

Pre-Calculus Math 20S

Formula Sheet (tear off for use during the exam)

$$V = lwh$$

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

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

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

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

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

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$c^2 = a^2 + b^2 - 2ab \cos C$$

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$y = mx + b$$

$$t_n = t_1 + (n-1)d$$

$$S_n = \frac{n}{2}[2t_1 + (n-1)d]$$

$$\text{Gain/Loss} = (\text{Probability of winning})(\text{Prize} - \text{Bet})$$

$$A = \pi r^2$$

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

$$A = \frac{1}{2}bc \sin A$$

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

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

$$y - y_1 = m(x - x_1)$$

$$S_n = \frac{n}{2}(t_1 + t_n)$$

$$t_n = t_1 r^{n-1}$$