Contents

1   algebra

1.1   wallace

1.1.1   distributive property

$$a(b + c) = ac + bc$$

1.1.2   slope

$$m = \frac{\textbf{rise}}{\textbf{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$

1.1.3   properties of exponents

$$a^m a^n = a^{m+n} \quad (ab)^m = a^m b^m \quad \frac{a^m}{a^n} = a^{m-n}$$

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \qquad a^{-m} = \frac{1}{a^m} \qquad \frac{1}{a^{-m}} = a^m$$

$$(a^m)^n = a^{mn} \qquad a^0 = 1 \qquad \left(\frac{a}{b}\right)^{-m} = \frac{b^m}{a^m}$$

1.1.4   scientific notation

$$a \times 10^b \text{ where } 1 \leqslant a < 10$$

2   geometry