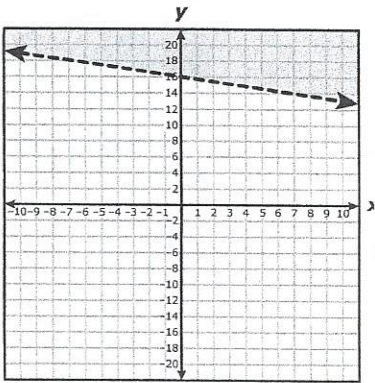


Algebra 1, Unit 4 Common Assessment

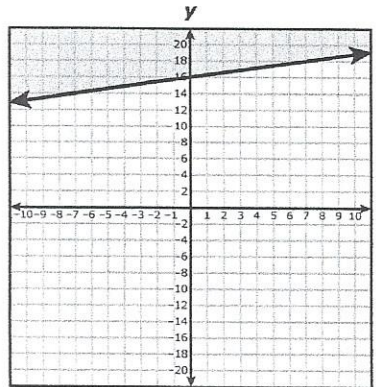
Show Work for Credit

1 Which graph represents the inequality $+2x + 7y < 112$?

A



B



$$+2x + 7y < 112$$

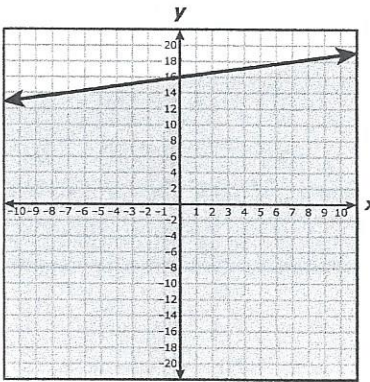
$$\begin{array}{r} +2x \\ \hline -2x \end{array}$$

$$7y < -\frac{2}{7}x + \frac{112}{7}$$

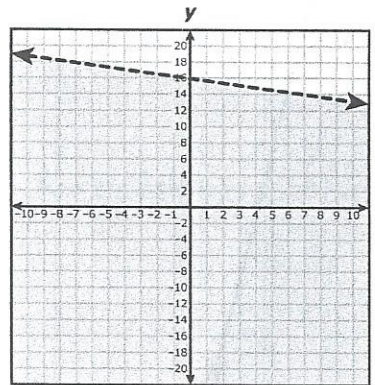
$$y < -\frac{2}{7}x + 16$$

↑
Dash Line
Shade Below

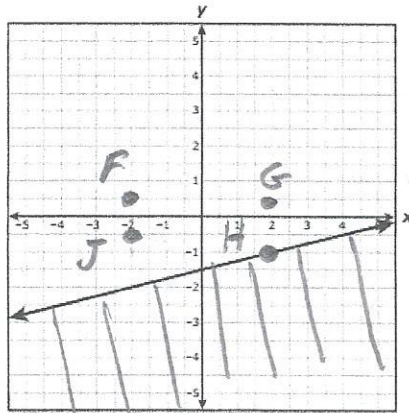
C



D



2 The graph of $0.5x - 2y = 3$ is shown on the grid.



• Graph
• Relation
Graph Show Shade Below
H is On The Line

Which ordered pair is in the solution set of $0.5x - 2y \geq 3$?

