

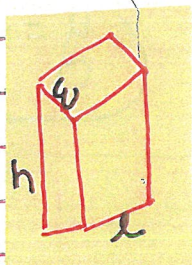
3.8

LITERAL EQUATIONS:

Notes

These EQ's have
MULTIPLE VARIABLES
AND you will be asked
to solve for 1 variable
to make a new EQUATION

EXAMPLE



$$V = l \cdot w \cdot h$$

① Rewrite formula for
height (solve for h)

$$V = l \cdot w \cdot h \quad \text{isolate h}$$

$$h = \frac{V}{lw}$$

② Use this new formula
to find the following
heights

Volume (ft ³)	l (ft)	w (ft)	h (ft)
1,000	20	10	<u>5</u> ft
1,000	20	5	<u>10</u> ft
1,000	20	2	<u>25</u> ft



3.8 NOTES put in binder

HW: #'s 13-17 (odd)

⑬ $12 = 9x + 3y$

ISOLATE y - Tip: rewrite

$$\begin{array}{r} 9x + 3y = 12 \\ -9x \quad -9x \\ \hline 3y = -3x + 12 \end{array}$$

$$y = \frac{-3x + 12}{3}$$

$$y = -x + 4$$

or $y = -x + 4$

⑮ $14 = 7y - 6x$

$$\begin{array}{r} 7y - 6x = 14 \\ +6x \quad +6x \\ \hline 7y = 6x + 14 \end{array}$$

$$y = \frac{6x + 14}{7}$$

KEEP the
number before
x as a
fraction

$$y = \frac{6}{7}x + 2$$

Over →

3.8

NOTES (CONT):

SPECIAL LITERAL EQ:

- USED TO Graph lines
- CALLED SLOPE - INTERCEPT

Simplified fraction

$$Y = mX + B$$

SOLVE FOR Y:

$$\textcircled{12} \quad 5X + 4Y = 10$$

$$\begin{array}{r} -5X \\ \hline 4Y = -5X + 10 \end{array}$$

$$\boxed{y = -\frac{5}{4}X + 2.5}$$

$$\textcircled{14} \quad 18X - 2Y = 26$$

$$\begin{array}{r} -18X \\ \hline -2Y = -18X + 26 \\ \hline \end{array}$$

$$\boxed{y = 9X - 13}$$

$$\ast \textcircled{18} \quad 3 + 6X = 11 - 4Y$$

$$\begin{array}{r} \downarrow \\ 4Y + 6X = 12 \\ \hline \end{array}$$

$$\begin{array}{r} -6X \\ \hline 4Y = -6X + 12 \end{array}$$

Reduce

$$\boxed{y = -\frac{3}{2}X + 3}$$

Keep as fraction

HW:

$$\textcircled{17} \quad 30 = 9X - 5Y$$

$$\begin{array}{r} -9X \\ \hline \end{array}$$

$$\begin{array}{r} 30 - 9X = -5Y \\ \hline \end{array}$$

$$\boxed{y = \frac{9}{5}X - 6}$$