

Placement into Math 162 (Math 30-2 Equivalent) Test: Formula Sheet

Factoring

$$a^2 - b^2 = (a - b)(a + b)$$

Quadratic Functions

$$y = ax^2 + bx + c \quad y = a(x - p)^2 + q \quad \text{or} \quad y = a(x - h)^2 + k \quad y = a(x - r)(x - s)$$

Quadratic Equations

$$\text{For } ax^2 + bx + c = 0: x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Trigonometry

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

Geometry

$$\text{Sum of interior angles of polygon} = 180^\circ(n - 2)$$

$$\text{Each interior angle of a regular polygon} = \frac{180^\circ(n - 2)}{n}$$

$$SA_{\text{cylinder}} = 2\pi r^2 + 2\pi rh \quad SA_{\text{cone}} = \pi r^2 + \pi rs \quad SA_{\text{sphere}} = 4\pi r^2$$

$$V_{\text{cylinder}} = \pi r^2 h \quad V_{\text{cone}} = \frac{1}{3}\pi r^2 h \quad V_{\text{sphere}} = \frac{4}{3}\pi r^3$$

$$V_{\text{pyramid}} = \frac{1}{3}(A_{\text{Base}} \times h) \quad V_{\text{prism}} = A_{\text{Base}} \times h$$

Statistics

$$z = \frac{x - \mu}{\sigma} \quad \bar{x} = \frac{\sum x}{n} \quad \sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

You will also need a graphing calculator OR a z-score table (standard normal distribution) for the exam.