



Conditional Probability

Chapter: Probability • Level ★★ • Time: 30 min

SCORE

___ / 20

Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

- ✓ Use $P(A|B) = P(A \cap B)/P(B)$. ✓ Handle draws without replacement. ✓ Use independence: $P(A \cap B) = P(A)P(B)$.
 ✓ Interpret conditional probabilities.



Section A • Concept Check

• BEGINNER

4 × 1 = 4

- 1 A die is rolled. $P(\text{number} > 3 \mid \text{number is odd}) =$
☐ A. 1/3 ☐ B. 1/2 ☐ C. 2/3 ☐ D. 1/6
- 2 A bag has 3 red and 7 blue balls. $P(2 \text{ blue, no replacement}) =$
☐ A. 7/15 ☐ B. 49/100 ☐ C. 7/10 ☐ D. 6/9
- 3 If $P(A)=0.3$, $P(B)=0.6$ and events are independent, $P(A \cap B) =$
☐ A. 0.18 ☐ B. 0.9 ☐ C. 0.3 ☐ D. 0.5
- 4 If $P(A \cap B)=0.15$ and $P(B)=0.3$, then $P(A|B) =$
☐ A. 0.5 ☐ B. 0.15 ☐ C. 0.45 ☐ D. 0.05



Section B • Problem Solving

• INTERMEDIATE

2 + 3 × 3 = 11

- 5 $P(A \mid B) = P(A \cap B) /$ _____
- 6 For independent events, $P(A \cap B) = P(A) \times$ _____
- 7 A die is rolled. Find $P(\text{number} > 3 \mid \text{number is odd})$.

- 8 A bag has 3 red and 7 blue balls. Find $P(\text{drawing 2 blue without replacement})$.

- 9 If $P(A)=0.3$, $P(B)=0.6$, independent. Find $P(A \text{ and } B)$.



Section C • Challenge

• CHALLENGE

5

- 10 If $P(A \text{ and } B)=0.15$ and $P(B)=0.3$, find $P(A|B)$.

Reflection — the most useful thing I learned: _____

A ___/4 B ___/11 C ___/5 Total ___/20

Teacher's Signature _____

Parent's Signature _____

ANSWER KEY — FOLD OR CUT BEFORE HANDING OUT

1-A 2-A 3-A 4-A | 5 $P(B)$ 6 $P(B)$ 7 $= P(A \cap B)=1/6$, $P(B)=1/2$, so $P(A|B)=1/3$ 8 $= (7/10)(6/9)$
 $= 7/15$ 9 $= 0.18$ | 10 $= 0.5$