

To understand how to simplify algebraic formulae.





$$1.4a + 5 = 25$$

2.3a - 10 = 35

$$3. a^2 + 4 = 29$$

Following the order of operations: Brackets Orders Division Multiplication Addition Subtraction

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Answers: 1. a = 5 2. a = 15 3. a = 5

Simplifying Algebra:

Sometimes we face a formula that isn't in its most simple form which makes it difficult to use, so just like we would simplify fractions we can simplify formula.

- 1. a + a + a = 1. a + a + a = 4a
- 2. $a \times a =$ 2. $a \times a = a^2$
- 3. a + a b = 3. a + a b = 2a b
- 4. 2a + a 2b + c =4. 2a + a - 2b + c = 3a - 2b + c

5. 4(a - b) + 5 =5. 4(a - b) + 5 = 4a - 4b + 5

6. 3(2a - 3b) + 2(a + b) =

6. 3(2a - 3b) + 2(a + b) = 6a - 9b + 2a + 2b8a - 11b

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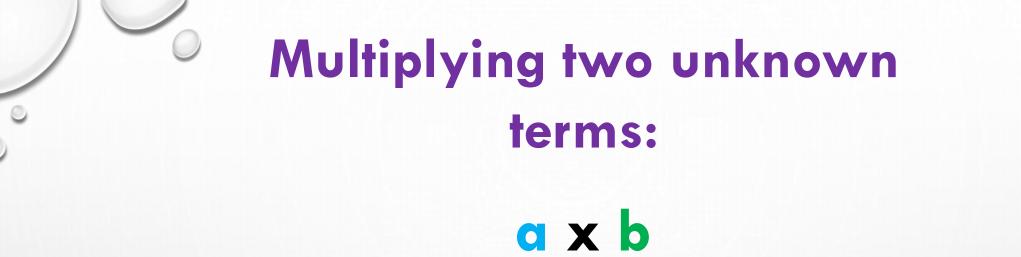
2a + **a**²

Why are these two terms not the same?



axa

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This may look unfamiliar to us, however, if a = 4, what would you do?

 $4 \times b = 4b$

All **a x b** is showing is that 2 unknown values are being multiplied so it will become:

ab

Simplifying Algebra:

1. $4a + a^2 + a - b =$ 1. $4a + a^2 + a - b = 5a + a^2 - b$

2. 4a(a - b) = 2. $4a^2 - 4ab$

3. $4a + b + c^2 + 2b + a^2 =$ 3. $4a + 3b + c^2 + a^2$

4. 2c x 2b =

4. 4bc

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Success Criteria:
✓ Search for like terms
✓ Multiply numbers
✓ Multiply letters
✓ BODMAS
✓ Check it is as simple as can be