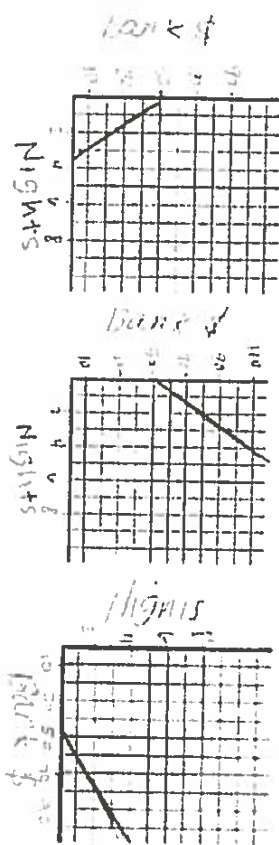


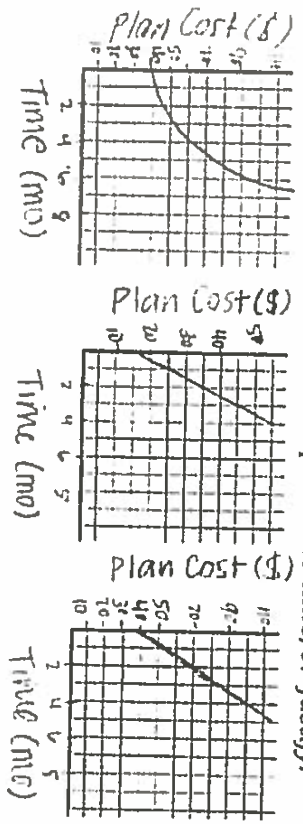
Multiple Choice Practice - Slope Intercept Form

- 1) Briana starts with \$50 in her savings account. She earns \$15 per night house-sitting for a neighbor who is out of town. Briana deposits all her money and makes no withdrawals. Which graph best describes the amount of money, m , in her bank account after n nights? Justify.



- Which equation best describes the scenario?
 (a) $m = 50 + 15n$ (b) $n = 50 + 15m$ (c) $m = 15 + 50n$

- 2) A cell phone plan costs \$40 to buy a new phone and then \$15 per month for unlimited texting. Which graph describes the cost, C , of the plan over time, t ? Justify.

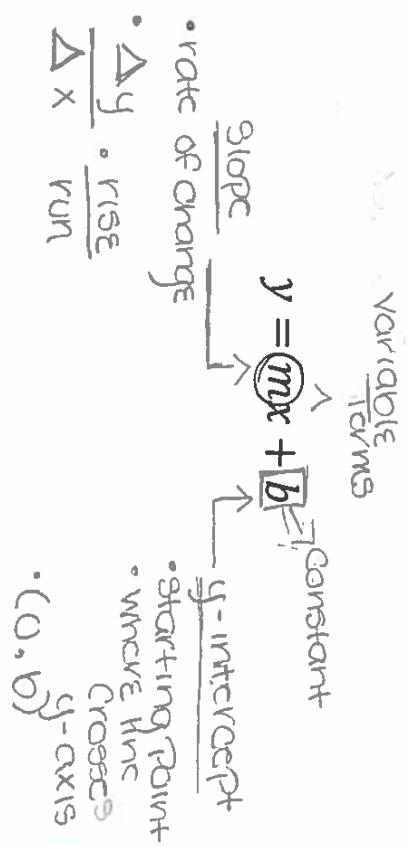


- Which equation best describes the scenario?
 (a) $C = 15m + 40$ (b) $C = 40m + 15$ (c) $C = 55m$

Name

Linear Equations: Slope-Intercept Form

Pd 1/2 1.E.6 & 1.E.7



What information can we find out about a line from this form?

1) $y = 3x - 5$

$m = 3$ increasing steep

$b = -5$ line crosses y-axis @ $(0, -5)$

2) $y = -\frac{2}{3}x + 4$

$m = -\frac{2}{3}$ decreasing less steep

$b = 4$ line crosses y-axis @ $(0, 4)$

Write the slope-intercept form of the linear equation given the information.

