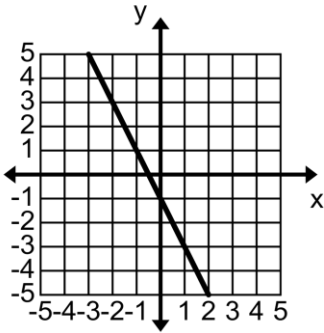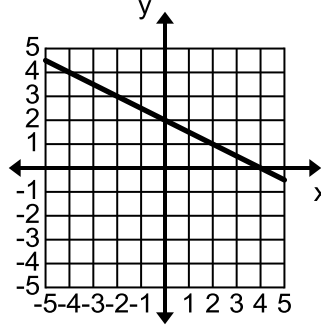# Study Guide 8th Grade Math
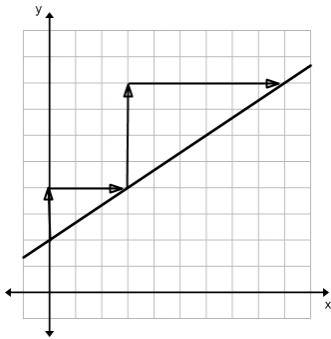## Unit 5/6 Troup County Schools

1. Find the slope of the line in the graph.   CC.8..F.4

2. Which linear function is shown on the graph below?   CC.8.F.4

3. Which statement is true concerning the slope of the line below?   CC.8.EE.6

A. The slope is equivalent to the simplified ratio of the horizontal leg to the vertical leg of each triangle shown.
B. The slope is equivalent to -2/3.
C. The slope is equivalent to the simplified ratio of the rise to the run of each triangle shown.
D. The slope is equivalent to 3/2.

4. Write an equation that represents the line graphed below.   CC.8.F.4
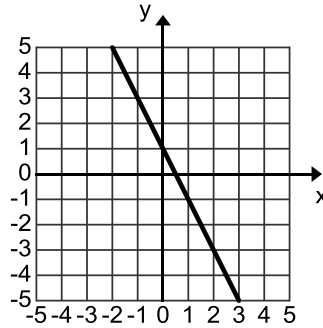
5. Find the equation of the line in the graph.   CC.8.F.4
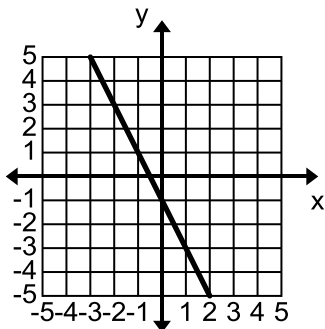
Oranges
Only $.50 each!   CC.8.F.4

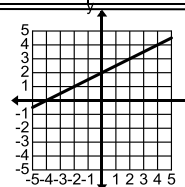| Apples			
Tickets	0	1	2	3
Price ($)	0	.65	1.30	1.95

6a. The starting amounts for each function?

6b. Which function has a greater rate of change?

7. What is the rate of change in the table?

| x	y
0	3
1	6
2	9
3	12

CC.8.F.2

Use the graph to answer question 8.

8. Is the slope positive, negative, no slope, or undefined?

CC.8.F.5

---

9. Sketch a graph to match this : The Olympic skier waited
   at the top of the mountain for 2 minutes before
   heading down the ski slope. She went faster and faster
   for the first 5 minutes, and then she slowed to a stop.
   Finally, it took her 10 more minutes to walk to her car.

CC.8.F.5

Distance

Minutes
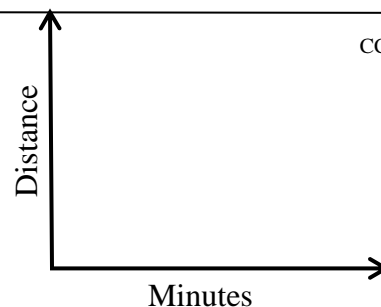
A C E S	**Time**(hours)	1	2	3	4	5	6
	Miles	10	20	30	40	50	60

10. Team Aces and Team Kings were riding bikes. Use the table
    And the graph to help you :
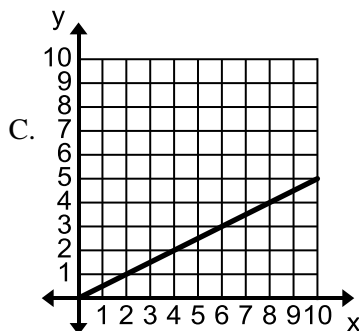   **Describe the difference between the rates of the two teams.**

