**GSE Algebra 1 Correlation vs. Causation Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Which of the following statements shows a relationship that is correlated but NOT causal?

1. The amount of rainfall received and the level of water in a lake
2. The number of lights left on each day and the amount of the electric bill
3. The increase of warm and sunny days and the number of ice cream trucks visible
4. The number of hours worked and how much money is made.

Which of the following statements show a relationship that is NOT causal?

1. The number of tardies to class and the number of detentions received
2. The season of the year and the number of related injuries/deaths
3. As the temp rises, the more mercury in a thermometer will expand and rise
4. The larger the dimensions of a rectangular patio, the more square footage it will be

Which one of the following statements shows a causal relationship and not just a correlated one?

1. An individual’s decision to work in construction and his diagnosis of skin cancer
2. A decrease in temp and the increase in attendance at an ice skating rink
3. As a child’s weight increases so does its vocabulary.
4. The number of minutes spent exercising and the amount of calories burned

Which statement below might be caused by the statement, “the more the furnace runs…”?

1. The less time individuals spend outside
2. The longer you will have to let your car heat up when you start it in the morning
3. The colder it is outside
4. The warmer the house becomes

Consider a large number of countries around the world. There is a **positive** correlation between the **number** of **Nintendo** games per **person**, **x**, and the **average** **life** **expectancy** of a person in the country, **y**. Does this mean that we would increase life expectancy in Rwanda by shipping Nintendo games to that country?

1. Yes, the correlation says that as Nintendo games go up, so does life expectancy
2. No, if the correlation were negative we could accept that conclusion, but this correlation is positive
3. Yes, positive correlation means that if we increase x, then y will increase also.
4. No, the positive correlation shows that richer countries have both more Nintendo games and higher life expectancies
5. It makes no sense to calculate correlation between two variables

