

# 007 Formula Sheet (Fall 2006) :

## Algebra:

### Factoring:

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

### Exponents:

$$a^m a^n = a^{m+n}$$

$$\frac{a^m}{a^n} = a^{m-n}$$

$$(a^n)^p = a^{np}$$

$$\sqrt{a} = a^{1/2}$$

## Straight Lines:

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

$$\text{Straight Line: } y = mx + b$$

Parallel lines have the same slope.

$$\text{Perpendicular lines: } m_{\perp} = -\frac{1}{m}.$$

## Quadratics:

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

## Economics:

### Simple Interest:

$$I = Prt$$

$$A = P + I$$

### Markup:

$$S = C + rC$$

### Discount:

$$S = C - rC$$

## Trigonometry:

In a right-angled triangle:

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

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

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

## Order of Operations:

BEDMAS

## Geometry:

