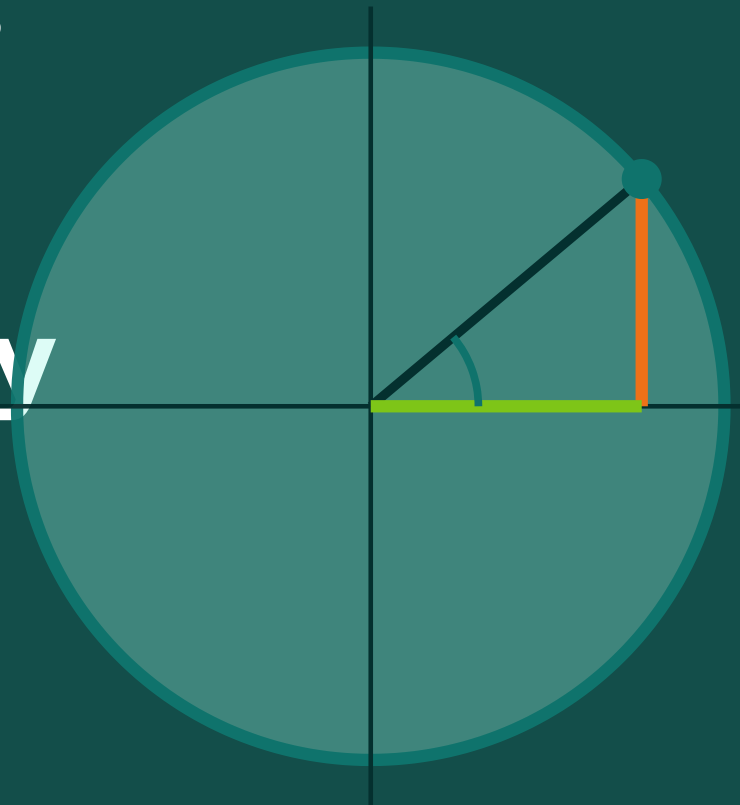


Geometry and trigonometry

**3D distance** **B**

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$

3D midpoint **B**

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}, \frac{z_1 + z_2}{2} \right)$$

Pyramid; cone **B**

$$V = \frac{1}{3}Ah; \quad V = \frac{1}{3}\pi r^2 h, \quad \text{curved } A = \pi r l$$

Sphere **B**

$$V = \frac{4}{3}\pi r^3, \quad A = 4\pi r^2$$

Sine rule **B**

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

Cosine rule **B**

$$c^2 = a^2 + b^2 - 2ab \cos C, \quad \cos C = \frac{a^2 + b^2 - c^2}{2ab}$$

Area of a triangle
B

$$A = \frac{1}{2}ab \sin C$$

Arc; sector (θ in radians) **B**

$$l = r\theta, \quad A = \frac{1}{2}r^2\theta$$

B given in the exam. Learn the rest.