

BE-1B TUESDAY 9-12-06

Use the "METHOD OF INTERCEPTS"
to graph:

① $4x + 2y = 12$

② $-5x + y = 10$

③ $2x - y = 0$  CHALLENGE

④ Find r if $m = 8$ and
the line passes through
 $(4, -5), (3, r)$

①

GIVEN ANY LINEAR EQUATION

$\Rightarrow x', y'$ numbers

YOU CAN ALWAYS "SOLVE FOR y "

IF you do, you get
 y by itself AND some
number of x 's AND some
number on the right.

EX) $y = 2x + 5$

$\nearrow$ this is ALWAYS m ,
the rise of the line
run OF THE line
which is $\frac{2}{1}$ in this case

$y = mx + b$
SLOPE-INTERCEPT FORM OF LE

Typical Problems ^b

②

① $m = 3$ $y_{int} = 6$ EOL?

$$\boxed{y = 3x + 6}$$

② $m = 2$ $P(1, 5)$ on line, EOL?

$$y = mx + b$$

$$(1, 5)$$

$$5 = 2 \cdot 1 + b$$

$$5 = 2 + b$$

$$3 = b$$

$$\boxed{y = 2x + 3}$$

③ $(-3, -1), (6, -4)$ EOL?

$$m = \frac{-4 + 1}{6 + 3} = \frac{-3}{9} = -\frac{1}{3} \quad \text{use EITHER (x, y)}$$

$$y = mx + b \quad \therefore -1 = -\frac{1}{3} \cdot -3 + b$$

$$-1 = 1 + b$$

$$-2 = b \quad \therefore \boxed{y = -\frac{1}{3}x - 2}$$

Graphing $y = mx + b$ lines

③

↑
begin at b
then move by slope

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

GP: Page 284

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Hw: Read Ch 5-3 & 5-4

Pg 285 # 48, 52,
54, 55,
57-62