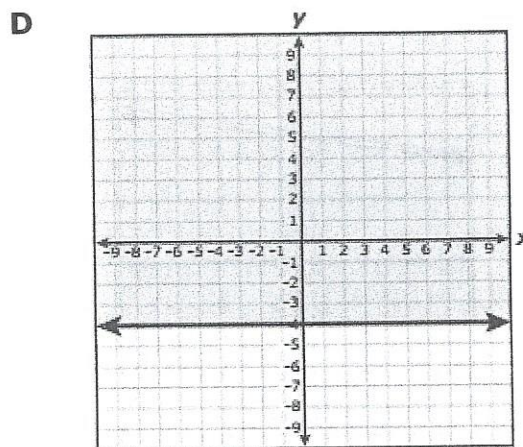
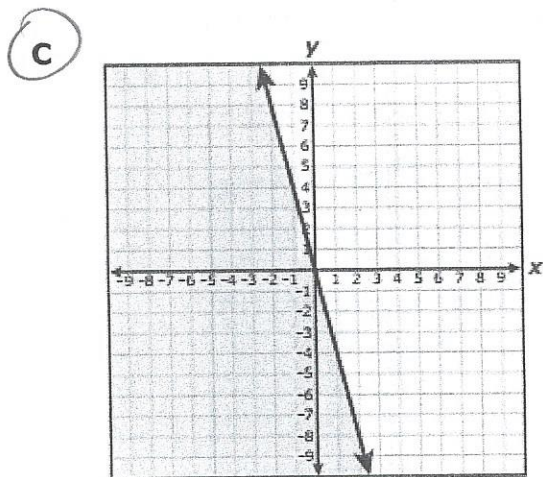
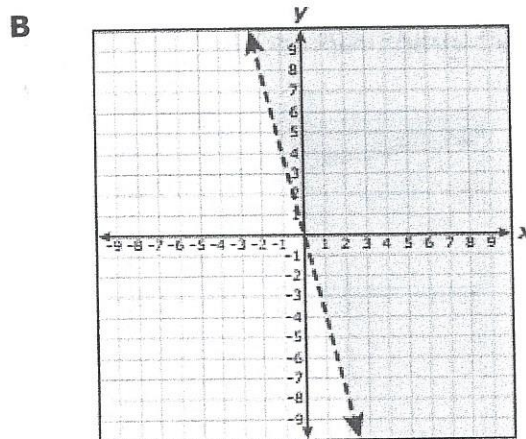
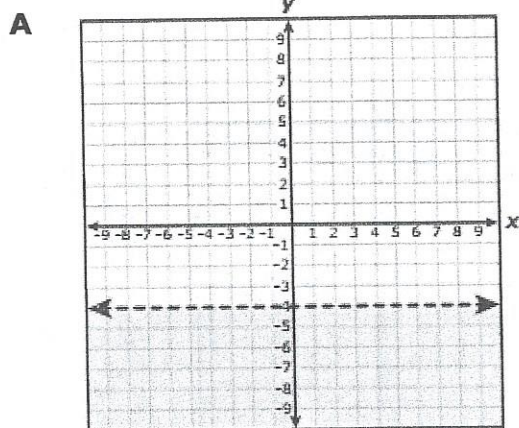
F (-2, 0.5)

G (2, 1)

H (2, -1)

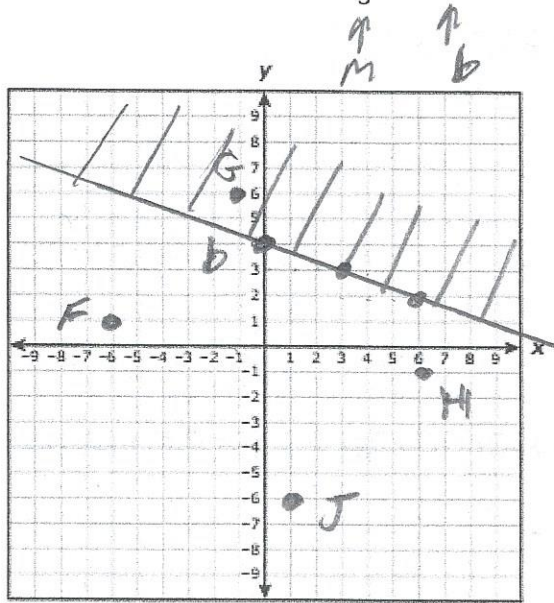
J (-2, -0.5)

3 Which graph best represents the solution set of $y \leq -4x$?



$y \leq -4x$
↑ ↑ ↑
Solid m b = φ
Below

- 4 Which ordered pair is in the solution set of $y \geq \frac{1}{3}x + 4$?



\geq Above
Solid

- F (-6, 1)
- G (-1, 6)**
- H (6, -1)
- J (1, -6)

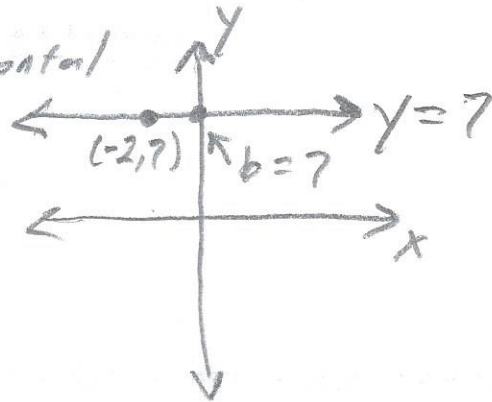
- 5 What is the equation of the line that passes through the point $(-2, 7)$ and has a slope of zero?

- A $x = 7$
- B $y = -2$
- C $x = -2$
- D $y = 7$**

$$y = mx + b$$

\uparrow
b, Horizontal

$$y = b$$



6 What is the equation in standard form of the line that passes through the

point $(4, -8)$ and has a slope of $\frac{1}{4}$?

