

Algebra 1 SOL Released Questions:

Graphing Linear Equations & Linear Inequalities

Directions: Click on the grid to plot two points. A line will extend through the two points. The coordinates of the points must be integers.

The function  $f(x)$  is shown on this coordinate plane. Plot two points on this grid to create the graph of the line that represents  $f(x) + 4$ .

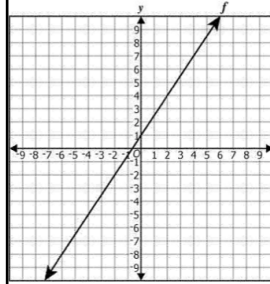
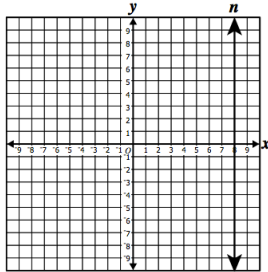


FIG 2009

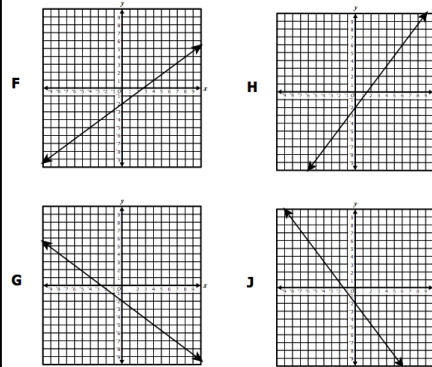
Which equation *best* models line  $n$  ?



- F  $x = 8$
- G  $y = 8$
- H  $x = 8y$
- J  $y = x + 8$

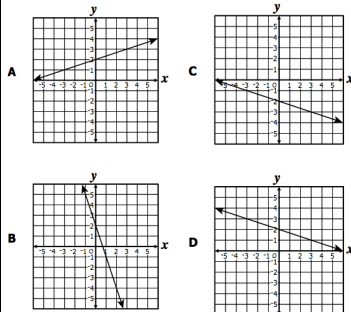
2010

Which graph *best* represents the equation  $y = \frac{3}{4}x - 2$  ?



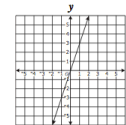
2010

Which graph best represents the equation of the line  $y = -\frac{1}{3}x + 2$  ?

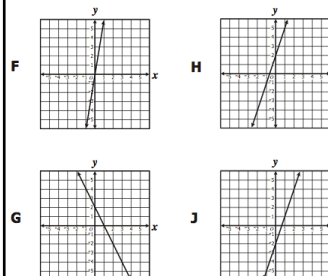


2010

The equation  $y = 3x$  is shown on the graph below.

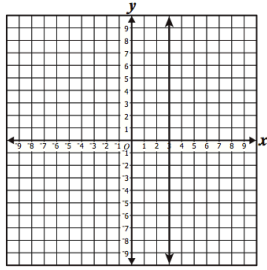


Which is most likely the graph of  $y = 3x + 2$  ?



2009

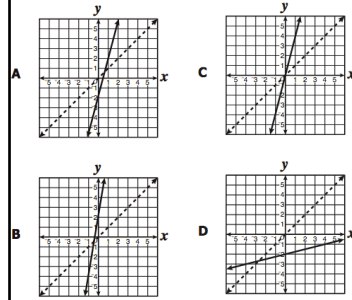
Which equation *best* describes the line whose graph is shown?



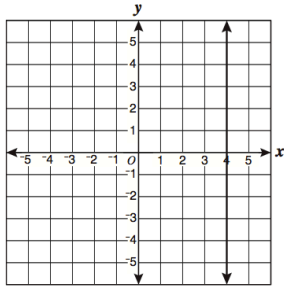
- F  $y = x + 3$
- G  $y = 3x$
- H  $y = 3$
- J  $x = 3$

2009

The dashed line on each grid represents  $y = x$ . On which grid is  $y = 4x - 2$  apparently represented as well?



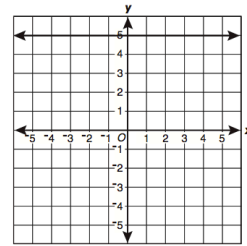
2008



Which equation *best* represents the line shown on the grid?

- F  $y = x - 4$
- G  $y = 4x$
- H  $x = 4$
- J  $y = 4$

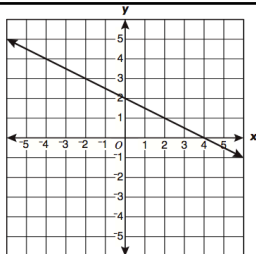
2008



Which is *most* likely the equation of the line shown on the graph above?

