SUPER 12s

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

2 ALGEBRA
2.6 EXPANDING BRACKETS
2.6 LEVEL 4

NAME : _____

Skill description: Expanding brackets using the distributive law with negative terms.

Essential Revision

1. Use the distributive law to expand.

$$3(a+11)$$

2. Use the distributive law to expand.

$$6(2x-3)$$

3. Show that

$$3(2b+5)=6b+15$$

by substituting $b=4$.

4. Use the distributive law to expand.

$$4(x-5)$$

5. Use the distributive law to expand.

$$3(p - 3d)$$

6. Show that

$$5(2x - 3) = 10x - 15$$

by substituting $x = 3$.

7. Use the distributive law to expand.

$$8(b + 5)$$

8. Use the distributive law to expand.

$$2a(7b - d)$$

9. Show that

$$4(p-3d)=4p-12d$$

by substituting $p=5$ and $d=3$.

10. Use the distributive law to expand.

$$7(x-3)$$

11. Use the distributive law to expand.

$$3a(c-3)$$

12. Show that

$$a(6b-d)=6ab-ad$$

by substituting $a=2,\ b=3$ and $d=4$.

Solutions can be found at the end of the booklet.

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

STRATEGIES TO SOLVE THE PROBLEMS

Example 1

Use the distributive law to expand the following bracket.

$$-3(a+6)$$

Step 1

Multiply the -3 and a. As the 3 is negative and the a positive, the result is $-3a$.

$$-3(a+6) = -3a$$

Step 2

Multiply the -3 and 6. As the 3 is negative and the 6 positive, the resultant is -18.

$$-3(a+6) = -3a - 18$$

Example 2

Use the distributive law to expand the following bracket.

$$-3a(b-2)$$

Step 1

Multiply the $-3a$ and b. As the $3a$ is negative and the b positive, the resultant is $-3ab$.

$$-3a(b-2) = -3ab$$

Step 2

Multiply the $-3a$ and -2. As both the $3a$ and 2 are negative the result is $+6a$.

$$-3a(b-2) = -3ab + 6a$$

QUESTIONS

Use the distributive law to expand the following brackets.

1. $-4(y-5)$

2. $-4(2a+7)$

3. $-4(a+8)$

4. $-5(3-4x)$

5. $-9(3b+5)$

6. $-5(x-2)$

7.

$-7(3x-2)$

8.

$-3(d-p)$

9.

$-a(c-6)$

10.

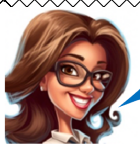
$-2(p-5d)$

11.

$-12(x-2)$

12.

$-p(3x+8)$



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. $3a + 33$	2. $12x - 18$
3. $39 = 39$	4. $4x - 20$
5. $3p - 9d$	6. $15 = 15$
7. $8b + 40$	8. $14ab - 2ad$
9. $-16 = -16$	10. $7x - 21$
11. $3ac - 9a$	12. $28 = 28$

Solutions to Questions

1. $-4y + 20$	2. $-8a - 28$
3. $-4a - 32$	4. $-15 + 20x$
5. $-27b - 45$	6. $-5x + 10$
7. $-21x + 14$	8. $-3d + 3p$
9. $-ac + 6a$	10. $-2p + 10d$
11. $-12x + 24$	12. $-3px - 8p$