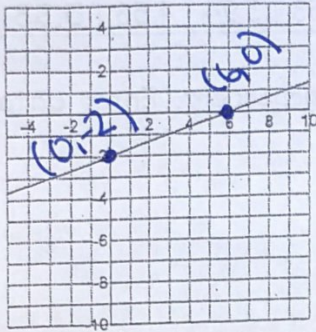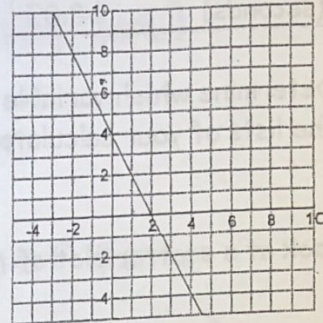AFM ~ Module 1
Data Collection

1. Write an equation in slope-intercept form for the following graphs.

(a)

(b)

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

(b) $y = -2x + 4$

2. Write an equation in slope-intercept form for the line that passes through the given pair of points.

(5, 1), (3, -2) $y = 1.5x - 6.5$

3. Your assignment is to make a graph comparing the amount of time you spend studying a week and your test grades.

(a) What is the independent variable?

time

(b) What is the dependent variable?

Grade

4. The Pizza Palace offers a choice of 4 specials to Leesville students.

Special	1	2	3	4
X Number of Slices	8	12	18	24
y Total Cost	4.25	6.70	11.90	15.60

(a) What are the independent and dependent variables?
#ofSlices   Cost

(b) Find a linear model for this data. Round to the nearest hundredth.

$y = .73x - 1.67$

Slope $-\frac{\Delta y}{\Delta x}$ ← cost
← # of slices

$m = \frac{.73}{1}$ ← cost
← slices

(c) Write a sentence giving the real-world meaning of the slope.

The cost increases $0.73 per slice of pizza.

(d) Write a sentence giving the real-world meaning of the y-intercept.

0 Slices of pizza cost -$1.67.

$(0, -1.67)$
↑   ↑
Slices Cost

(e) If Pizza Palace offers a 36-slice special, what should they charge based on your equation in part b?

$y = .73(36) - 1.67$ $24.61

(f) If you have only $7.10, about how many slices could you buy? (Round down.)

$7.1 = .73x - 1.67$ 12 slices

$8.77 = .73x$

$x = 12.01$

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