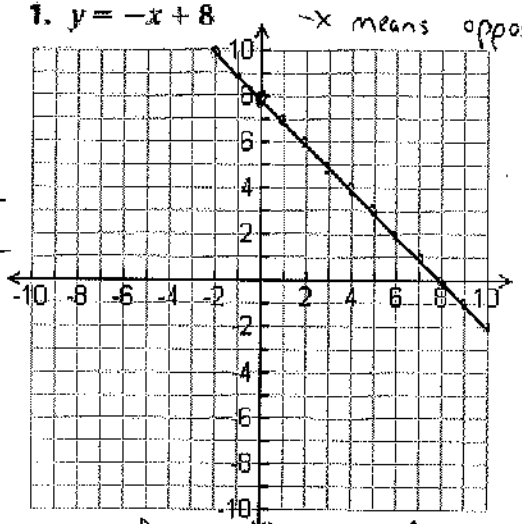
Name _____ Date _____

Chapter 4 Quiz Review

Graph the linear equation. Use the table to help you get started.

1. $y = -x + 8$ → means opposite x

Pattern
Down 1
Right 1

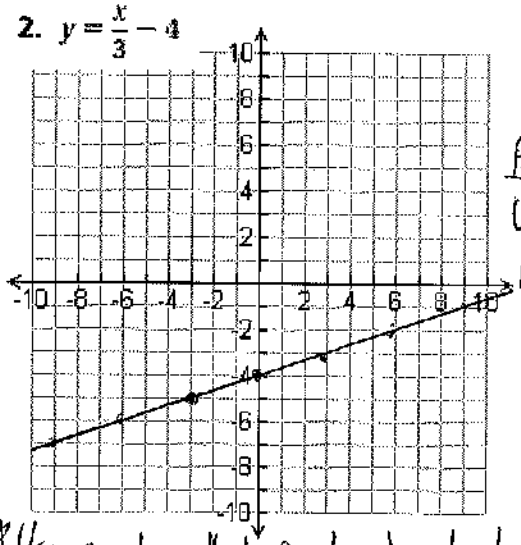


★ Pick a number for x and solve for y

x	0	1	2	3
y	8	7	6	5

2. $y = \frac{x}{3} - 4$

Pattern
Up 1
Right 3

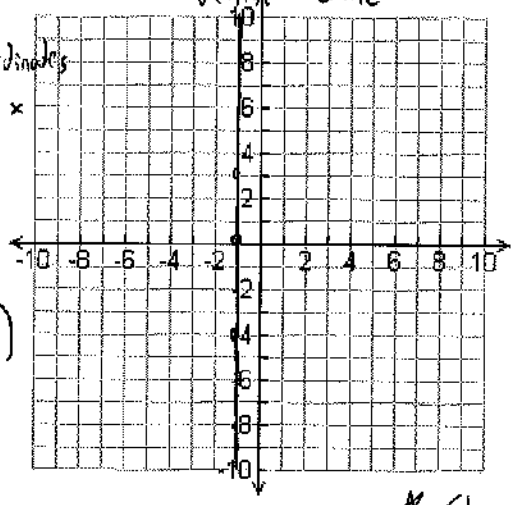


★ Use numbers that easily divide by 3

x	0	3	6	-3
y	-4	-3	-2	-5

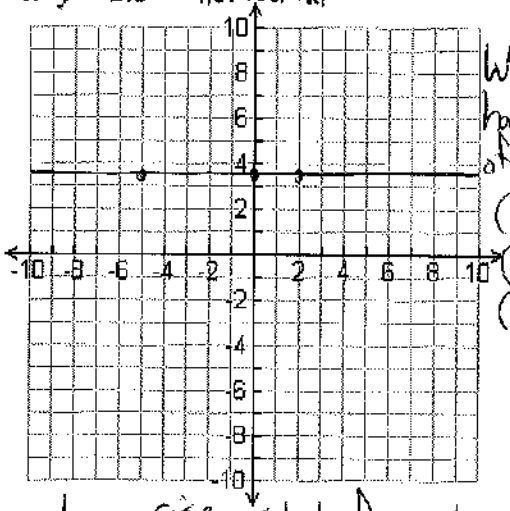
3. $x = -1$ Vertical Line

What coordinates have an x of -1?
(-1, 3)
(-1, 0)
(-1, -4)
x y



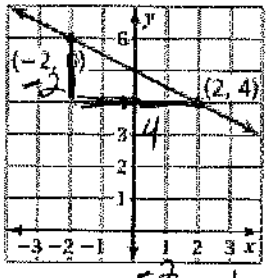
4. $y = 3.5$ Horizontal

What coordinates have a y of 3.5?
(2, 3.5)
(0, 3.5)
(-5, 3.5)



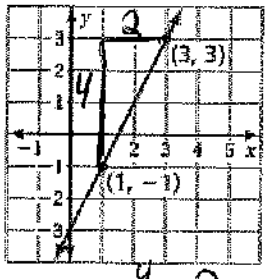
Find the slope of the line. ★ Slope on a line $\frac{\text{rise}}{\text{run}}$. Start from the left. point.

5.



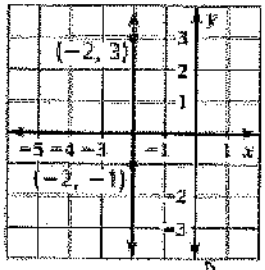
$m = \frac{-2}{4} = -\frac{1}{2}$

6.



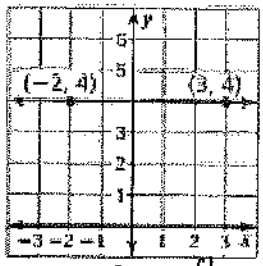
$m = \frac{4}{2} = 2$

7.



m = Undefined
Vertical

8.



Horizontal
$m = 0$ $\frac{0}{5}$

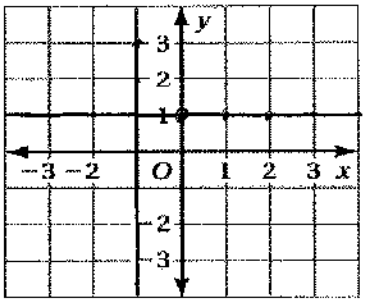
9. What is the slope of a line that is parallel to the line in Exercise 5? What is the slope of a line that is perpendicular to the line in Exercise 5?

Parallel lines have the same slope. $m = -\frac{1}{2}$ Perpendicular lines have opposite adjacent slopes $m = \frac{2}{1}$ $-\frac{1}{2} \cdot \frac{2}{1} = -\frac{2}{2} = -1$

