

N5

National Qualifications

2023

Mathematics

Paper 1

Wednesday, 3 May

Formulae List

[Braille page 2] FORMULAE LIST

The roots of $ax^2+bx+c=0$ are

$$x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$$

Sine rule:

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Cosine rule:

$$a^2 = b^2 + c^2 - 2bc \cos A \text{ or } \cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

Area of a triangle: $A = \frac{1}{2} ab \sin C$

Volume of a sphere: $V = \frac{4}{3} \pi r^3$

Volume of a cone: $V = \frac{1}{3} \pi r^2 h$

Volume of a pyramid: $V = \frac{1}{3} Ah$

Standard deviation:

$$s = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n-1}}$$

$$\text{or } s = \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}},$$

where n is the sample size.

[End of Formulae List]