

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## Probability: Independent Events

Calculate the probability of the following independent events occurring

1. Gary is playing cricket. When attempting to catch the ball, the probability Gary is successful is  $\frac{3}{4}$ . During the game, Gary attempts two catches. Find the probability Gary is successful with both catches.



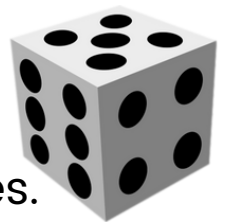
..... 2 marks

2. Helen is taking part in a quiz on TV. The probability she answers a question correctly is  $\frac{4}{5}$ . Helen is asked two questions. Calculate the probability she answers both questions correctly.



..... 2 marks

3. A fair six sided dice is rolled three times.



- (a) Find the probability of getting a six all three times.

..... 2 marks

- (b) Find the probability of getting no sixes.

..... 2 marks

## Probability: Independent Events

1. 
$$p(s, s) = \frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$$



2. 
$$p(c, c) = \frac{4}{5} \times \frac{4}{5} = \frac{16}{25}$$



3.

(a) 
$$p(6, 6, 6) = \frac{1}{6} \times \frac{1}{6} \times \frac{1}{6} = \frac{1}{216}$$



(b)  $p(\text{not } 6, \text{not } 6, \text{not } 6)$

$$= \frac{5}{6} \times \frac{5}{6} \times \frac{5}{6} = \frac{125}{216}$$