Lesson 6.4 Practice: Independence and the Multiplication Rule

School Launch · Statistics · Unit 6: Probability · Worksheet A

Calculator / tables

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Independent events: $P(A) = 0.5$, $P(B) = 0.3$. Find $P(A \text{ and } B)$. EASY

2. Independent events: $P(A) = 0.8$, $P(B) = 0.5$. Find $P(A \text{ and } B)$. EASY

3. Independent events: $P(A) = 0.5$, $P(B) = 0.8$. Find $P(A \text{ and } B)$. EASY

4. $P(A) = 0.2$, $P(B) = 0.1$, $P(A \cap B) = 0.04$. Are A and B independent? MEDIUM

5. $P(A) = 0.7$, $P(B) = 0.2$, $P(A \cap B) = 0.16$. Are A and B independent? MEDIUM

6. $P(A) = 0.5$, $P(B) = 0.7$, $P(A \cap B) = 0.35$. Are A and B independent? MEDIUM

7. $P(A) = 0.1$, $P(B) = 0.1$, $P(A \cap B) = 0.02$. Are A and B independent? MEDIUM

8. $P(A) = 0.9$, $P(B) = 0.4$, $P(A \cap B) = 0.36$. Are A and B independent? HARD

9. $P(A) = 0.2$, $P(B) = 0.7$, $P(A \cap B) = 0.14$. Are A and B independent? HARD

10. $P(A) = 0.2$, $P(B) = 0.1$, $P(A \cap B) = 0.02$. Are A and B independent? HARD