

Maths HL10 – Factorising and re-arranging formula

- 1 Given that $T = 3p - 5$, calculate T when $p = 12$.
- 2 In mountaineering, in general, the higher you go, the colder it gets. This formula shows how the height and temperature are related.

$$\text{Temperature drop } (^{\circ}\text{C}) = \frac{\text{height increase (m)}}{200}$$

- a If the temperature at a height of 500 m is 23°C , what will it be when you climb to 1300 m?
 - b How far would you need to climb to experience a temperature drop of 5°C ?
- 3 The formula $e = 3n$ can be used to relate the number of sides (n) in the base of a prism to the number of edges (e) that the prism has.
 - a Make n the subject of the formula.
 - b Find the value of n for a prism with 21 edges.

Past paper questions

- 1 Factorise $2x - 4xy$. [2]

[Cambridge IGCSE Mathematics 0580 Paper 22 Q2 Feb/March 2016]

- 2 Make r the subject of this formula.

$$v = \sqrt[3]{p+r} \quad [2]$$

[Cambridge IGCSE Mathematics 0580 Paper 22 Q5 October/November 2014]

- 3 Expand the brackets. $y(3 - y^3)$ [2]

[Cambridge IGCSE Mathematics 0580 Paper 13 Q9 October/November 2012]

- 4 Factorise completely. $4xy + 12yz$ [2]

[Cambridge IGCSE Mathematics 0580 Paper 13 Q13 October/November 2012]

- 5 Solve the equation. $5(2y - 17) = 60$ [3] **E**

[Cambridge IGCSE Mathematics 0580 Paper 22 Q12 May/June 2013]

- 6 Solve the equation $(3x - 5) = 16$. [2]

[Cambridge IGCSE Mathematics 0580 Paper 13 Q5 May/June 2013]

- 7 Factorise completely. $6xy^2 + 8y$ [2]

[Cambridge IGCSE Mathematics 0580 Paper 13 Q9 May/June 2013]