- F  $y = x + 5$
- G  $y = 5x$
- H  $y = 5$
- J  $x = 5$

2007

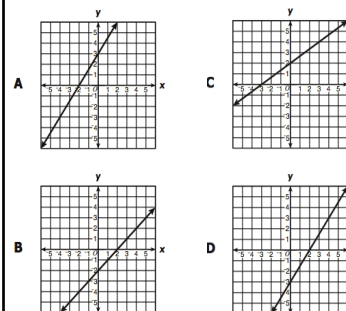


Which could be an equation for the line shown on the grid?

- A  $y = -\frac{1}{2}x + 2$
- B  $y = -\frac{1}{2}x - 2$
- C  $y = -2x + 2$
- D  $y = 2x - 2$

2007

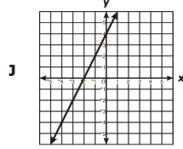
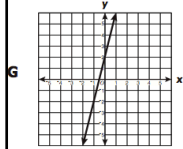
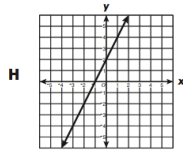
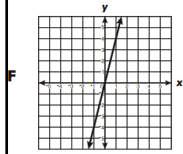
Which graph *best* represents a line with an x-intercept of 2 and a y-intercept of -3?



2007

Which graph best represents the following function?

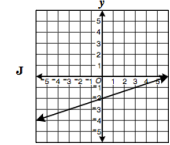
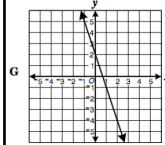
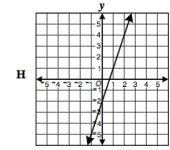
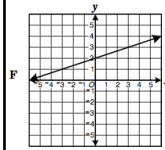
$$y = 4x + 2$$



2007

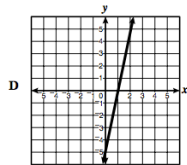
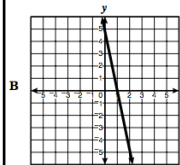
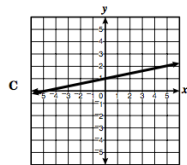
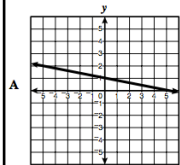
Which graph best represents the line

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

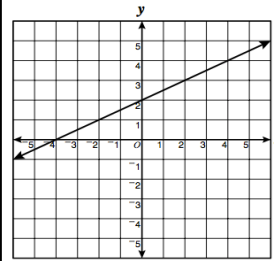


2008

Which line has a y-intercept of -5 and an x-intercept of 1?



2008



Which equation best represents the line shown?

F  $y = 2x + 2$

G  $y = 2x + 1$

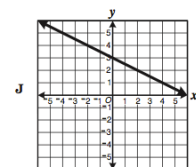
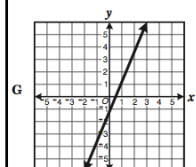
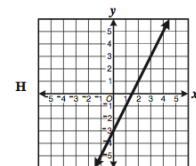
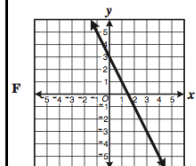
H  $y = \frac{1}{2}x + 2$

J  $y = x + 2$

2008

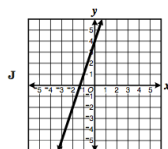
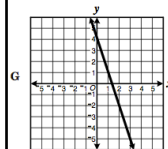
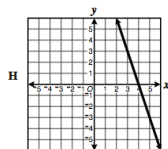
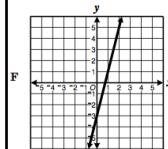
Which of the following is most likely a graph of

