Association and Causation Worksheet

Directions:

Suppose studies were to be done on the following.

Part a) Determine if you believe the association would be positive, negative, or none.

Part b) Then decide if the relationship would most likely be causation, common response, or confounding

Part c) If it is common response, identify the hidden variable affecting both. If it is confounding, identify the hidden variable affecting the response variable.

The following are the 12 studies you will analyze:

1. When you are on a diet, the amount of calories you eat daily vs. the amount of weight you lose.

2. The number of pets you own vs. the amount you spend on pet food.

3. How much you pay for a house vs. how much you pay for a car.

4. How much you study vs. your GPA.

5. The number of policeman that are visible on a stretch of road vs. the speed you travel.

6. How a student does in algebra vs. the student does in geometry.

7. A person's height vs. the amount of money that person has.

8. The number of wins the Indians have and the total amount of money spent on concessions at Indians games.

9. The number of people who smoke cigarettes vs the number of people who get lung cancer.

10. The number of people in a family vs. the number of cars the family owns.

11. The number of problems on a math test vs. the amount of time it takes students to complete the exam.

12. The amount of gasoline purchased on the Ohio Turnpike daily vs the total length of time it takes vehicles to travel the Ohio Turnpike.

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Name_____

Study #	Association			Relationship			Possible Hidden Variable
	+	−	None	Causation	Confounding	Common Response	
1							1. 2. 3.
2							1. 2. 3.
3							1. 2. 3.
4							1. 2. 3.
5							1. 2. 3.
6							1. 2. 3.
7							1. 2. 3.
8							1. 2. 3.
9							1. 2. 3.
10							1. 2. 3.
11							1. 2. 3.
12							1. 2. 3.