

British Columbia Grade 10 Mathematics: Formula Sheet

Pythagorean Theorem

$a^2 + b^2 = c^2$, where c is the length of the hypotenuse

Linear Relations

$$\text{Slope: } m = \frac{y_2 - y_1}{x_2 - x_1}$$

Trigonometry

$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$

Arithmetic Sequences

Given the first term a , and the common difference d , the general term t_n is $t_n = a + (n - 1)d$

Area and Volume: for ALL calculations on the test using π , *always use*

$$\pi = 3.14$$

Circumference and Area of a **circle** with radius r

$$C = 2\pi r \qquad A = \pi r^2$$

Area of a **triangle** with base b and height h :

$$A = \frac{1}{2}bh$$

Volume of **Prism**:

Volume = area of base \times height of the prism

Volume of **Pyramid**:

Volume = $\frac{1}{3} \times$ (the volume of the enclosing prism)

Volume of **Cylinder** with height h and radius r :

$$V = \pi r^2 h$$

Volume of **Sphere** with radius r :

$$SA = \frac{4}{3}\pi r^3$$