$$y = -2x + 3?$$

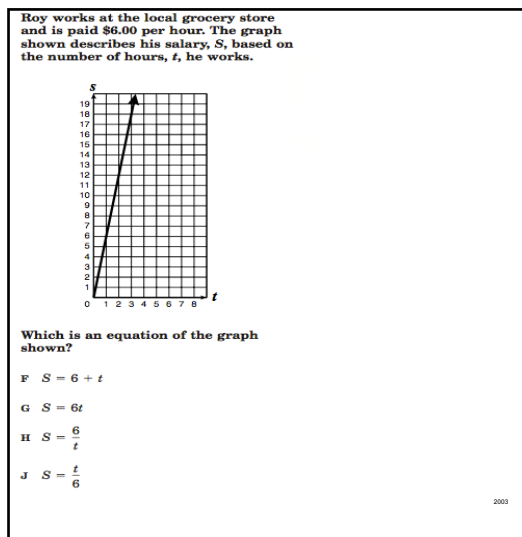
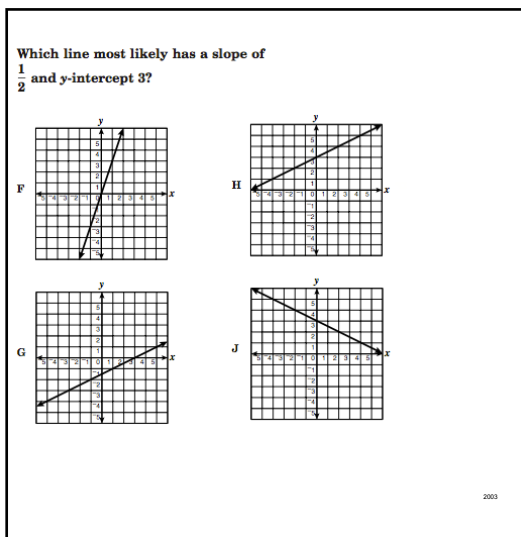
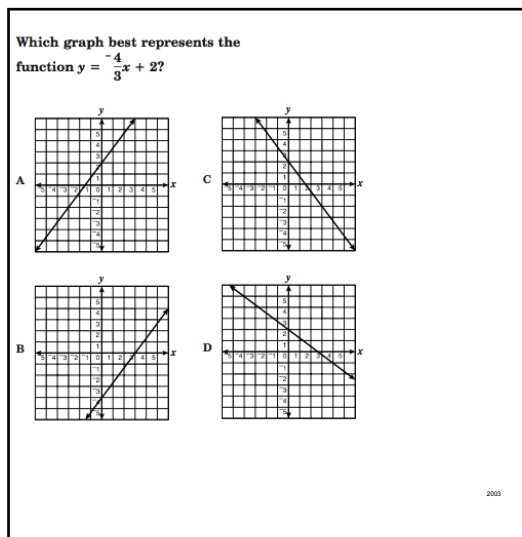
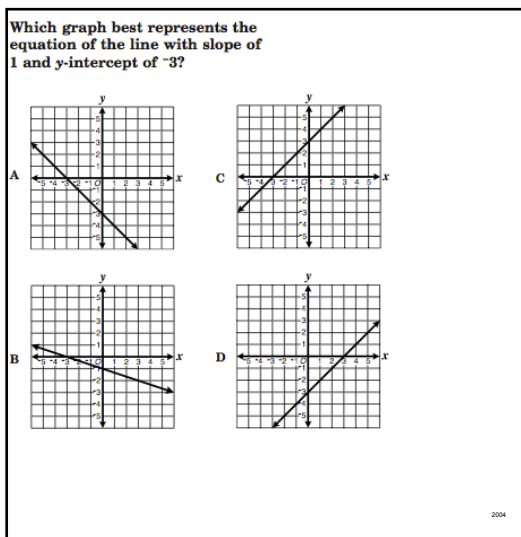
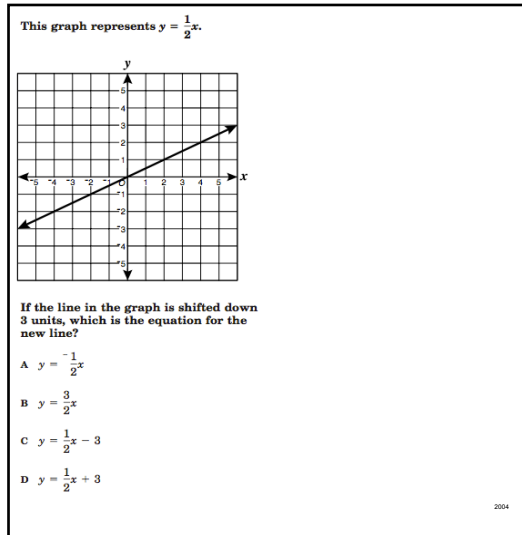
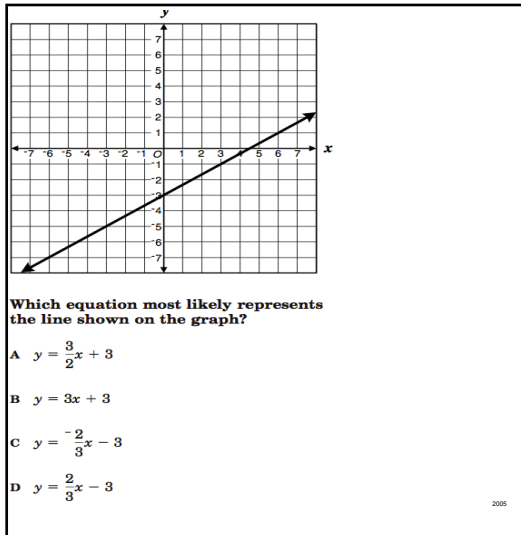


