

SUPER 12s



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

2 ALGEBRA
2.9 SUBSTITUTION
2.9 LEVEL 2

NAME : _____

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

Essential Revision

1. Solve for the unknown.

$$\blacksquare + 13 = 17$$

2. Solve for the unknown.

$$r + 9 = 18$$

3. Write the algebraic term.

8 divided by p

4. Evaluate.

$$2p \text{ if } p = 9$$

5. Solve for the unknown.

$$\blacksquare + 3 = 22$$

6. Solve for the unknown.

$$y - 5 = 9$$

7. Write the algebraic term.

d multiplied by 7

8. Evaluate.

$$\frac{35}{y} \text{ if } y = 7$$

9. Solve for the unknown.

$$\blacksquare + 7 = 16$$

10. Solve for the unknown.

$$h - 4 = 22$$

11. Write the algebraic term.

11 divided by t

12. Evaluate.

$$5a \text{ if } a = 8$$

Solutions can be found at the end of the booklet.

score
12

STRATEGIES TO SOLVE THE PROBLEMS

Example 1

Evaluate.

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

Step 1

Substitute in the value of -4 in for p .

$$3p$$



$$3(-4)$$



$$-12$$

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 .

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



$$\frac{-(-3)}{18}$$



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

Simplify.



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



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THESE EXAMPLES.



QUESTIONS

Evaluate and simplify your answer.

1.

$$8x \text{ if } x = -3$$

2.

$$\frac{-y}{15} \text{ if } y = 3$$

3.

$$-2p \text{ if } p = 5$$

4.

$$\frac{3}{-y} \text{ if } y = -7$$

5.

$$8m \text{ if } m = -2$$

6.

$$\frac{-t}{10} \text{ if } t = 5$$

7.

$$-11n \text{ if } n = -2$$

8.

$$\frac{-x}{2} \text{ if } x = 16$$

9.

$$3a \text{ if } a = 12$$

10.

$$\frac{v}{-8} \text{ if } v = 16$$

11.

$$\frac{21}{-t} \text{ if } t = -3$$

12.

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



SOLUTIONS CAN BE FOUND AT
THE END OF THE BOOKLET.

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

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MASTERY TEST

Teacher's signature

I'VE COMPLETED

LEVELS THIS YEAR



Solutions to Essential Revision

1. $\blacksquare = 4$

2. $r = 9$

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

4. 18

5. $\blacksquare = 19$

6. $y = 14$

7. $7d$

8. 5

9. $\blacksquare = 9$

10. $h = 26$

11. $\frac{11}{t}$

12. 40

Solutions to Questions

1. -24

2. $\frac{-1}{5}$

3. -10

4. $\frac{3}{7}$

5. -16

6. $-\frac{1}{2}$

7. 22

8. -8

9. 36

10. -2

11. 7

12. -64