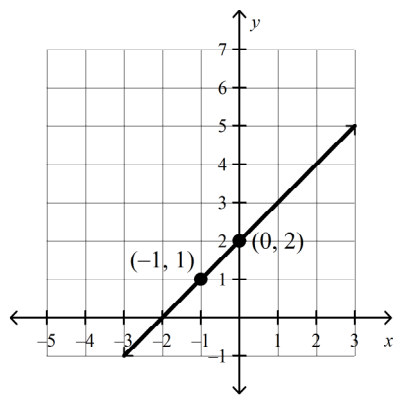


Grade 8: Writing Linear Equations Test

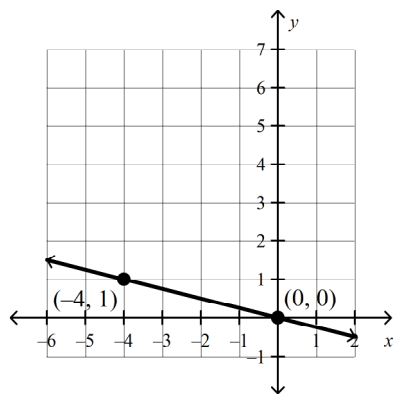
STUDY GUIDE

Write an equation of the line in slope-intercept form.

1

Equation: $y =$ _____

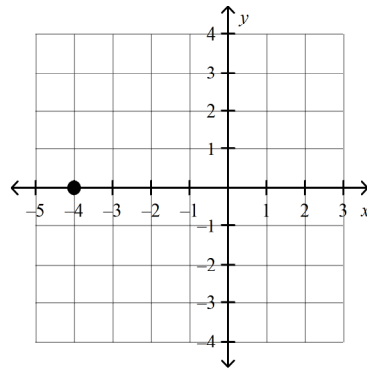
2

Equation: $y =$ _____

Write an equation of the line with the given slope that passes through the given point.

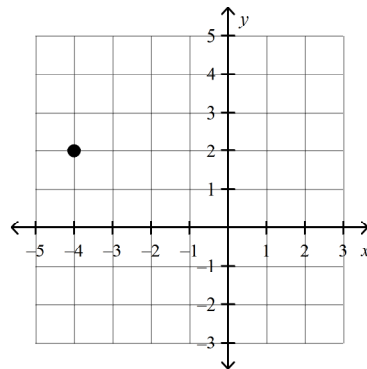
3

$$m = \frac{1}{2}$$

Equation: $y =$ _____

4

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

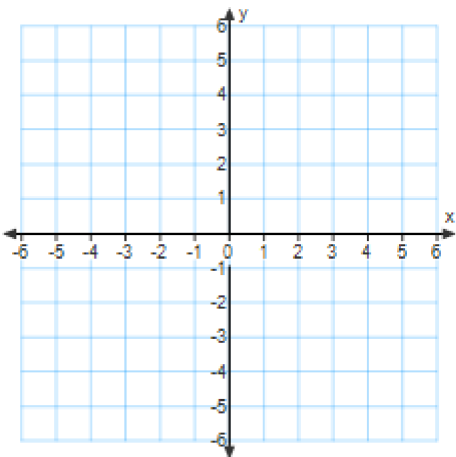
Equation: $y =$ _____

Name: _____

ID: S

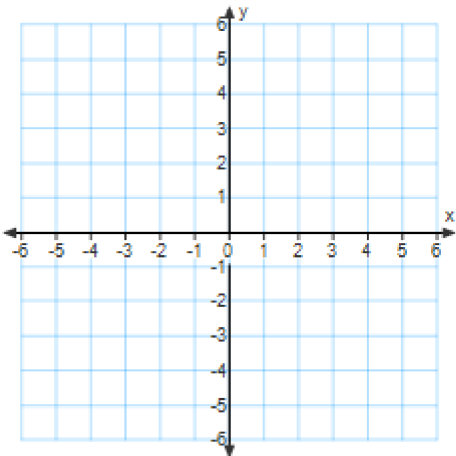
Write an equation of the line that passes through the points.

