

# SUPER 12s



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

2 ALGEBRA

2.4 MULTIPLICATION OF TERMS

2.4 LEVEL 5

NAME : \_\_\_\_\_

**Skill description:** Multiplication of algebraic terms that involve multiple variables with indices.

## Essential Revision

1. Rewrite using the correct algebraic conventions.

$$1x$$

2. Simplify.

$$3p \times -8q$$

3. Show that  $3x \times -5y = -15xy$  by substituting  $x = 2$  and  $y = 10$ .

4. Rewrite using the correct algebraic conventions.

$$a \times c$$

5. Simplify.

$$3x \times -7y$$

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

7. Rewrite using the correct algebraic conventions.

$$c \times c \times c$$

8. Simplify.

$$-5 \times 3g$$

9. Show that

$$2 \times -2a \times -3b = 12ab$$

by substituting  $a = 2$  and  $b = -1$ .

10. Rewrite using the correct algebraic conventions.

$$9 \div x$$

11. Simplify.

$$-g \times -3g \times -2g$$

12. Show that

$$-2 \times 3p \times -2 = 12p$$

by substituting  $p = -2$ .

Solutions can be found at the end of the booklet.

**score**       
**12**

## STRATEGIES TO SOLVE THE PROBLEMS

### Example 1

Simplify.

$$3ab \times 2ab$$

### Step 1

Multiply the coefficients, then each variable – remembering your index rules.

$$3ab \times 2ab$$
$$\downarrow$$
$$6a^2b^2$$

### Example 2

Simplify.

$$4ab^2 \times 3a^2b^2$$

### Step 1

Multiply the coefficients, then each variable – remembering your index rules.

$$4ab^2 \times 3a^2b^2$$
$$\downarrow$$
$$12a^3b^4$$

### Example 3

Simplify.

$$3xyz^2 \times 5x^2z^2$$

#### Step 1

Multiply the coefficients, then each variable – remembering your index rules.

$$3xyz^2 \times 5x^2z^2$$

↓

$$15x^3yz^4$$



SCAN THE QR CODE OR  
VISIT SUPER12S.COM  
TO WATCH A VIDEO OF  
THESE EXAMPLES.



# QUESTIONS Simplify.

1.

$$5x \times 2xy$$

2.

$$7ab \times 3ab$$

3.

$$4abc \times 2bc$$

4.

$$8ab^2 \times 2a^2b^2$$

5.

$$3yz \times 4xy$$

6.

$$5a^2b \times 3ab^2$$

7.

$$3ac \times 5bc$$

8.

$$2xyz^2 \times 2x^2z^2$$

9.

$$11a \times 2abc$$

10.

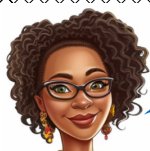
$$2abc^3 \times 3a^3bc^2$$

11.

$$9xyz \times xy$$

12.

$$4y^4z^2 \times 8x^2z^3$$



SOLUTIONS CAN BE FOUND AT  
THE END OF THE BOOKLET.

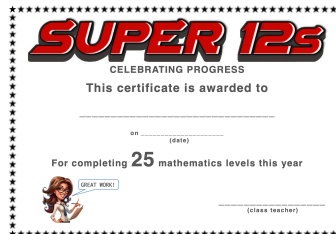
*score*  $\frac{\quad}{12}$

# MASTERY TEST

Teacher's signature

I'VE COMPLETED

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LEVELS THIS YEAR



## Solutions to Essential Revision

1.  $x$

2.  $-24pq$

3.  $-300 = -300$

4.  $ac$

5.  $-21xy$

6.  $24 = 24$

7.  $c^3$

8.  $-15g$

9.  $-24 = -24$

10.  $\frac{9}{x}$

11.  $-6g^3$

12.  $-24 = -24$

## Solutions to Questions

1.  $10x^2y$

2.  $21a^2b^2$

3.  $8ab^2c^2$

4.  $16a^3b^4$

5.  $12xy^2z$

6.  $15a^3b^3$

7.  $15abc^2$

8.  $4x^3yz^4$

9.  $22a^2bc$

10.  $6a^4b^2c^5$

11.  $9x^2y^2z$

12.  $32x^2y^4z^5$