F $x - 4y = 36$

G $x + 4y = 28$

H $x - 4y = -36$

J $x + 4y = -28$

$$\begin{array}{r} x - 4y = 36 \\ -x \qquad -x \\ \hline -4y = -x + 36 \\ \frac{-4y}{-4} = \frac{-x}{-4} + \frac{36}{-4} \\ y = \frac{1}{4}x - 9 \end{array}$$

• Graph
• f(x)
• Table

7 Which equation in standard form has a graph that passes through the point $(-4, 2)$ and

has a slope of $\frac{9}{2}$?

A $9x - 2y = 36$

B $9x + 2y = 26$

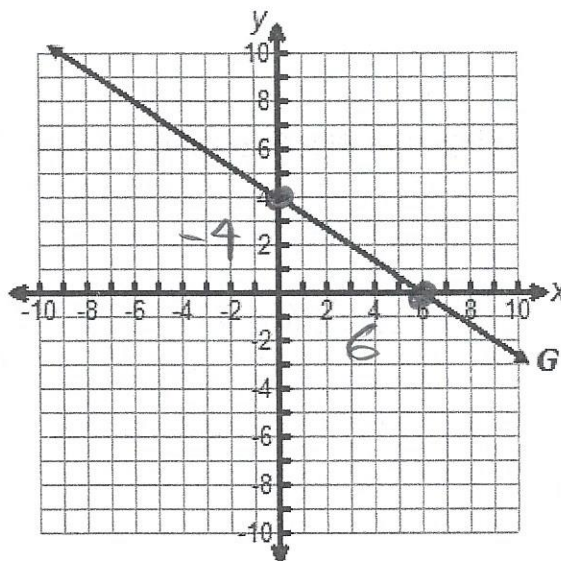
C $9x - 2y = -40$

D $9x + 2y = -10$

$$\begin{array}{r} 9x - 2y = -40 \\ -9x \qquad -9x \\ \hline -2y = -9x - 40 \\ \frac{-2y}{-2} = \frac{-9x}{-2} + \frac{-40}{-2} \\ y = \frac{9}{2}x + 20 \end{array}$$

• Graph
• f(x)
• Table

8 Line G is graphed on the coordinate plane below.



$m = \frac{-4}{6}$
 $m = -\frac{2}{3}$

1.3 pt

Which linear equation can be used to represent a line parallel to line G passing through the point $(-6, 1)$?

F $3x + 2y = -16$

G $2x + 3y = -9$

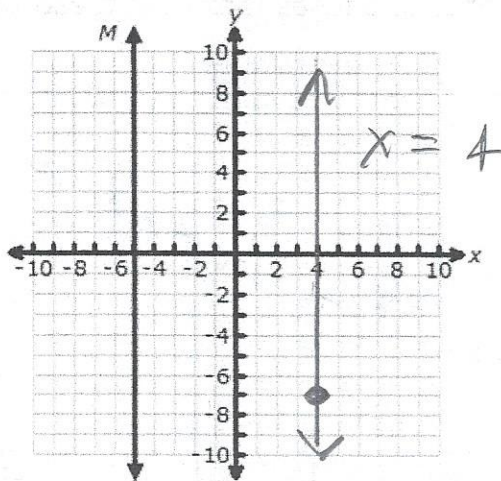
H $2x + 3y = 15$

J $3x + 2y = 20$

$$\begin{array}{r} 2x + 3y = -9 \\ -2x \qquad -2x \\ \hline 3y = -2x - 9 \\ \frac{3y}{3} = \frac{-2x}{3} + \frac{-9}{3} \\ y = -\frac{2}{3}x - 3 \end{array}$$

• Graph
• f(x)
• Table

9 Line M is graphed on the coordinate plane below.

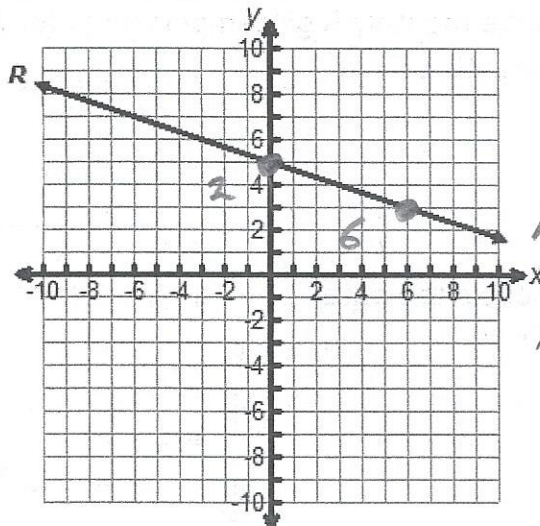


Which linear equation can be used to represent a line parallel to M passing through the point $(4, -7)$?