KINGS

Miles

Hours
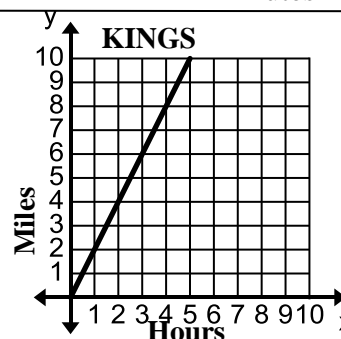
CC.8.EE.5

---

11. Of the four linear functions represents below, which has the greatest rate of change?

CC.8.EE.5

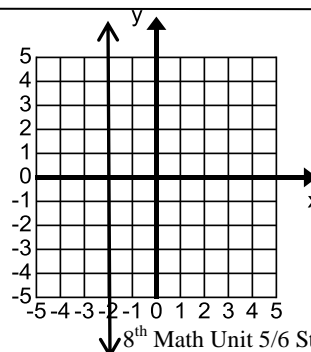A. | A number (*y*) is two more than a number (*x*)

B. | $y = 4x$

C.

y

D.

x	y
0	5
1	6
2	7
3	8

---

12. Which best describes the slope of the line in the graph?

   A. Positive slope
   B. Negative slope
   C. Zero slope
   D. Undefined

CC.8.F.4

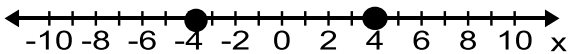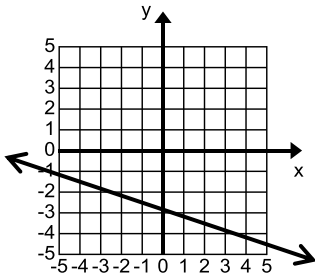13. Which of the following 4 data sets represents a linear function?

x	y
1	3
1	6
1	8
1	12

x	y
0	2
6	-1
8	4
10	-4

14. Fill in the chart below and graph the line for:

$$y = 3x-2$$ MCCF.4

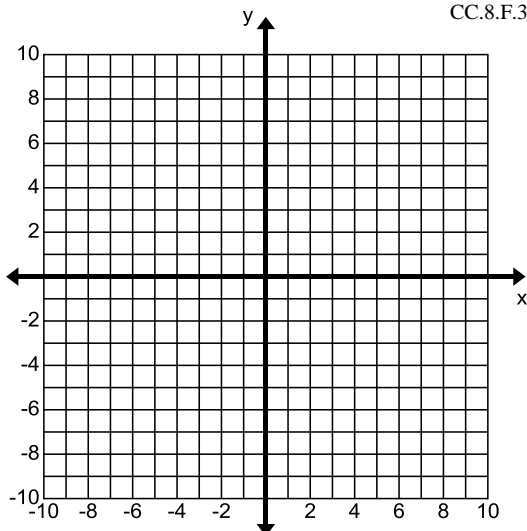| x	y
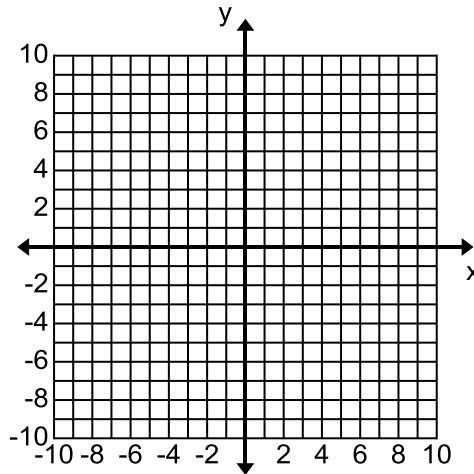
15. Bob has $12 and he makes $5 per hour washing cars. This can be represented as: $y= 5x +12$.
What does the slope represent?

   A. The number of cars washed
   B. The total cost of car washes
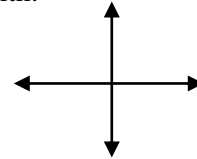   C. The amount per hour he makes
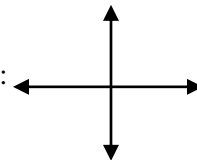   D. The amount he already has.

16. Sketch graphs with: CC.8.F.4

POSITIVE SLOPE:

NEGATIVE SLOPE:

ZERO SLOPE:

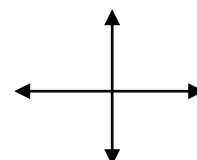UNDEFINED:

17. Draw the graph of $y = \frac{1}{3} x - 2$. CC.8.F.3
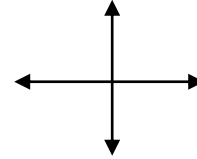
18. Which of these sets of data matches the graph?

