

# Algebra – Simplifying

## Multiplying terms

### Basic rules

$$\begin{aligned}
 a \times a &= a^2 \\
 1 \times b &= b \\
 2 \times b &= 2b \\
 x \times y \times z &= xyz
 \end{aligned}$$

Multiply numbers  
then  
multiply letters

Simplify

$$2h \times 5h^2$$

$$2h \times 5h^2$$

$$2 \times 5 \times h \times h^2$$

$$10h^3$$

$$10h^3$$

Simplify

$$3xy \times 4x^2 \times 5y^2$$

$$3xy \times 4x^2 \times 5y^2$$

$$3 \times 4 \times 5 \times x \times x^2 \times y \times y^2$$

$$60x^3y^2$$

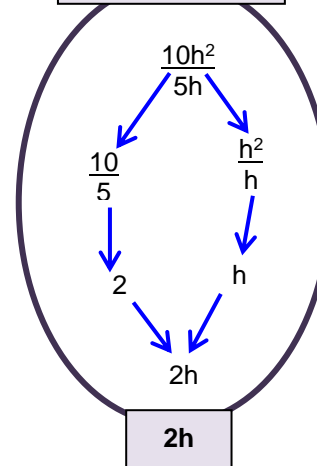
$$60x^3y^2$$

## Dividing terms

- Write as a fraction
- Simplify the number fraction
- Simplify the letter fraction
- Combine the two fractions

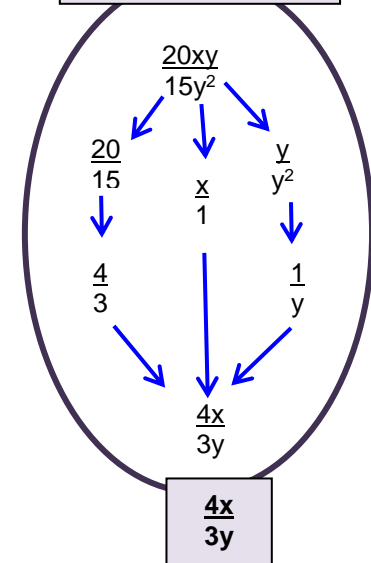
Simplify

$$10h^2 \div 5h$$



Simplify

$$20xy \div 15y^2$$



### Basic rules

$$\begin{aligned}
 a \div a &= 1 \\
 b^2 \div b &= b \\
 x \div 1 &= x \\
 1 \div y &= \frac{1}{y}
 \end{aligned}$$