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
  \[AX + BY = C\]