x	y
-2	3
-1	0
0	-1
1	-1

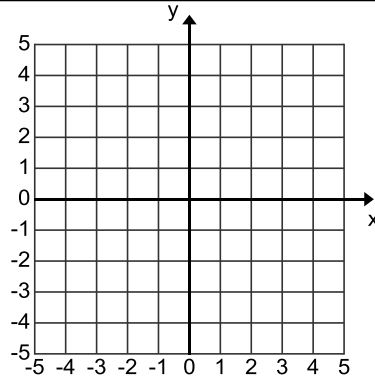| x	y
-2	3
-1	1
0	-1
1	-3

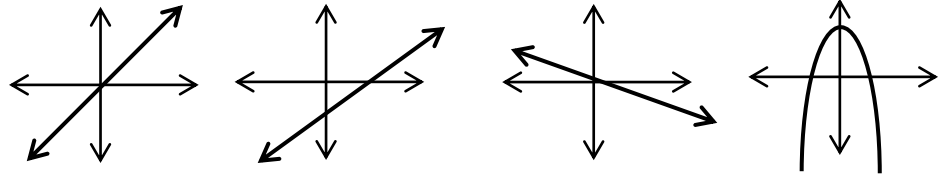| x	y
-2	3
-1	0
0	-.5
1	-1
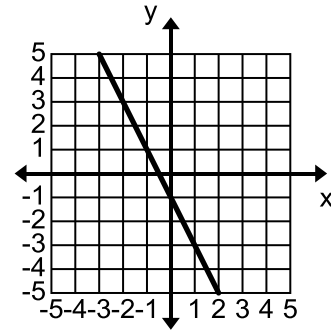
19. Draw the function $y = x$

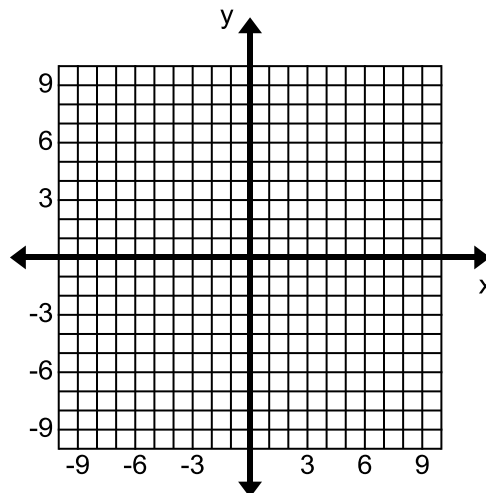CC.8.F.4

20. Which sketches illustrate $y = x$?

CC.8.F.5

21. Al drives a cab. He charges $4 to pick you up and $2 for each mile. He uses the equation: $y = 2x + 4$
    Explain what the variable x means in this equation.
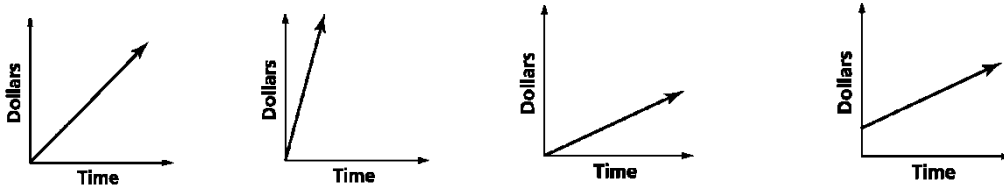
CC.8.F.3

22. Draw the graph $y = -x + 1$.

CC.8.F.3

23.
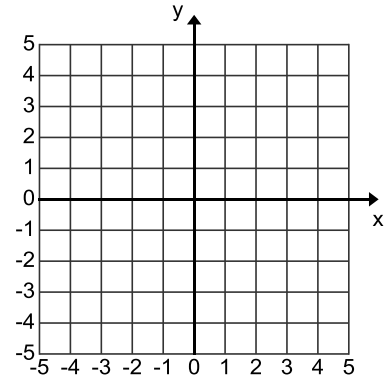.   Which graph increased in cost at the fastest rate?

Which graph increased in cost at the slowest rate?

Which 2 have similar rates?
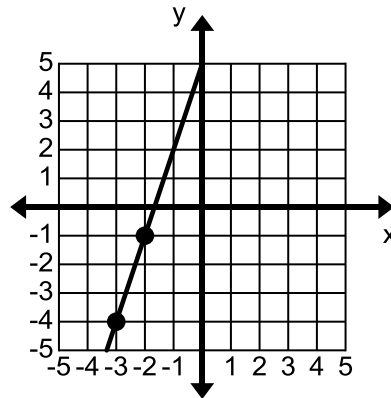
24. Draw the graph of the equation $y = -2x + 2$.

25. Write the equation of this graph.

26. Fill in the blanks to make TRUE statements about the graph shown?

A. The slope of the line is _____.

B. The smaller triangle and the larger triangle shown

     are _____.

C. The simplified ratio of the rise and run of

     each triangle is _____.