- A $x = 4$
- B $x = -7$
- C $y = -7$
- D $y = 4$

slope is undefined $\Rightarrow x = \underline{\quad}$
 \uparrow
Equation, Vertical

10 Line R is graphed on the coordinate plane below.



$m = \frac{-2}{6}$
 $m = -\frac{1}{3}$

$m_p = \frac{3}{1} = 3$

Which linear equation can be used to represent a line perpendicular to line R passing through the point $(3, -6)$?

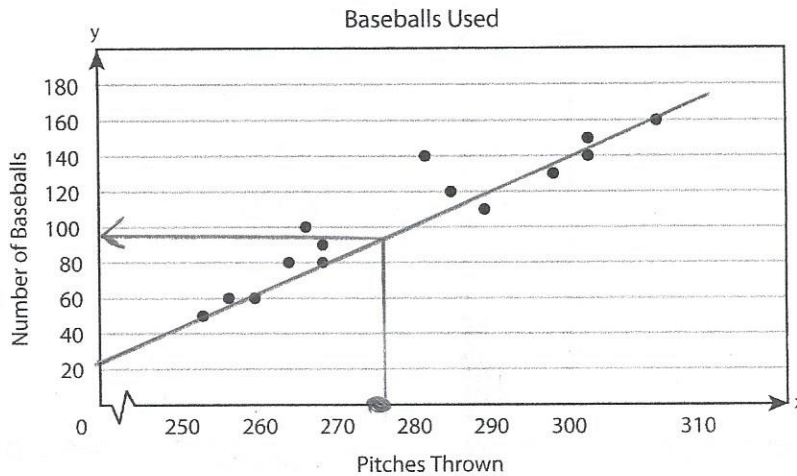
- F $x - 3y = 21$
- G $3x + y = 3$
- H $3x - y = 15$
- J $3x - y = 3$

$$\begin{array}{r} 3x - y = 15 \\ -3x = \\ \hline -y = -3x + 15 \\ = + \frac{15}{-1} \\ = - 15 \\ = - 15 \end{array}$$

$$y = 3x - 15$$

• Graph
• $f(x)$
• Table

- 11 The scatterplot below shows the relationship between the number of baseballs used in 14 games and the number of pitches thrown in these games.



Based on the scatterplot, what is the best prediction of the number of baseballs that will be used if 275 pitches are thrown?

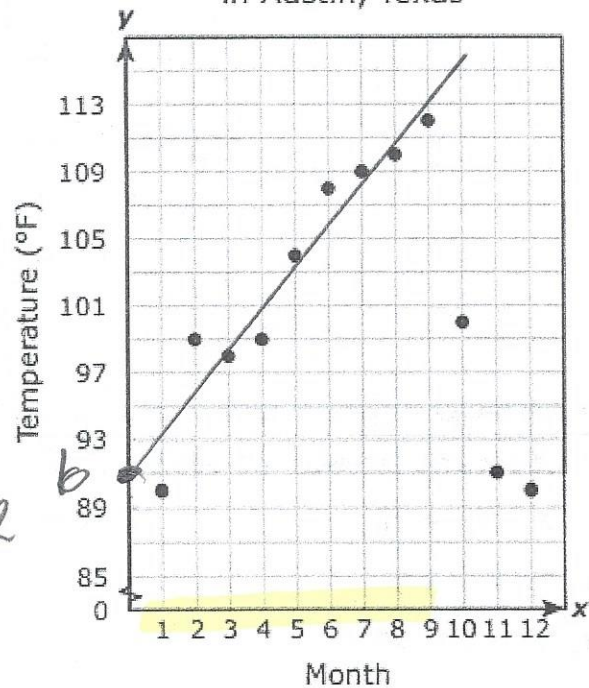
- A 150
- B 60
- C 100**
- D 160

Use Line of Best Fit

@ 275 = 100

- 12 The scatterplot shows the monthly high temperatures for Austin, Texas, in degrees Fahrenheit over a 12-month period.

Monthly High Temperatures
in Austin, Texas



Which function best models the data from Month 1 to Month 9?

- F $y = -1.6x + 111$
- G $y = 3.5x + 85$
- H $y = 2.5x + 90$**
- J $y = -3.3x + 130$

← b

b = 92