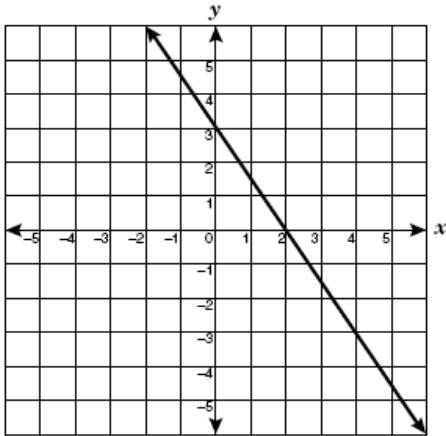


$$y = mx + b$$

18.

Which equation best represents the graph below?



F $y = 3 - \frac{3}{2}x$

G $y = 3 - \frac{2}{3}x$

H $y = 3 + \frac{2}{3}x$

J $y = 3 + \frac{3}{2}x$

All the answers have 3 as the **y** intercept.

This is strictly a slope problem off the 2006 Exit TAKS Test.

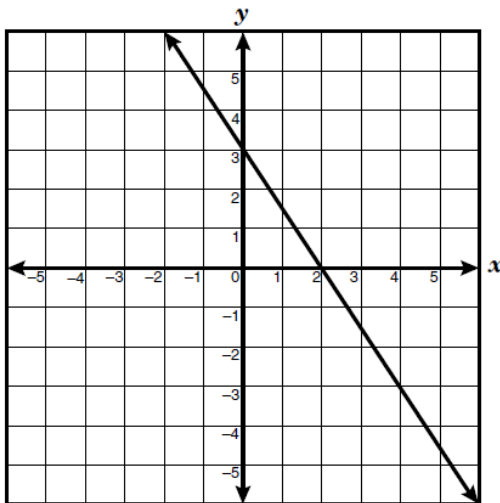
Is the slope positive or negative? _____

This eliminates _____ and _____

What is the slope? _____

19.

Which equation best represents the graph below?



F. $y = 3 - \frac{3}{2}x$

G. $y = 3 - \frac{2}{3}x$

H. $y = 3 + \frac{2}{3}x$

J. $y = 3 + \frac{3}{2}x$

20.

Find the slope of the line $2y = 8x - 3$.

A $-\frac{3}{2}$

B 4

C 8

D Not here

21.

Which equation describes a line that has a y -intercept of 5 and a slope of $\frac{1}{2}$?

F $y = 5 + \frac{1}{2}x$

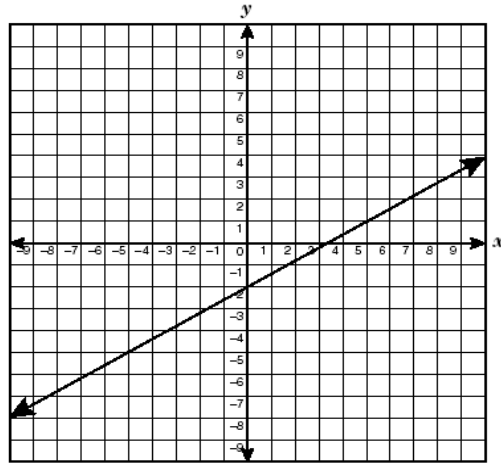
G $y = (5 + x)\frac{1}{2}$

H $y = 5x + \frac{1}{2}$

J $y = (5x + 1)\frac{1}{2}$

22.

