SUPER 12s

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

2 ALGEBRA
2.3 COLLECT LIKE TERMS
2.3 LEVEL 4

NAME:_____

Skill description: Collecting like terms in expressions with more than one variable.

Essential Revision

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1. Circle the like terms.

$$3y, \quad 9a, \quad y, \quad b$$

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2. Simplify.

$$xy^2 + 2xy^2$$

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3. Show that $y^2 + 3y^2 = 4y^2$ by substituting $y = 2$.

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4. Circle the like terms.

$$3z^4, \quad c, \quad 3z^2, \quad 12c$$

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5. Simplify.

$$3a^2b - 2a^2b + a^2b$$

6. Show that $-p - 3p = -4p$ by substituting $p = 4$.

7. Circle the like terms.

$$3a^2, \quad 2a^3, \quad 3a^5, \quad a^3$$

8. Simplify.

$$7v - 5v$$

9. Show that $ab + ab = 2ab$ by substituting $a = 2 \ and \ b = 5$.

10. Circle the like terms.

$$5c, \quad 9c, \quad 7y, \quad 2b$$

11. Simplify.

$$-2g - 4g$$

12. Show that $4p - 3p + p = 2p$ by substituting $p = 4$.

Solutions can be found at the end of the booklet.

score $\dfrac{}{12}$

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Example 1

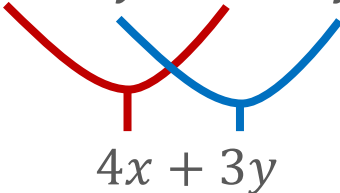Simplify by collecting the like terms.

$$2x + 2y + 2x + y$$

Step 1

Identify the like terms.

$$2x + 2y + 2x + y$$

Step 2

Collect the like terms.

$$2x + 2y + 2x + y$$

$$4x + 3y$$

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Example 2

Simplify by collecting the like terms.
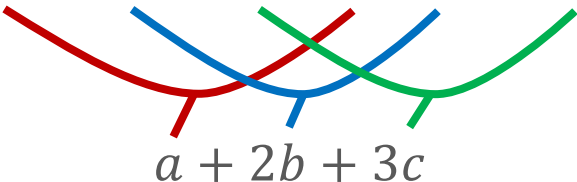
$$2a + 3b + 6c - a - b - 3c$$

Step 1

Identify the like terms.

$$2a + 3b + 6c - a - b - 3c$$

Step 2

Collect the like terms.

$$2a + 3b + 6c - a - b - 3c$$

$$a + 2b + 3c$$

Example 3

Simplify by collecting the like terms.

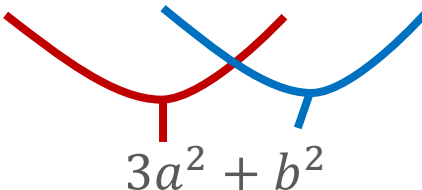$$4a^2 + 3b^2 - a^2 - 2b^2$$

Step 1

Identify the like terms.

$$4a^2 + 3b^2 - a^2 - 2b^2$$

Step 2

Collect the like terms.

$$4a^2 + 3b^2 - a^2 - 2b^2$$

$$3a^2 + b^2$$

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1.

$$4x + 2y + 3x + y$$

2.

$$4a + 5b + 3a - 2b$$

3.

$$x + 2y + 2z + 4x - 3y + z$$

4.

$$5a + 3b + 6c - 2a - b - c$$

5.

$$5x^2 + y^2 + 2x^2 + 3y^2$$

6.

$$2a^2 + 4b^2 - a^2 - 3b^2$$

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7.

$$-3a^2 + 4b^2 + 3a^2 - 7b^2$$

8.

$$3x + 2y + 10x - y$$

9.

$$2a + 3b - 3a - 6b$$

10.

$$2x + 3y - z + 4x - y + 2z$$

11.

$$3x^2 + 2y^2 + 2x^2 + 3y^2$$

12.

$$-6a^2 + 2b^2 + 6a^2 - 2b^2$$

SOLUTIONS CAN BE FOUND AT
THE END OF THE BOOKLET.

score $\overline{12}$

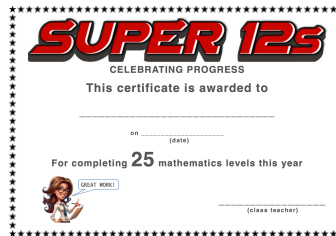Visit super12s.com for more than 200 Algebra booklets just like this one!

MASTERY TEST

I'VE COMPLETED

_ _ _ _ _

LEVELS THIS YEAR

SUPER 12s
CELEBRATING PROGRESS
This certificate is awarded to
_____
on _____ (date)
For completing **25** mathematics levels this year
GREAT WORK!
_____ (class teacher)

SUPER 12s
CELEBRATING PROGRESS
This certificate is awarded to
_____
on _____ (date)
For completing **50** mathematics levels this year
GREAT WORK!
_____ (class teacher)

Solutions to Essential Revision

1.	$3y,\ y$	2.	$3xy^2$
3.	$16 = 16$	4.	$c,\ 12c$
5.	$2a^2b$	6.	$-16 = -16$
7.	$2a^3,\ a^3$	8.	$2v$
9.	$20 = 20$	10.	$5c,\ 9c$
11.	$-6g$	12.	$8 = 8$

Solutions to Questions

1.	$7x + 3y$	2.	$7a + 3b$
3.	$5x - y + 3z$	4.	$3a + 2b + 5c$
5.	$7x^2 + 4y^2$	6.	$a^2 + b^2$
7.	$-3b^2$	8.	$13x + y$
9.	$-a - 3b$	10.	$6x + 2y + z$
11.	$5x^2 + 5y^2$	12.	0

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