Practice worksheet | Statistics and regression

Correlation and causation

Name: _____ Date: _____

6 questions | 18 marks

1. Sales of heaters and cough medicine rise together. Give a plausible confounder. [3 marks]

2. A survey finds students who seek tutoring have lower earlier scores. Does this prove tutoring reduces achievement? [3 marks]

3. An online poll links sleep and concentration, but only volunteers respond. Name two limitations. [3 marks]

4. A randomised experiment reports a mean improvement. Does random assignment guarantee every participant improves? [3 marks]

5. Rewrite “Eating breakfast causes higher scores”, when the only evidence is an observational correlation. [3 marks]

6. Explain why a plausible mechanism is helpful but does not by itself prove causation. [3 marks]