

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

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

EQUATIONS OF A LINE

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