

Topic Test 1 (20 minutes)

Basic probability - Foundation

- 1 There are 50 pens in a drawer.
15 are blue, 4 are green and the rest are black.
A pen is chosen at random.

Work out the probability that it is black.

[2 marks]

Answer _____

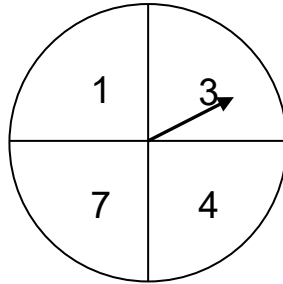
- 2 Aisha collects 1p coins and 2p coins.
24 of these are 1p coins.
The probability of choosing a 2p coin at random is $\frac{1}{2}$

How much money does she have in total?

[3 marks]

Answer _____ p

3 A game is played with a fair spinner.



The spinner is spun twice and the two numbers are added to make a score.

3 (a) Complete the table to show the possible scores.

[2 marks]

		First spin			
		1	3	4	7
Second spin	1				
	3				
	4				
	7				

3 (b) You win if your score is an even number.

Kesha says,

“Only 1 of the 4 numbers on the spinner is an even number so I am unlikely to win.”

Is she correct?

Give a reason for your answer.

[2 marks]

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- 4** A box contains counters that are red, blue, yellow or green.
The table shows some information about picking a counter at random.

	red	blue	yellow	green
Probability		0.25	0.35	0.3

- 4 (a)** What is the probability of picking a red counter?

[2 marks]

Answer _____

- 4 (b)** Jamie says that there are 70 counters in total.

Show how you know that he must be wrong.

[1 mark]

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- 5** Temi rolls two fair, six-sided dice.
The two numbers rolled are added to give a total.

Work out the probability that the total is a single-digit prime number.

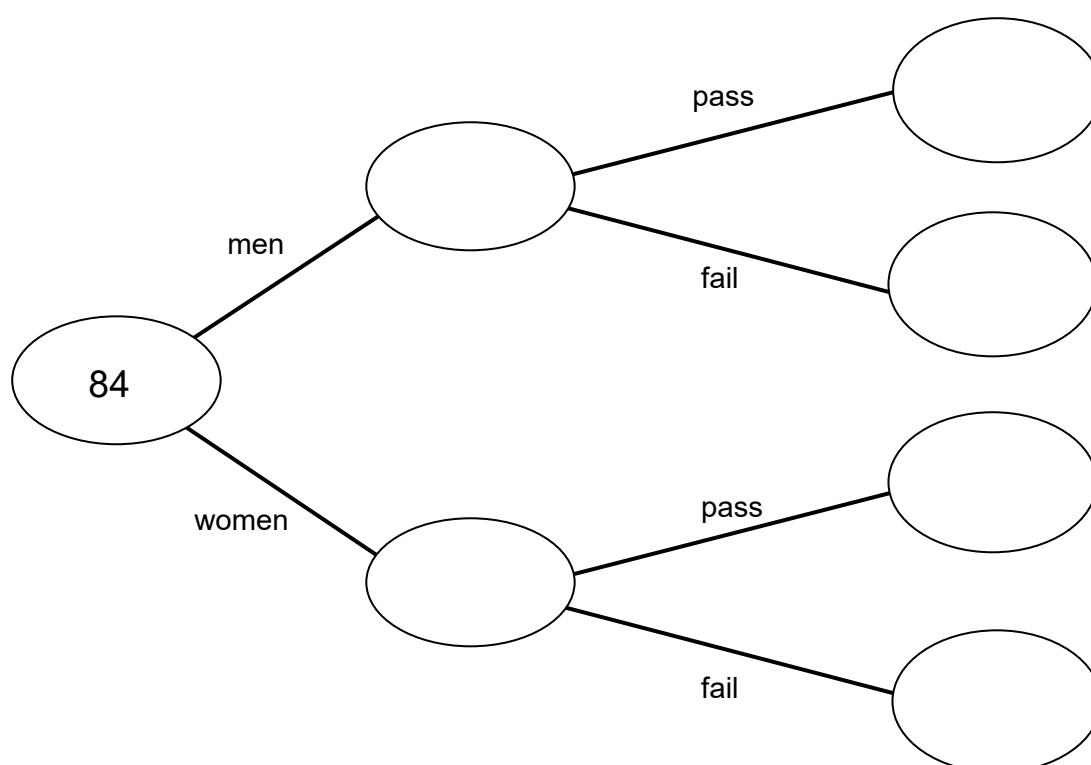
[3 marks]

Answer _____

- 6** 84 people take a driving test.
 A quarter are men.
 For the men, the ratio pass : fail = 5 : 2
 The number of women who pass is double the number of women who fail.

6 (a) Complete the frequency tree.

[3 marks]



6 (b) One of the people is chosen at random

Work out the probability that it is a woman who passes.
 Give your answer as a fraction in its simplest form.

[2 marks]

Answer _____