26 What is the rate of change of the graph below?



F 3.5

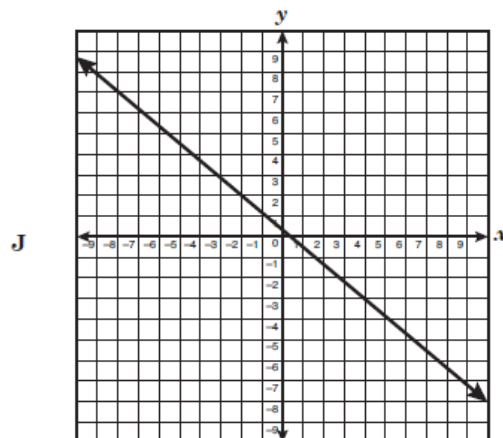
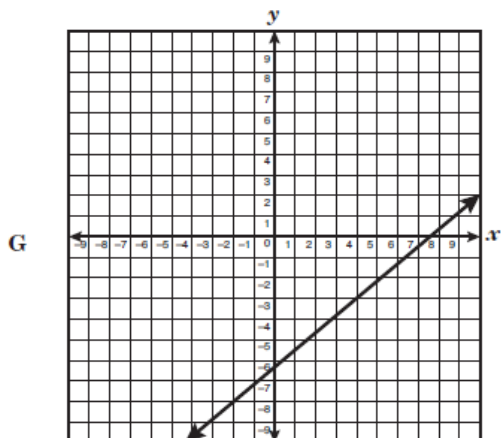
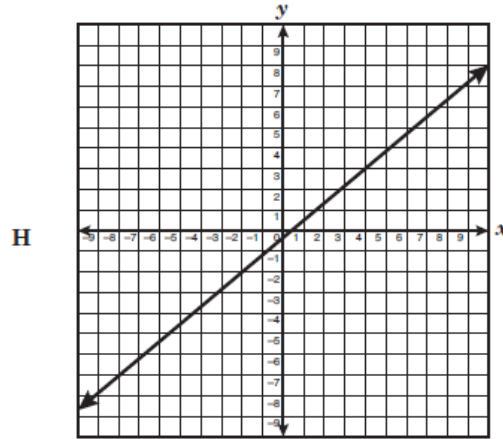
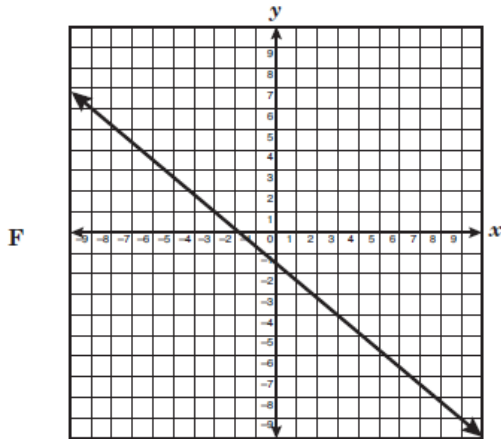
G 1.67

H 0.6

J -1.67

23.

Which graph best represents the line that has a slope of $-\frac{5}{6}$ and contains the point $(4, -3)$?



Which have negative slopes? Now which negative slope line has the point $(4, -3)$?

24.

Casey conducted an experiment and recorded the data in the table shown below.

x	y
1	1
2	2
3	5
4	10

Why is this table of values **not** a linear function?

25.

A sporting-goods store sold a total of 80 backpacks at the beginning of a new school year. Each backpack sold for either \$35 or \$50, not including tax. If x represents the number of \$35 backpacks the store sold, which expression represents the total amount of money in dollars from the sales of the two kinds of backpacks, not including tax?

- F $35x + 50(x - 80)$
- G $50x + 35(80 - x)$
- H $35x + 50(80 - x)$
- J $50x + 35(x - 80)$

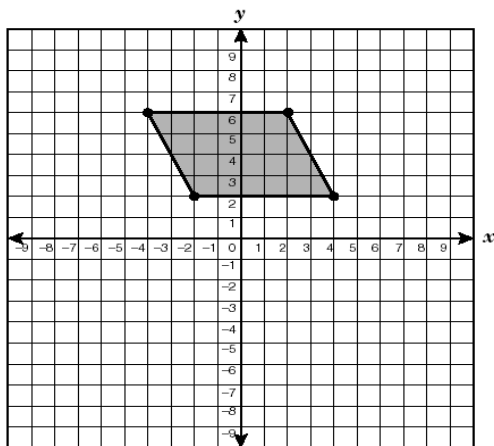
If 80 is the total backpacks and x is the \$35 backpack, how can we write the number of \$50 backpacks in terms of 80 and \$35?

()

We will multiply this by \$_____

26.

3 A shaded parallelogram is graphed on the coordinate grid below.



Which of the following functions describes a line that would include an edge of the shaded parallelogram?

- F $y = -2x + 5$
- G $y = -2x - 2$
- H $y = -2x + 9$
- J $y = -2x - 1$

Slope? Since every answer has the same slope, this must be a y intercept problem.

Use a straight edge on BOTH diagonal lines and see where they touch the y-axis.

Be careful as you must be **precise**.

