Practice worksheet | Probability

Conditional language and restricted sample spaces

Name: _____ Date: _____

6 questions | 13 marks

1. A fair six-sided die result is known to exceed 3. Find $P(\text{even})$. [2 marks]

2. A fair six-sided die result is known to be even. Find $P(\text{greater than } 3)$. [2 marks]

3. Find $P(\text{cycle} \mid \text{girl})$ from the table. [2 marks]

Invented survey of 60 students; every student is in exactly one travel category.

Travel	Girl	Boy	Total
Cycle	12	8	20
Walk	18	22	40
Total	30	30	60

4. Find $P(\text{girl} \mid \text{cycle})$ from the table. [2 marks]

Invented survey of 60 students; every student is in exactly one travel category.

Travel	Girl	Boy	Total
Cycle	12	8	20
Walk	18	22	40
Total	30	30	60

5. Using the travel table, explain why $P(\text{cycle} \mid \text{girl})$ and $P(\text{girl} \mid \text{cycle})$ have different denominators. [3 marks]

Invented survey of 60 students; every student is in exactly one travel category.

Travel	Girl	Boy	Total
Cycle	12	8	20
Walk	18	22	40
Total	30	30	60

6. $P(A \cap B) = 0.12$ and $P(B) = 0.3$. Find $P(A \mid B)$. [2 marks]