

# LINEAR EQUATIONS

## MID POINT FORMULA

$$\left( \frac{X_2 + X_1}{2}, \frac{Y_2 + Y_1}{2} \right)$$

## SLOPE

$$M = \frac{Y_2 - Y_1}{X_2 - X_1}$$

## DISTANCE FORMULA

$$D = \sqrt{(Y_2 - Y_1)^2 + (X_2 - X_1)^2}$$

## EQUATIONS OF A LINE

- SLOPE-INTERCEPT FORM  
 $Y = MX + B$
- POINT-SLOPE FORM  
 $Y - Y_1 = M(X - X_1)$
- STANDARD FORM  
 $AX + BY = C$