Practice worksheet | Statistics and data analysis

Association versus causation

Name: _____ Date: _____

6 questions | 15 marks

1. Umbrella sales and rainfall rise together. Which is a plausible direction of causation? [2 marks]

2. Towns with more fire engines report more total fire damage. Why is reducing fire engines not justified by this association? [3 marks]

3. Coffee drinkers in a survey sleep less. Name a possible confounder. [2 marks]

4. Why does random assignment help a treatment comparison? [3 marks]

5. Write a cautious conclusion: more exercise is associated with lower reported stress in a voluntary survey. [2 marks]

6. A company claims its product caused improvement because users improved over a month, with no comparison group. Give two alternative explanations. [3 marks]