

N5

National Qualifications

2025

Applications of Mathematics

Paper 2

Friday, 16 May

Formulae List

**[Braille page 2] FORMULAE LIST**

Circumference of a circle:  $C = \pi d$

Area of a circle:  $A = \pi r^2$

Theorem of Pythagoras:  $a^2 + b^2 = c^2$

Refer to diagram sheet.

Volume of a cylinder:  $V = \pi r^2 h$

Volume of a prism:  $V = Ah$

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

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

Standard deviation:

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

OR

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

where n is the sample size.

Gradient:

$$\text{gradient} = \frac{\text{vertical height}}{\text{horizontal distance}}$$

Refer to diagram sheet.