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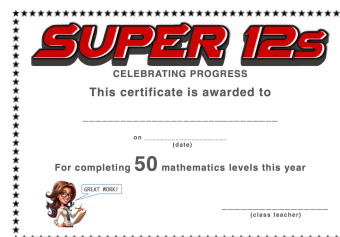
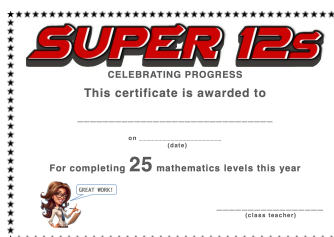
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MASTERY TEST

Teacher's signature

I'VE COMPLETED

LEVELS THIS YEAR



Solutions to Essential Revision

1. $\frac{x}{15}$

2. $\blacksquare = 6$

3. $r = 8$

4. 4

5. $12x$

6. $x = 15$

7. $\frac{y}{8}$

8. $h = 19$

9. 16

10. $f = 7$

11. $\blacksquare = 5$

12. $22r$

Solutions to Questions

1. 21

2. $\frac{1}{3}$

3. 8

4. 3

5. 24

6. $\frac{1}{4}$

7. 55

8. 4

9. 60

10. $\frac{8}{3}$

11. 5

12. 56