Algebra 1 Test Review Chapter 4 Functions Chapters 1 – 3 Spiral

- ***Review is due on the day of the test.***
- ***Review will not be graded unless answers are written on separate paper.***
- ***In order to be eligible to retest, this review must becomplete, accurate, and turned in.***

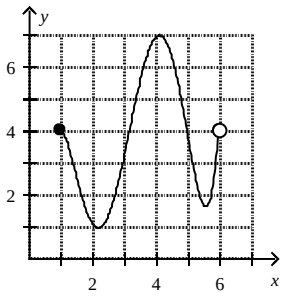
PART 1 Make sure to answer all parts of each question.

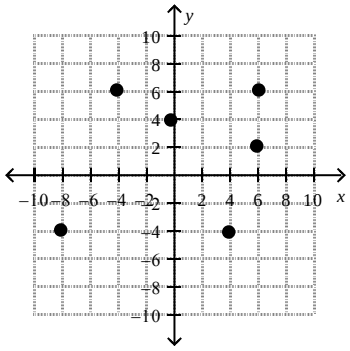
1. Sketch a graph that models the following situations: Label the axes.
*A swimmer starts at a steady pace, slows down to a stop, and then starts up swimming again, but at a slower pace than when she first started.
*After a ball is thrown into the air, it falls back to the ground and bounces.
*Temperature changes throughout the hours of a day. Early in the morning, temperature increases slowly. At noon, the temperature rises sharply. During the afternoon, the temperature stays the same for several hours. As night falls, the temperature decreases slightly.

2. What type of correlation do these situations have? Positive, negative or no correlation. **Explain your reasoning in complete sentences.**
* The amount of gasoline in a car and how far the car has traveled
* The temperature on Tuesdays
* The size of a snowball and how long it has been melting

3. Express the relation {(1, 2), (2, 3), (3, 5), (4, 10), (5, 5)} as a table, a mapping diagram, and as a graph. If the relation a function?

4. Give the domain and range of the relation. Identify as discrete or continuous. Identify which graph is a function.





5. State the domain and range of the relation. Tell whether the relation is a function.

x	***y***
0	–5
1	–1
1	3
1	6

x	***y***
4	9
6	6
0	9
– 5	– 4

6. Identify the independent and dependent variables in the situation: **The amount of electricity used for air conditioning in homes increases as the temperature increases.**

7. A video club costs $25 to join. Each video that is rented costs $2.50. Let *v* represent the number of videos. Identify the independent and dependent variables. Then, write a rule in function notation for the situation. What will the first billing statement show as a cost if 5 videos are rented?

8. For $f(x) = -4x + 2$, find $f(x)$ *for the domain* $\{x | x = -2, -1, 0, 3, 4\}$

9. For the function $-2x + 4y = 4$ find *y for the domain* D: {–8, –4, 0, 4, 8}.

10. Lionel observes that traffic is getting worse and it's taking him longer to get to work. He records once a week the following data for several weeks. Graph a scatter plot using the given data.

Week	1	2	3	4	5	6	7	8
Time (min)	8.2	8.9	8.6	8.3	9	9.7	8.4	10.1

11. A snail travels at a rate of 2.37 feet per minute.
a. Write a rule to describe the function.
b. How far will the snail travel in 6 minutes?

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PART 2

Use your test reviews from Chapter 1, 2, and 3. There will be approximately 13 questions on the spiral portion of the exam.