# Degree of an algebraic expression

The degree of an algebraic expression is the highest power of the variable(s) in the expression.

- If there is only one term, its degree is the power of the variable
- If there are many terms, find the term with the highest power

# **Important points**

- Constant has degree 0
- If there are two variables in a term, add their powers
- Only non-zero terms are considered

# **Examples with Solutions**

#### Example

Expression: 7x<sup>3</sup>

- One term
- Power of x is 3
  - ✓ Degree = 3

#### Example

Expression:  $5x^2 + 3x + 9$ 

- Powers are:  $x^2 \rightarrow 2$ ,
- $x \rightarrow 1$ ,
- constant  $\rightarrow$  0
  - ✓ Degree = 2

#### Example

Expression: 4x<sup>2</sup>y

- Two variables x and y
- Powers:  $x \rightarrow 2$ ,
- $y \rightarrow 1$
- Add the powers: 2 + 1 = 3

✓ Degree = 3

# Example

Expression:  $-2a^{3}b^{2} + 7ab$ 

- First term:  $a^3b^2 \rightarrow 3 + 2 = 5$
- Second term:  $ab \rightarrow 1 + 1 = 2$ 
  - ✓ Degree = 5

#### Example

Expression: 6

- Constant only
  - ✓ Degree = 0

# **Summary Points**

- Degree means the highest power in the expression.
- In single-variable terms, degree = highest exponent of that variable.
- In terms with multiple variables, add powers of all variables in the term.
- Constant has degree 0.
- Ignore zero terms when finding degree.