Better yet, with a slope – rise over run of – 2 over 1, continue the diagonal lines until they intersect the y-axis

<p>27.</p> <p>What is the equation of the line containing the points (7, 5) and (11, 9)?</p> <p>A $y = 4x$</p> <p>B $y = x - 2$</p> <p>C $y = 2x - 2$</p> <p>D $y = x + 2$</p>	<p>Your equation will have a slope that may be calculated by the given points. Use the slope formula:</p> $m = \frac{y_2 - y_1}{x_2 - x_1} =$ <p>It does not matter which point is 1 and which is 2, just be consistent!</p> <p>Using your formula $m =$ _____</p> <p>Backdoor method: use the y= program and see which equation passes through both points.</p>
<p>28.</p> <p>Which equation describes the line passing through the points (3, 0) and (0, 4)?</p> <p>F $y = 3x + 4$</p> <p>G $x = 4y + 3$</p> <p>H $3x + 4y = 12$</p> <p>J $4x + 3y = 12$</p>	<p>Hummmmmmm.....</p> <p>You could calculate the slope for the two points, but only one equation has the slope.</p> <p>You could just solve each for y and use the y= program, but that is a lot of work.</p> <p>Really, you need to plug in (3, 0) and (0, 4) and see which equation works?</p>

$$Ax + By = C \quad \text{so: } y = \frac{A}{B}x + \frac{C}{B} \quad \therefore \quad m = \frac{A}{B} \text{ and } b = \frac{C}{B}$$

29. WATCH OUT FOR THE Y-INTERCEPT!

Which statement is true for the graph below?



- A Ms. Goodlett will earn \$500 if she sells \$5000 worth of merchandise.
- B Mr. Murphy will not earn any money if he does not sell any merchandise.
- C Mr. Laster will earn \$1000 if he sells \$1000 worth of merchandise.
- D Ms. Cho will earn \$700 if she sells \$5000 worth of merchandise.

A. Look at 5000. How much is the earnings? _____

B. Look at 0 sales. Does he still make money? _____

C. Look at 1000 – not 10,000. How much is the commission? _____

D. Look at 5000 again. Commission? _____

30.

What is the effect on the graph of the equation $6x + 3y = 12$ if 12 is changed to 36?

- A The line is translated up 24 units.
- B The line is translated up 8 units.
- C The line is translated down 24 units.
- D The line is translated down 8 units.

YOU MUCH CHANGE FROM STANDARD TO SLOPE INTERCEPT FORM!!!!

Change into slope intercept form:
 $6x + 3y = 12$

Change $6x + 3y = 36$ into slope intercept form

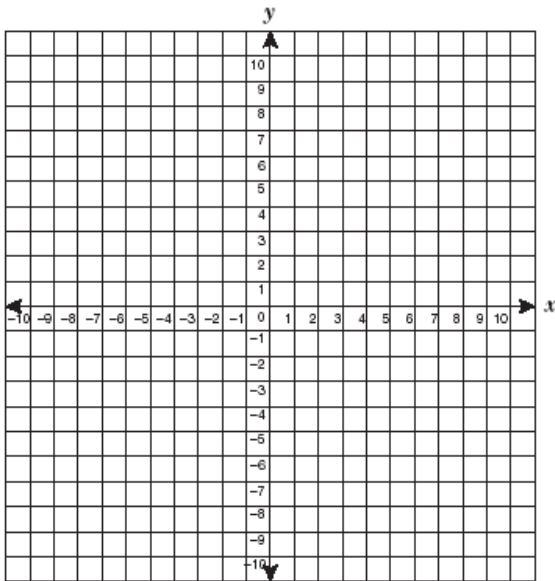
What happened to the y-intercept?

This is when it is good to know the y-intercept is C/B.

Equ : 1 C/B= _____ Equ 2: C/B= _____

31.

- 24 Which best describes the effect on the graph of $f(x) = 4x + 8$ if the y-intercept is changed to -3 ?



- F The slope decreases.
- G The new line passes through the origin.
- H The x-intercept increases.
- J The y-intercept increases.

Graph both on the grid.