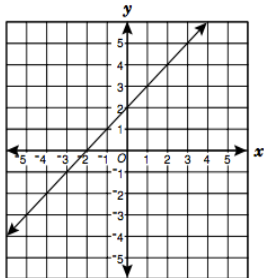
2005

Which graph best represents a line with a y-intercept of 4 and slope -3?



2005



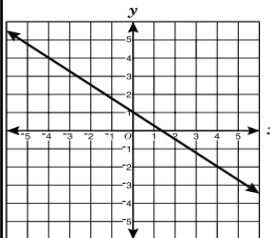


Which equation best describes this graph?

- A  $y = -x$
- B  $y = 2x + 2$
- C  $y = x - 2$
- D  $y = x + 2$

2003

The graph of  $y = -\frac{3}{4}x + 1$  is shown.

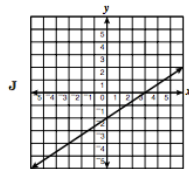
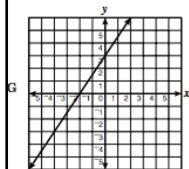
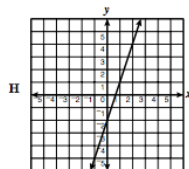
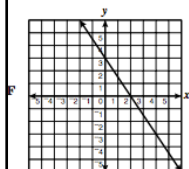


If the line in the graph is shifted up 2 units, which is the equation of the new line?

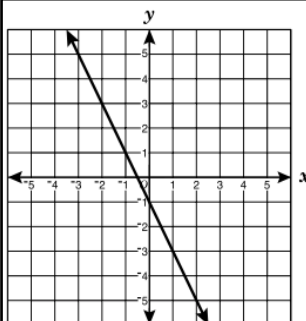
- A  $y = \frac{3}{4}x + 3$
- B  $y = \frac{3}{4}x + 2$
- C  $y = -\frac{3}{4}x + 2$
- D  $y = -\frac{3}{4}x + 3$

2002

Which is the graph of a line that appears to have a slope of 3 and y-intercept -2?



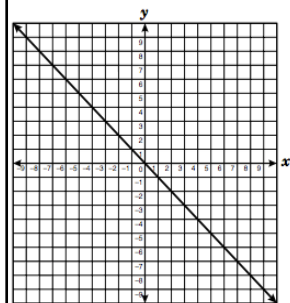
2002



Which best represents the equation of the line shown?

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

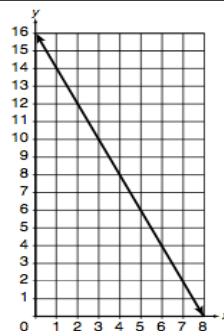
2002



An equation for the line shown could be —

- A  $y = x$
- B  $y = -x$
- C  $y = x - 1$
- D  $y = x + 1$

2002



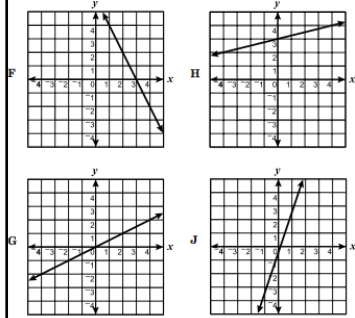
Which equation best describes this graph?

- A  $y = 20 - 4x$
- B  $y = x + 14 - x^2$
- C  $y = 16 - 2x$
- D  $y = x^2 - 5x + 18$

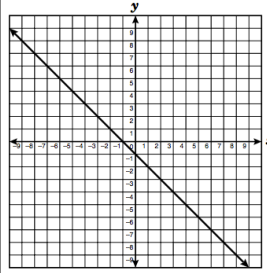
2002

x	1	4	3
y	4	-2	0

Which graph appears to contain all the points in the table?