- 5 $(-5, -1), (0, -1)$



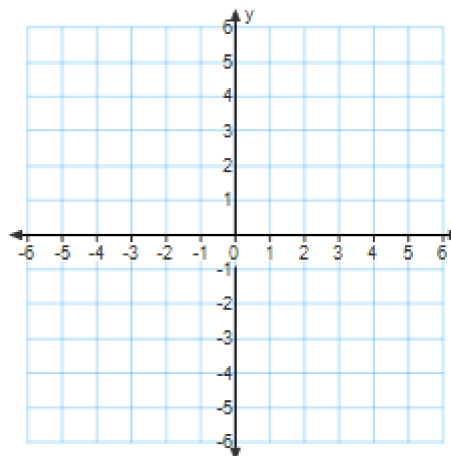
Equation: $y =$ _____

- 6 $(6, 4), (-5, -7)$



Equation: $y =$ _____

- 7 $(1, 6), (0, 6)$



Equation: $y =$ _____

- 8 A mechanic at a bicycle repair shop charges \$25 per hour. The cost of the parts is \$45. Write an equation that represents the total cost y of fixing the bicycle after x hours of work.

Equation: $y =$ _____

- 9 For a field trip, a bus company charges \$60 plus a fee of \$4.50 per student. Write an equation that represents the cost y of the field trip for x students.

Equation: $y =$ _____

10

Keifer Sutherland wants to buy a new car. He has already saved \$1000 and will earn the rest by doing acting jobs for \$8,500 each.

Part A

Write an equation that represents the amount of money Keifer has saved given the number of acting jobs he's completed. Be sure to define your variables.

Define the variables

Equation _____

PART B

Explain what the y-intercept and slope represents in the context of the problem.

Slope _____

y-intercept _____

Part C

Determine the number of acting jobs Keifer must complete before he is able to purchase a car that costs \$94,500 after tax.

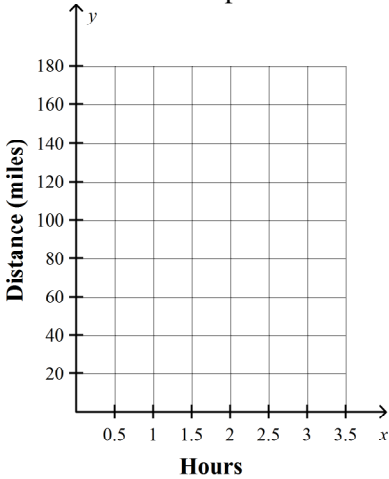
SHOW ALL WORK

Answer _____ **acting jobs**

- 11 The table shows the distance you travel over a 3-hour period.

Hours, x	Distance (miles), y
0.5	25
1	55
1.5	77
2	106
2.5	130
3	146

- a. Make a scatter plot of the data.



- b. Draw a line of best fit on your scatter plot.
- c. Write an equation of the line of best fit.

Equation: $y =$ _____

- d. Predict the distance you will travel in 5 hours.

_____ miles

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Grade 8: Writing Linear Equations Test Answer Section

STUDY GUIDE

1 $y = x + 2$

2 $y = -\frac{1}{4}x$

3 $y = \frac{1}{2}x + 2$

4 $y = -\frac{1}{2}x$

5 $y = -1$

6 $y = x - 2$

7 $y = 6$

8 $y = 25x + 45$

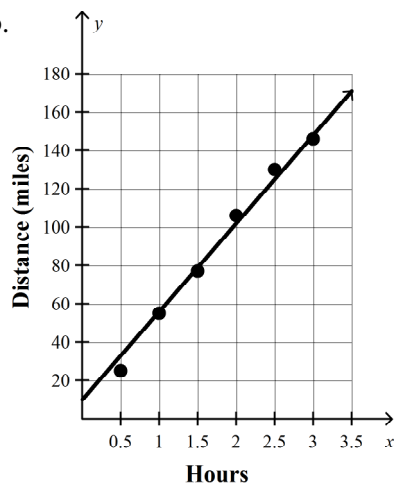
9 $y = 4.5x + 60$

10 let $x = \#$ of acting jobs
let $y = \text{total \$ raised}$
 $y = 8500x + 1000$

slope = 8500, \$ per acting job
y-int = 1000, \$ at the start

11

11 a-b.



c. Sample answer: $y = 46x + 10$

d. Sample answer: 240 miles

12 ? ! ? ! ?