SOL Lesson 2 Practice
Graphing Linear Eqns

Name $\qquad$ Date $\qquad$

The line on the grid is best described by the equation -
$-7 \quad$ Which is an equation for the line that contains the points $(-2,3)$ and $(2,-1)$ ?

A $y=x+5$
B $y=x-3$
C $y=-x+1$
D $y=-2 x-1$
-5 Which equation is the slope-intercept form of

$$
-x+6 y=12 ?
$$

F $\quad y=\frac{1}{6} x+2$
G $y=\frac{-1}{6} x+2$

H $x=6 y-12$

J $6 y=12+x$
-10 What is the slope of the line that contains points (2, 3) and (2, -4)?
-8


Which equation best describes this graph?

A $y=-x$
B $y=2 x+2$
C $y=x-2$
D $y=x+2$
-6 A line has a slope of $\mathbf{- 2}$ and contains the point $(1,-1)$. Which is an equation of this line?
-4 What is the slope of the line that contains (4, -1) and (3, 3)?

F -4

G $\quad-\frac{1}{2}$
H $\quad-\frac{1}{4}$

J 2

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| -3 | Which of the following is most likely a <br> graph of |
| :--- | :--- |

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

F

G


J

-2 Which line has $\boldsymbol{y}$-intercept -3 ant $x$-intercept 2?

A


B


C


D


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Name $\qquad$ Date $\qquad$
-1 Which graph best represents the function $y=\frac{-4}{3} x+2$ ?

A



C


D


0 Which graph best represents the equation of the line with slope of 1 and $y$-intercept of $\mathbf{- 3}$ ?

A


B


C


D


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Which line on the graph has an undefined slope?

A $A$
B $B$
C $C$
D $D$
3 Which is a zero of the function $f(x)=x^{2}+3 x-4$ ?

2


Which equation best represents the line shown on the grid?

$$
\begin{array}{ll}
\mathbf{F} & y=x-4 \\
\mathbf{G} & y=4 x \\
\mathbf{H} & x=4 \\
\mathbf{J} & y=4
\end{array}
$$

4 Which is a zero of the function $f(x)=3 x-21$ ?

A -21
B $\quad-7$
C 0
D 7
5 The point ( $q, 0$ ) lies on the graph of the following function.

$$
f(x)=\frac{-3}{4} x-6
$$

What is the value of $q$ ?
A -8
B -6
C 6
D 8

6 What are the $x$ - and $y$-intercepts of the line with equation $4 x+5 y=40$ ?

A $x$-intercept $10, y$-intercept 8
B $x$-intercept $8, y$-intercept 10
C $x$-intercept $-10, y$-intercept -8
D $x$-intercept $-8, y$-intercept -10

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




9


Which best represents the equation of the line shown?

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

8


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

| F | $y=x+5$ |
| :--- | :--- |
| $\mathbf{G}$ | $y=5 x$ |
| $\mathbf{H}$ | $y=5$ |
| J | $x=5$ |

10


Which equation best describes this graph?

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


The line shown contains ( $-1,2$ ) and $(1,-1)$. What is the slope of the line?

13 Which is an equation for the line that contains the points $(-3,5)$ and $(1,-3)$ ?

A $y=-x+2$
B $y=-2 x-1$
C $y=-\frac{1}{2} x-\frac{3}{2}$
D $y=\frac{3}{2} x-\frac{9}{2}$

15 What is the $y$-intercept of

$$
4 x+8 y=12 ?
$$

A 3

B $\frac{3}{2}$
C $\quad-\frac{1}{2}$

D -4
12. 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 $\quad y=\frac{3}{4} x+3 \quad$ B $\quad y=\frac{3}{4} x+2$
C $y={ }^{-} \frac{3}{4} x+2$ D $y=\frac{-3}{4} x+3$
14 The equation of the line that contains the points $(-8,1)$ and $(0,-5)$ is -

A $y=\frac{3}{4} x+7$
B $y=\frac{1}{2} x+1$
C $y=\frac{-3}{4} x-5$
D $y=\frac{-3}{4} x+7$
16 What are the x -intercepts of the graph of the following equation?

$$
y=x^{2}+5 x+4
$$

G -2 and 3
H -1 and 1
J -1 and 2
$\qquad$
$\qquad$

17 | $x$ | -2 | 0 | 2 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $y$ | 3 | 2 | 1 | 0 |

Which equation fits the data in the table?

A $y={ }^{-} \frac{x}{2}+2$

B $y=x+3$
H $y=\frac{2}{3} x-\frac{5}{3}$
C $y=2 x-3$

D $y=\frac{x}{2}+2$
19 Which is an equation for the line which contains $(3,4)$ and the origin?

A $y=\frac{3}{4} x$
B $y=\frac{4}{3} x$
F $y=\frac{1}{2} x$

G $y=2 x$
c $y=4 x+3$

D $y=3 x+4$
20 Which is an equation for the line with a slope of $\frac{1}{2}$ that passes through the origin?

H $\quad y=\frac{1}{2}$

J $\boldsymbol{x}=0$
21 The point $(q, 0)$ lies on the graph of the
22 What are the $x$ - and $y$-intercepts of the line with equation $4 x+5 y=40$ ?

$$
f(x)=\frac{-3}{4} x-6
$$

What is the value of $q$ ?
A $x$-intercept $10, y$-intercept 8
B $x$-intercept $8, y$-intercept 10
C $x$-intercept $-10, y$-intercept -8
D $x$-intercept $-8, y$-intercept -10
A -8
в -6
C 6
D 8
23. What are the $x$-intercepts of the graph of the following equation?

$$
y=x^{2}+6 x-7
$$

A -7 and -1
B 1 and 7
C - 1 and 7
D - 7 and 1
$\qquad$
$\qquad$
24. Using the inequalities shown, create a system of two inequalites that could be represented by this graph.


25. A rancher wants to fence in a rectangular habitat for the foals that are born in the spring. The length of the habitat should be at least 60 feet, and the distance around it should be no more than 360 feet.
Select the graph that represents the possible dimensions of the habitat.
A)

C)

26. Circle each equation whose line has a slope of 3 .
$y=3 x+7$
$-3 x+y=9$
$y-4=3(x-2)$
$y=x+3$
$3 x-3 y=3$
$y=3$
15. Write the equation of a line that:
a) Passes through the point $(4,-2)$ and has an $x$-intercept of 3 $\qquad$
b) Passes through the point $(5,1)$ and has a $y$-intercept of -3

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