3) $m = 2, b = -4$

$y = mx + b$
 $y = 2x - 4 \implies y = 2x - 4$

4) The slope of the line is $-\frac{5}{3}$ and the y-intercept is at $(0, -1)$.

$y = -\frac{5}{3}x - 1$

5) The line passes through $(0, 3)$ and $(5, -1)$.

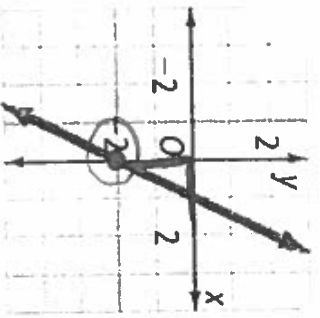
$m = \frac{-1 - 3}{5 - 0} = -\frac{4}{5}$

$y = -\frac{4}{5}x + 3$

b always has $x = 0$ so $(0, 3)$ is y-int. $b = 3$

Write Slope-Intercept Form Linear Equations from Graphs

1)



b is where line crosses

$b = -2$ $y = ax + b$

$m = \frac{\text{rise}}{\text{run}}$ $\frac{\text{UP 2}}{\text{OVER 1}}$

$m = \frac{2}{1}$ (increasing) so positive

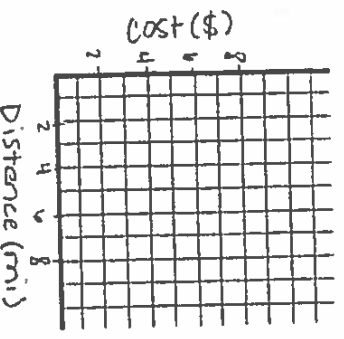
$y = \frac{2}{1}x + (-2)$

$y = 2x - 2$

Slope-Intercept Form in Real Life & Graphing

1) A taxi charges an initial fee of \$1. The taxi also charges \$2 for every mile traveled. Model the scenario with a graph and equation.

Taxi Fare



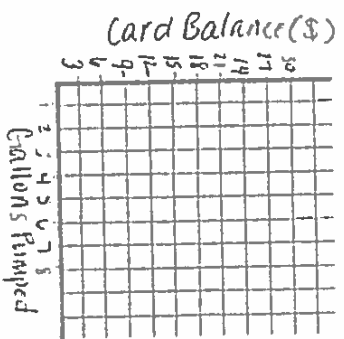
What is the cost of a 4-mile ride?

Steps to Write the Equation

1) Define your variables:	2) Identify your starting point.	3) Identify your rate of change.	4) Write your equation in slope-intercept form.
x:			
y:			

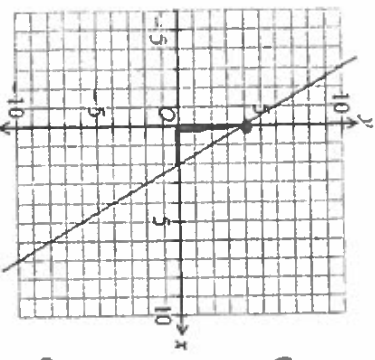
2) A woman puts \$30 on a gift card for gas. Gas costs \$3 per gallon. Model the scenario with a graph and an equation.

Gas Card



How much is left on the card after she pumps 6 gallons?

2)



$b = 4$

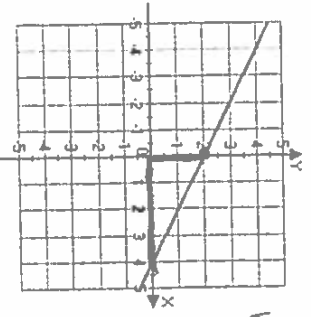
$m = \frac{\text{rise}}{\text{run}} = \frac{\text{down 4}}{\text{over 2}}$

$m = -\frac{4}{2} = -2$

decreasing so negative

$y = -2x + 4$

3)



$b = 2$

$m = \frac{\text{rise}}{\text{run}} = \frac{\text{down 2}}{\text{over 4}}$

$m = \frac{2}{4} = \frac{1}{2}$

decreasing so negative (m)

$y = -\frac{1}{2}x + 2$