Name_____ Class_____ Date_____

5-1 Practice

Form K

Rate of Change and Slope

Each rate of change is constant. Find the rate of change and explain what it represents.

1. **Fences Painted**

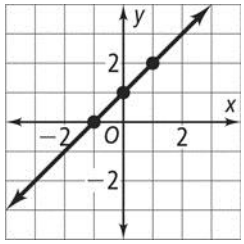
Hours	Fences
3	1
6	2
9	3
12	4

2. **Miles Per Hour**

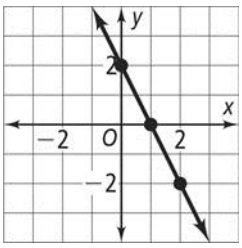
Hours	Miles
2	70
4	140
6	210
8	280

Find the slope of each line.

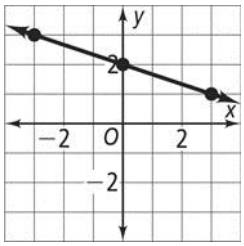
3.



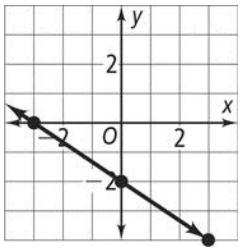
4.



5.



6.



Find the slope of the line that passes through each pair of points.

7. (–4, 5), (1, 1)

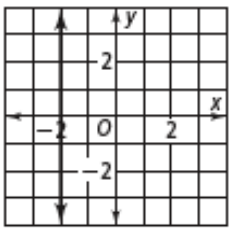
8. (0, 0), (–1, 3)

9. (2, 2), (3, 4)

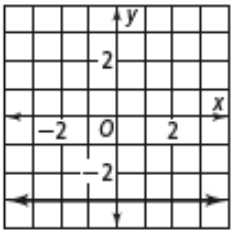
10. (5, 3), (–2, –4)

Find the slope of each line.

11.



12.



5-1 Practice (continued)

Form K

Rate of Change and Slope

Without graphing, tell whether the slope of a line that models each linear relationship is *positive*, *negative*, *zero*, or *undefined*. Then find the slope.

13. The cost of a pair of jeans is $22.50 for 1 pair and $67.50 for 3 pairs.

14. An employee earns $28.50 after 3 hours and $237.50 after 25 hours.

State the independent variable and the dependent variable in each situation. Then find the rate of change for each situation.

15. The cost of three gallons of milk is $8.85 and five gallons of milk is $14.75.

16. Jacques filled 10 envelopes in 1 minute and 100 envelopes in 10 minutes.

Find the slope of the line that passes through each pair of points.

17. (7, –1), (7, 1)

18. (3, –2), (–2.5, 9)

19. $\left(\frac{1}{3}, \frac{2}{5}\right), \left(-\frac{1}{3}, \frac{3}{5}\right)$

20. $\left(-\frac{3}{4}, \frac{2}{3}\right), \left(-\frac{3}{4}, \frac{5}{3}\right)$

21. **Writing** Explain why the slope of a vertical line is always undefined.

22. **Writing** Describe how to draw a line that passes through the origin and has a slope of $\frac{3}{5}$.

Each pair of points lies on a line with the given slope. Find *x* or *y*.

23. (2, 2), (5, *y*); slope = 2

24. (9, 4), (*x*, 6); slope = $-\frac{1}{3}$