



F08-10min Conditional Probability (Foundation): 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** Write down what $P(A|B)$ means in words.

(Total for Question 1 is 1 mark)

- 2** 40 people were asked whether they prefer tea or coffee, and whether they take sugar in their drink. The two-way table shows the results.

	Sugar	No sugar	Total
Tea	8	12	20
Coffee	14	6	20
Total	22	18	40

- (a) Write down the number of coffee drinkers who do not take sugar. (1)

- (b) One person is chosen at random from the tea drinkers. Find the probability that this person takes sugar. (2)

(Total for Question 2 is 3 marks)

3 Decide whether each statement is True or False, then answer part (iii).

(i) The notation $P(A|B)$ is read as 'the probability of A given B'. (1)

(ii) If two events are independent, the outcome of one event changes the probability of the other. (1)

(iii) Which expression gives $P(B|A)$? (1)

- ☐ A) $P(A) \times P(B)$
- ☐ B) $P(A \text{ and } B) / P(A)$
- ☐ C) $P(A \text{ and } B) / P(B)$
- ☐ D) $P(A) / P(B)$

(Total for Question 3 is 3 marks)

4 A bag contains 10 sweets: 6 red and 4 yellow. Chloe takes a sweet at random from the bag and eats it. She does not put the sweet back in the bag. The sweet Chloe took was red.

(a) Find the probability that the second sweet Chloe takes is also red. (2)

.....
(b) Find the probability that the second sweet Chloe takes is yellow. (2)

.....
(Total for Question 4 is 4 marks)

Mark scheme · F08-10min Conditional Probability (Foundation): 10-minute Pack

Question 1

- **B1** the probability of A given that B has happened, oe
- **Answer: The probability of A, given that B has happened.**

Question 2

- (a) **B1** 6 cao
- (a) **Answer: 6**
- (b) **M1** 8/20 seen, oe
- (b) **A1** 2/5 oe cao
- (b) **Answer: 2/5**

Question 3

- (i) **B1** True cao
- (i) **Answer: True**
- (ii) **B1** False cao
- (ii) **Answer: False**
- (iii) **B1** B cao
- (iii) **Answer: B) $P(A \text{ and } B) / P(A)$**

Question 4

- (a) **M1** 5/9 seen, oe (5 red sweets remain out of 9 sweets left)
- (a) **A1** 5/9 cao
- (a) **Answer: 5/9**
- (b) **M1** 4/9 seen, oe (4 yellow sweets remain out of 9 sweets left)
- (b) **A1** 4/9 cao
- (b) **Answer: 4/9**