

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The text is centered in the middle of the slide.

**To understand how to
simplify algebraic
formulae.**

Using BODMAS

Solve:

1. $4a + 5 = 25$

2. $3a - 10 = 35$

3. $a^2 + 4 = 29$

Following the order of operations:

Brackets

Orders

Division **M**ultiplication

Addition **S**ubtraction

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. $a + a + a + a =$

1. $a + a + a + a = 4a$

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. $3(2a - 3b) + 2(a + b) = 6a - 9b + 2a + 2b$
 $8a - 11b$

Recognising like terms:

$$2a + a^2$$

Why are these two terms not the same?

$$2 \times a$$

$$a \times a$$

Multiplying two unknown terms:

$$a \times b$$

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

$$4 \times b = 4b$$

All $a \times b$ 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. $2c \times 2b =$

4. $4bc$

Success Criteria:

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