

## Factorisation

| Factorising Expressions  |  |
|--|--|
| <p>Factorisation is the opposite of expanding brackets.</p> <p>It involves identifying the highest common factor (HCF) of each term and bringing them out of the brackets.</p> | <p>For example,<br/><b>Factorise <math>5x + 15</math>.</b></p> <p>The <b>HCF</b> for both terms is <b>5</b>.<br/>Therefore, bring 5 outside the brackets and <b><u>fill in the remaining terms</u></b> so that the expression is equal.</p> $5x + 15 = 5(x + 3)$ |

**Instructions:** Factorise the expressions below.

|   |           |   |           |
|---|-----------|---|-----------|
| 1 | $3x + 6$  | 2 | $5x + 10$ |
| 3 | $4s - 8$  | 4 | $3a + 15$ |
| 5 | $8c - 32$ | 6 | $12h + 3$ |



|    |            |    |            |
|----|------------|----|------------|
| 7  | $7x + 14$  | 8  | $27x + 9$  |
| 9  | $6q - 24$  | 10 | $9e + 12$  |
| 11 | $12f + 8$  | 12 | $14h + 21$ |
| 13 | $10a - 12$ | 14 | $20l + 15$ |
| 15 | $16k - 12$ | 16 | $18m + 15$ |



|    |              |    |                 |
|----|--------------|----|-----------------|
| 17 | $10bc + 5b$  | 18 | $x^2 - 3x$      |
| 19 | $2j + 6jk$   | 20 | $8n^2 - 4n$     |
| 21 | $5u^2 - 5u$  | 22 | $3d + 9de$      |
| 23 | $9c^2 - 6c$  | 24 | $12h^3 + 8h$    |
| 25 | $10t^2 + 6t$ | 26 | $18w^3 - 12w^2$ |

## Factorisation

### Factorising Expressions

Factorisation is the opposite of expanding brackets.

It involves identifying the highest common factor (HCF) of each term and bringing them out of the brackets.

For example,  
**Factorise  $5x + 15$ .**

The **HCF** for both terms is **5**.  
Therefore, bring 5 outside the brackets and **fill in the remaining terms** so that the expression is equal.

$$5x + 15 = 5(x + 3)$$

**Instructions:** Factorise the expressions below.

|   |           |   |            |
|---|-----------|---|------------|
| 1 | $4t + 8$  | 2 | $6c - 30$  |
| 3 | $9m - 45$ | 4 | $11n + 99$ |
| 5 | $32 - 8j$ | 6 | $18s + 27$ |



|    |               |    |              |
|----|---------------|----|--------------|
| 7  | $15m + 12$    | 8  | $25k - 45$   |
| 9  | $108 - 48a$   | 10 | $21 + 77p$   |
| 11 | $3mn + 9m$    | 12 | $12xy + 6y$  |
| 13 | $18u - 9uv$   | 14 | $60c - 12cd$ |
| 15 | $110k - 11kl$ | 16 | $7g + 42gh$  |



|    |                  |    |                     |
|----|------------------|----|---------------------|
| 17 | $27x^2 - 18x$    | 18 | $30s - 10st^2$      |
| 19 | $8h^2 + 20h$     | 20 | $36p^2 - 45p^2q$    |
| 21 | $35y^2 + 42xy$   | 22 | $24p^3q - 48p^3$    |
| 23 | $16a^2 + 28a^2b$ | 24 | $44v^3 - 33vu$      |
| 25 | $60cd^3 - 24c^2$ | 26 | $27b^2c + 72b^2c^2$ |