

Formula Sheet

Note: You may use these formulas throughout this entire test.

Linear Formulas

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

Midpoint $M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

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

Slope-Intercept Form $y = mx + b$

Exponential Formula

(h, k) Form $y = ab^{x-h} + k$

Quadratic Formulas

Vertex Form $y = a(x - h)^2 + k$

Standard Form $y = ax^2 + bx + c$

Intercept Form $y = a(x - p)(x - q)$

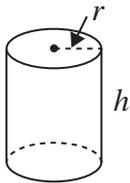
Probability Formulas

$P(A \text{ and } B) = P(A) \cdot P(B)$

$P(A \text{ and } B) = P(A) \cdot P(B|A)$

$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

Volume and Surface Area



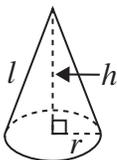
$$V = \pi r^2 h$$

$$SA = 2(\pi r^2) + h(2\pi r)$$



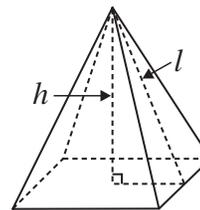
$$V = \frac{4}{3}\pi r^3$$

$$SA = 4\pi r^2$$



$$V = \frac{1}{3}\pi r^2 h$$

$$SA = \pi r^2 + \frac{1}{2}(2\pi r \cdot l)$$



$$V = \frac{1}{3}Bh$$

$$SA = B + \frac{1}{2}(Pl)$$

where B = base area
and P = base perimeter