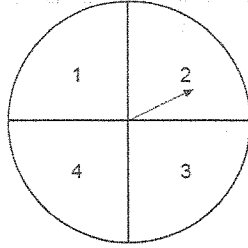1   A fair 4-sided spinner is spun twice.

means multiply →

The **product** of the two numbers on each spin is recorded in the table below.

(a) Complete the table below to show the possible outcomes.

	Number on first spin			
X	1	2	3	4
Number on second spin 1	(1)	2	3	(4)
2	2	(4)	6	8
3	3	6	(9)	12
4	(4)	8	12	(16)

[2]

Remember Probability is a number between 0 ←→ 1

Decimal or Fraction or Percentage

(b) Work out the probability that the product is a square number.

square numbers
1, 4, 9, 16,

These are circled in the table

Answer ___6/16___ [1]

13   A menu in a restaurant prices the meals as follows:

2 courses:	£16
3 courses:	£21

The menu offers 5 starters, 8 mains and 4 desserts.
John wants a 2 course meal which includes a main.

How many choices does John have?

starter AND main
5   x   8
40 possible

or

main AND dessert
8   x   4
32 possible

Answer ___72 choices___ [3]

2   Karen buys 1.6 kg of apples on Monday.

She pays £2.80
Karen buys 2 kg of apples in the same shop on Tuesday.

How much in total does Karen pay for apples on Monday and Tuesday?

$1.6kg = 2.80$
$1kg = £1.75$

does this make sense?
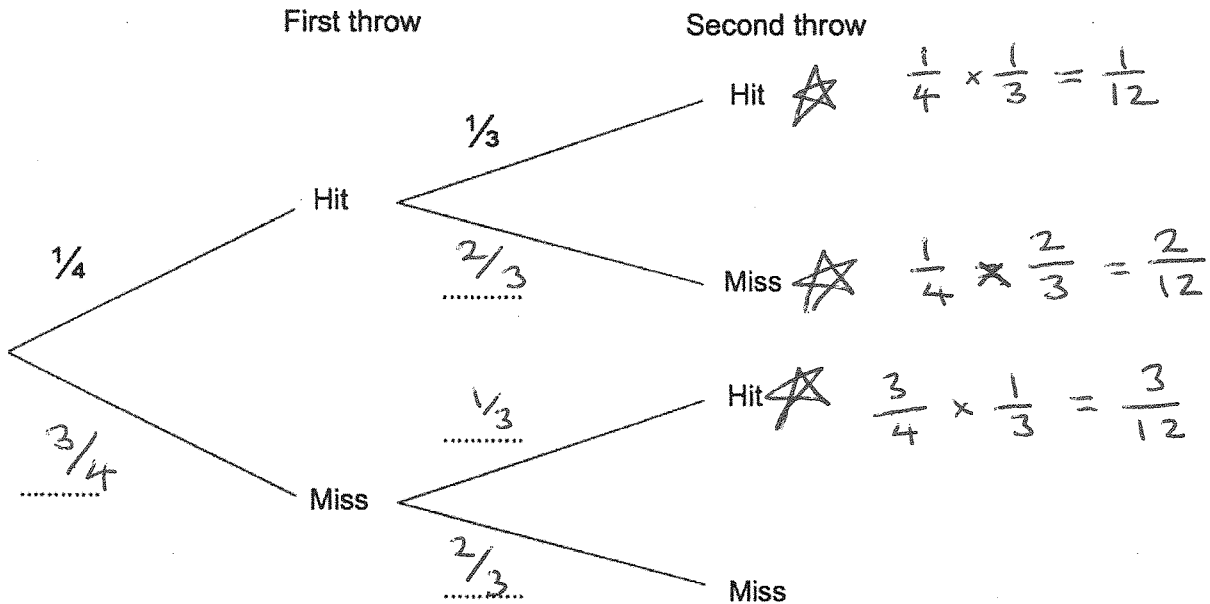
$2kg = 2 \times 1.75$
$2kg = £3.50$

Answer   £6.30   for Monday & Tuesday   [4]

5.   Jennifer is playing darts.
She throws two darts aiming for a Bullseye.

The probability Jennifer hits the Bullseye on her first throw is ¼.
The probability she hits the Bullseye on her second throw ⅓.

(a) Complete the tree diagram.

First throw   Second throw

¼ — Hit

⅓ — Hit $\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

⅔ — Miss $\frac{1}{4} \times \frac{2}{3} = \frac{2}{12}$

³⁄₄ — Miss

⅓ — Hit $\frac{3}{4} \times \frac{1}{3} = \frac{3}{12}$

⅔ — Miss

(b) Work out the probability Jennifer hits the Bullseye at least once.

Hit & Hit   OR   Hit AND Miss   OR   MISS AND HIT

$\frac{1}{12} + \frac{2}{12} + \frac{3}{12}$

$\frac{6}{12}$

(2)