2002

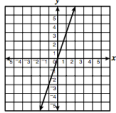


The line on the grid is best described by the equation —

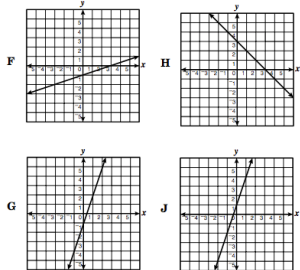
- A  $y = x + 1$
- B  $y = x - 1$
- C  $y = -x + 1$
- D  $y = -x - 1$

2001

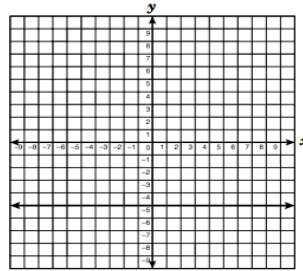
The graph below represents the equation  $y = 3x$ .



Which graph best represents  $y = 3x - 1$ ?



2001

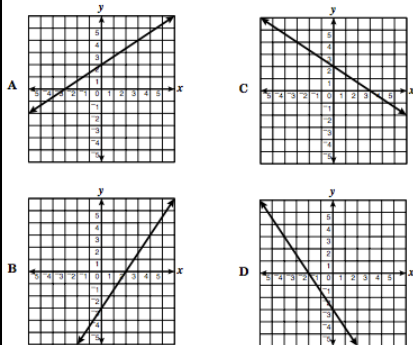


Which equation best describes this graph?

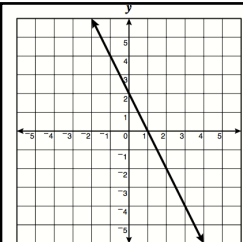
- F  $x = 5y$
- G  $x = -5$
- H  $y = -5x$
- J  $y = -5$

2001

Which line has y-intercept -3 and x-intercept 2?



2001

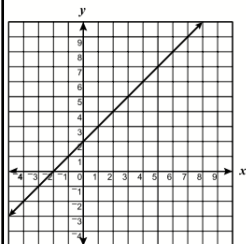


Which table *most* likely matches this graph?

F	<table border="1"><tr><th>x</th><th>y</th></tr><tr><td>2</td><td>0</td></tr><tr><td>2</td><td>2</td></tr><tr><td>0</td><td>1</td></tr></table>	x	y	2	0	2	2	0	1	H	<table border="1"><tr><th>x</th><th>y</th></tr><tr><td>0</td><td>2</td></tr><tr><td>3</td><td>-4</td></tr><tr><td>1</td><td>0</td></tr></table>	x	y	0	2	3	-4	1	0
x	y																		
2	0																		
2	2																		
0	1																		
x	y																		
0	2																		
3	-4																		
1	0																		
G	<table border="1"><tr><th>x</th><th>y</th></tr><tr><td>1</td><td>0</td></tr><tr><td>2</td><td>3</td></tr><tr><td>3</td><td>1</td></tr></table>	x	y	1	0	2	3	3	1	J	<table border="1"><tr><th>x</th><th>y</th></tr><tr><td>0</td><td>1</td></tr><tr><td>2</td><td>2</td></tr><tr><td>4</td><td>3</td></tr></table>	x	y	0	1	2	2	4	3
x	y																		
1	0																		
2	3																		
3	1																		
x	y																		
0	1																		
2	2																		
4	3																		

2000

Which equation is represented by this line?



F  $y = x - 2$

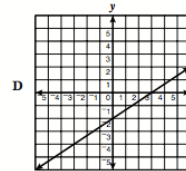
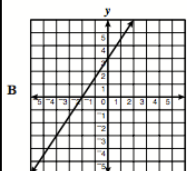
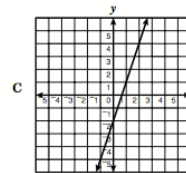
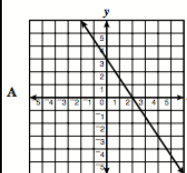
G  $y = \frac{x}{2} + 2$

H  $y = x + 2$

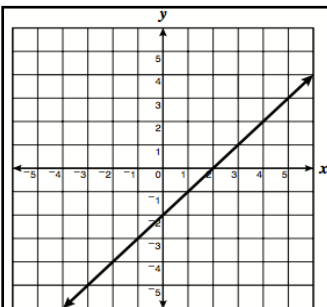
J  $y = 2x + 2$

2000

Which line on the graph below has y-intercept 3 and x-intercept -2?



2000



Which is most likely an equation for the line shown?

F  $y = -x$

G  $y = x - 2$

H  $y = -x + 4$

J  $y = 2x - 2$

2000