SUPER 12s

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

2 ALGEBRA
2.4 MULTIPLICATION OF TERMS
2.4 LEVEL 4

NAME : _____

Skill description: Confirmation of algebraic multiplication through substitution.

Essential Revision: Simplify.

1. $3x \times 7$

2. $-5y \times -6y$

3. $3a \times 3b$

4. $-4 \times -a$

5.

$5y \times 4y$

6.

$3x \times -6y$

7.

$4 \times 3p$

8.

$-g \times 2g \times -2g$

9.

$2 \times 3a \times 4b$

10.

$-4 \times 3p \times -2$

11.

$2x \times 4x \times x$

12.

$3y \times -5y \times 3$

Solutions can be found at the end of the booklet.

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

STRATEGIES TO SOLVE THE PROBLEMS

Example 1

Show that $-2y \times -2y = 4y^2$ by substituting $y = 2$.

Step 1

Substitute the value for y.

$$-2y \times -2y = 4y^2$$

$$-2(2) \times -2(2) = 4(2)^2$$

Step 2

Evaluate the terms.

$$-4 \times -4 = 16$$

Step 3

Combine terms to show that the left-hand side equates to the right-hand side.

$$16 = 16$$

Example 2

Show that $2p \times -3q = -6pq$ by substituting $p = -2 \; and \; q = 3.$

Step 1

Substitute the value for y.

$$2p \times -3q = -6pq$$

$$2(-2) \times -3(3) = -6(-2)(3)$$

Step 2

Evaluate the terms.

$$-4 \times -9 = 36$$

Step 3

Combine terms to show that the left-hand side equates to the right-hand side.

$$36 = 36$$

QUESTIONS

1. Show that $-3x \times 2 = -6x$ by substituting $x = 2$.

2. Show that $-4y \times -2y = 8y^2$ by substituting $y = 2$.

3. Show that $3a \times -2b = -6ab$ by substituting $a = 2 \; and \; b = 3$.

4. Show that $-2 \times -a = 2a$ by substituting $a = 5$.

5. Show that $2p \times -6q = -12pq$ by substituting $p = 2 \; and \; q = 6$.

6. Show that $2x \times -5y = -10xy$ by substituting $x = 2 \; and \; y = 10$.

7. Show that $-4 \times -2g = 8g$ by substituting $g = 4$.

8. Show that $-g \times 2g \times -2g = 4g^3$ by substituting $g = 1$.

9. Show that $2 \times -2a \times 3b = -12ab$ by substituting $a = 2$ *and* $b = -1$.

10. Show that $-3 \times 3p \times -2 = 18p$ by substituting $p = -1$.

11. Show that $-3x \times -2x \times 2x = 12x^3$ by substituting $x = -2$.

12. Show that $2y \times -5y \times 3 = -30y^2$ by substituting $y = 2$.

SOLUTIONS CAN BE FOUND AT THE END OF THE BOOKLET.

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

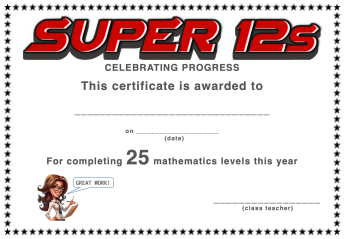
MASTERY TEST

Teacher's signature

I'VE COMPLETED

_____

LEVELS THIS YEAR



Solutions to Essential Revision

1. $21x$	2. $30y^2$
3. $9ab$	4. $4a$
5. $20y^2$	6. $-18xy$
7. $12p$	8. $4g^3$
9. $24ab$	10. $24p$
11. $8x^3$	12. $-45y^2$

Solutions to Questions

1. $-12 = -12$	2. $32 = 32$
3. $-36 = -36$	4. $10 = 10$
5. $-144 = -144$	6. $-200 = -200$
7. $32 = 32$	8. $4 = 4$
9. $24 = 24$	10. $-18 = -18$
11. $-96 = -96$	12. $-120 = -120$