

METHOD 3:

GRAPHING WITH
SLOPE - INTERCEPT
abbrev. S/I

S/I: $y = mx + b$

m = slope

b = y-intercept (0, b)

* IDENTIFY SLOPE &
INTERCEPT

(4) $y = -x$
 $m = -1$ $b = 0$

(7) $y = \frac{2}{3}x - 1$

$m = \frac{2}{3}$ $b = -1$

* PUT INTO S/I and
IDENTIFY slope & yint.

(12) $x - y = 6$ ← putting $y = mx + b$
 $-x$ $-x$
 $-y = -x + 6$
 -1 -1 -1
 $y = x - 6$ $m = 1$
 $b = -6$

(13) $6x - 3y = -9$
 $-6x$ $-6x$
 $-3y = -6x - 9$
 -3 -3 -3
 $y = 2x + 3$ $m = 2$
 $b = 3$

(16) $-x - 10y = 20$
 $+x$ $+x$
 $-10y = x + 20$
 -10 -10 -10
 $y = -\frac{1}{10}x - 2$
FRACTION b/c
it is slope

$m = -\frac{1}{10}$

$b = -2$

#15 30-35

// Lines

// = parallel lines

// means lines never intersect because they have the same slope

Look at #'s 30 + 31 and state the // lines

[30] blue and green lines are //

[31] ALL THE Lines are //

* Determine if the given lines are //

[32] a) $y = 5x - 7$ $m = 5$

b) $5x + y = 7$

$$\begin{array}{r} -5x \quad -5x \\ \hline y = -5x + 7 \end{array}$$
 $m = 5$

Not // b/c the slopes are different

[33] a) $y = 3x + 2$ $m = 3$

b) $-7 + 3x = y$ $m = 3$
 $\hookrightarrow y = 3x - 7$

// lines b/c same slope

[34] a) $y = -0.5x$ $m = -\frac{1}{2}$

b) $x + 2y = 18$

$$\begin{array}{r} -x \quad -x \\ \hline 2y = -x + 18 \\ \frac{2}{2} \quad \frac{2}{2} \quad \frac{2}{2} \\ \hline y = -\frac{1}{2}x + 9 \end{array}$$
 $m = -\frac{1}{2}$

// lines b/c same slope

[35] a) $4x + y = 3$

$$\begin{array}{r} -4x \quad -4x \\ \hline y = -4x + 3 \end{array}$$
 $m = -4$

b) $x + 4y = 3$

$$\begin{array}{r} -x \quad -x \\ \hline 4y = -x + 3 \\ \frac{4}{4} \quad \frac{4}{4} \quad \frac{4}{4} \\ \hline y = -\frac{1}{4}x + \frac{3}{4} \end{array}$$
 $m = -\frac{1}{4}$

Not // b/c different slopes