10. Are the lines $y = -1$ and $x = -1$ parallel? Are they perpendicular? Justify your answer.

Horizontal Vertical

After graphing the lines, you can see $y=-1$ is horizontal and $x=-1$ is vertical. The lines are not parallel. They are perpendicular.



11. A bank charges \$3 each time you use an out-of-network ATM. At the beginning of the month, you have \$1500 in your bank account. You withdraw \$60 from your bank each time you use an out-of-network ATM. Graph a linear equation that represents the balance in your account after you use an out-of-network ATM x times. Use the graph paper provided.

* Make a table and plot the points on the graph.

Use of ATM (x)	0	1	2	3
Bank Account (y)	1500	1437	1374	1311

12. The number of y hours of cello lessons that you take after x weeks is represented by the equation $y = 3x$. Graph the equations and interpret the slope. Use the opposite side of the graph paper provided.

* Make a table and plot the points on the graph.

weeks (x)	0	1	2	3	4
hours (y)	0	3	6	9	12

slope (m) = 3 means 3 hours per session

13. The cost y (in dollars) to provide food for guests at a dinner part is proportional to the number x of guests attending the party. It costs \$30 to provide food for 4 guests.

a. Write an equation that represents the situation.

$y = 7.5x$

$\frac{\$30}{4 \text{ guests}} = \frac{\$7.50}{1 \text{ guest}}$

b. Interpret the slope.

The slope means 1 guest cost \$7.50

c. How much does it cost to provide food for 10 guests?

$y = 7.5x \rightarrow y = 7.5(10) \rightarrow y = \$75$