Is the slope changed at all? _____

If a graph passes through the origin what will the y-intercept be? _____

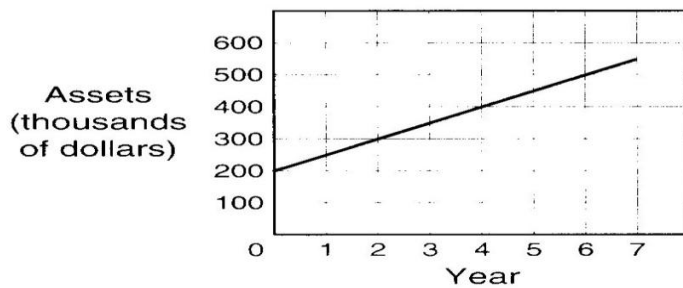
Is -3 an increase over 8 for the y-intercept? _____

Did the x-intercept get larger? _____

Graph on the calculator to check.

32.

The graph projects a business's growth in financial assets over a seven-year period.



Which of the following interpretations of the graph is true?

- A The company's initial assets are \$200,000. The expected growth rate is \$50 per year.
- B The company's initial assets are \$200. The expected growth rate is \$50,000 per year.
- C The company's initial assets are \$200,000. The expected growth rate is \$50,000 per year.
- D The company's initial assets are \$200. The expected growth rate is \$50 per year.

Carefull!!

Are you using thousands or hundred thousand?

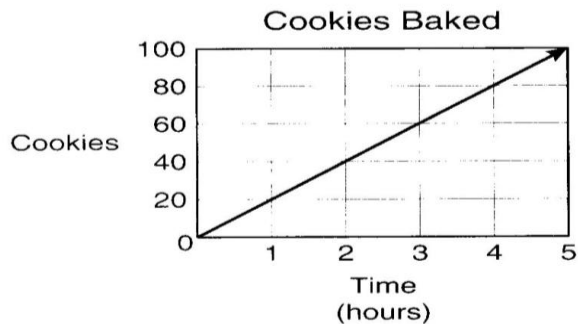
33.

Which equation is the parent function of a quadratic equation?

- A $y = \sqrt{x}$
- B $y = x$
- C $y = |x|$
- D $y = x^2$

34.

Mark and his friends are baking cookies for a bake sale. The graph below shows the total number of cookies they have compared to the number of hours they bake.



How would the graph change if Mark and his friends were given 20 cookies when they started baking?

- A The y -intercept would increase.
- B The slope would increase.
- C The y -intercept would decrease.
- D The slope would decrease.

35.

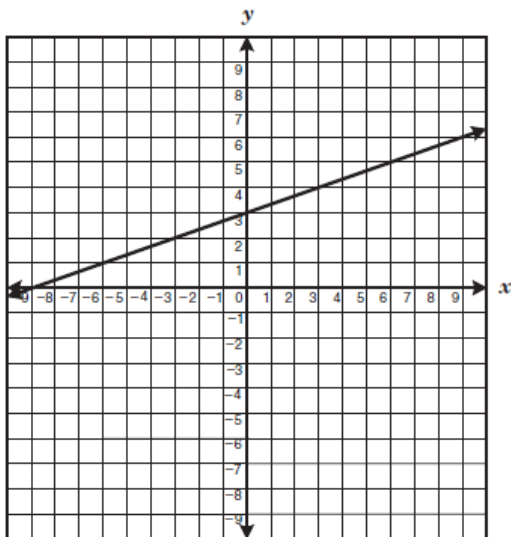
What is the y -intercept of the function $f(x) = 3(x - 2)$?

- F 3
- G 1
- H -2
- J -6

Make sure you distribute first

36.

26 The graph of a linear function is shown below.



If the line is translated 2 units down, which equation will best describe the new line?

F $y = 3x + 1$

G $y = \frac{1}{3}x + 1$

H $y = 3x + 5$

J $y = \frac{1}{3}x + 5$

This requires you to find both the slope and the y-intercept. Translate the line 2 units down, what will the new y-intercept be? _____

So, now is the slope 1/3 or 3? _____

37.

The equation $F = \frac{9}{5}C + 32$ represents the relationship between F , the temperature in degrees Fahrenheit, and C , the temperature in degrees Celsius. If the temperature is 104°F , what is the temperature in degrees Celsius?

So $F = 104$

Substitute into the equation and solve for C

ANSWER: _____.

38.

What is the rate of change of the function $y = -7$?

F 7

G -7

H 0

J Undefined

Rate of Change IS Slope

Write $y = -7$ in slope intercept form.

$y = \underline{\hspace{2cm}} x + \underline{\hspace{2cm}}$

What is the number next to the x ?