## Common Core 1A Problem Set \#8

## Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.
The rate of change is constant in each table. Find the rate of change. Explain what the rate of change means for the situation.
$\qquad$ 1.

| Time (days) | Cost (\$) |
| :---: | :---: |
| 3 | 75 |
| 4 | 100 |
| 5 | 125 |
| 6 | 150 |

a. $\frac{25}{1}$ dollars per day; the cost is $\$ 25$ for each day.
b. $\frac{1}{25}$ dollars per day; the cost is $\$ 25$ for each day.
c. $\frac{75}{1}$ dollars per day; the cost is $\$ 75$ for each day.
d. $\frac{1}{150}$ dollars per day; the costs $\$ 1$ for 150 days
2. A student finds the slope of the line between $(14,1)$ and $(18,17)$. She writes $\frac{1-17}{18-14}$. What mistake did she make?
a. She should have added the values, not subtracted them.
b. She used $y$-values where she should have used $x$-values.
c. She mixed up the $x$ - and $y$-values.
d. She did not keep the order of the points the same in numerator and the denominator.
3. Graph the line with a slope of ${ }_{2}^{1}$ that passes through the point $(4,-5)$.
a.

c.

b.

d.


## Solve the proportion.

4. $\frac{x-8}{5}=\frac{2}{4}$
a. 9
b. 5
2
c. 21
2

## Short Answer

Find the slope of the line.
5.

6.


Find the rate of change for the situation.
7. You run 7 miles in one hour and 21 miles in three hours.

Combine like terms.
8. $5 y+9-2 y+2$
9. What is the slope of the line that passes through the points $(8,1)$ and $(5,7)$ ?
10. Simplify $7(8 a-4)+2 a$.
11. Label each section of the graph.

Roller Skating

12. Model the function rule $y=3 x+0$ with a table of values and a graph.

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| -1 |  |
| 0 |  |
| 1 |  |



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Answer Section

## MULTIPLE CHOICE

1. A
2. D
3. B
4. C

## SHORT ANSWER

5. -2
6. -1
7. 7 miles per hour
8. $3 y+11$
9. -2
10. $58 a-28$
11. Answers may vary. Sample:

Roller Skating


A - speed is slowing, as if skating uphill
B - gaining speed quickly, as if beginning a downhill descent
C - high speed briefly, as if just skating down a hill
D - constant speed for some time, as if skating on an even surface
12.

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| -1 | -3 |
| 0 | 0 |
| 1 | 3 |



