

- ① Name the 3 forms of a linear equation and write their formulas.
- ② Solve for y:

$$y - 2 = \frac{1}{2}(x + 5)$$
- ③ Write the EOL through $(-2, 0)$ with slope of $-\frac{3}{2}$

• Take out homework: Pg. 289 #1-7, 10.

①

Forms of Equations

Standard form of an equation of a line: $Ax + By = C$

Slope-intercept form of an equation of a line: $y = mx + b$

Point-slope form of an equation of a line: $y - y_1 = m(x - x_1)$

AHSGE
REFERENCE
PAGE

$$\begin{array}{rcl} \textcircled{2} & y - 2 = \frac{1}{2}x + \frac{5}{2} & \\ & + 2 & + \frac{4}{2} \end{array}$$

$$\boxed{y = \frac{1}{2}x + \frac{9}{2}}$$

$$\textcircled{3} \quad \begin{array}{c} (-2, 0) \\ x, y \end{array} \quad \begin{array}{c} m = -\frac{3}{2} \\ y = mx + b \end{array} \quad \text{or}$$

$$0 = -\frac{3}{2} \cdot -2 + b$$

$$0 = \frac{6}{2} + b$$

$$\begin{array}{c} -2 \quad -2 \\ -2 = b \end{array} \Rightarrow \boxed{y = -\frac{3}{2}x - 3}$$

S-I Form

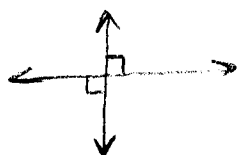
$$\begin{array}{c} y - y_1 = m(x - x_1) \\ \boxed{y - 0 = -\frac{3}{2}(x + 2)} \\ \text{P-S Form} \end{array}$$

PRACTICE:

Pg. 289 # 15, 18, 21 WRITE EACH LINE
in all 3 forms.

// means PARALLEL, two lines in
the same plane that never cross.

⊥ means PERPENDICULAR, two lines that
cross at right angles (90 degrees)



* PARALLEL LINES HAVE THE SAME SLOPE !!

EX) $y = 3x - 2$
 $y = 3x + 6$
 $y = 3x$ } All parallel.

Homework: Page 289 # 16, 17, 20 WRITE ALL
3 forms of
each line