

- 1 In a bag there are only red counters, blue counters, green counters and pink counters.  
A counter is going to be taken at random from the bag.

The table shows the probabilities of taking a red counter or a blue counter.

<b>Colour</b>	red	blue	green	pink
<b>Probability</b>	0.05	0.15	.....	.....

The probability of taking a green counter is 0.2 more than the probability of taking a pink counter.

- (a) Complete the table.

(2)

There are 18 blue counters in the bag.

- (b) Work out the total number of counters in the bag.

.....  
(2)

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**(Total for Question 1 is 4 marks)**

- 2 There are 15 sweets in a jar.  
4 of the sweets are red.

Jill takes at random a sweet from the jar.

- (a) Write down the probability that the sweet is red.

.....  
(1)

There are only green counters and blue counters in a bag.

A counter is taken at random from the bag.

The probability that the counter is green is 0.3

- (b) Find the probability that the counter is blue.

.....  
(1)

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**(Total for Question 2 is 2 marks)**

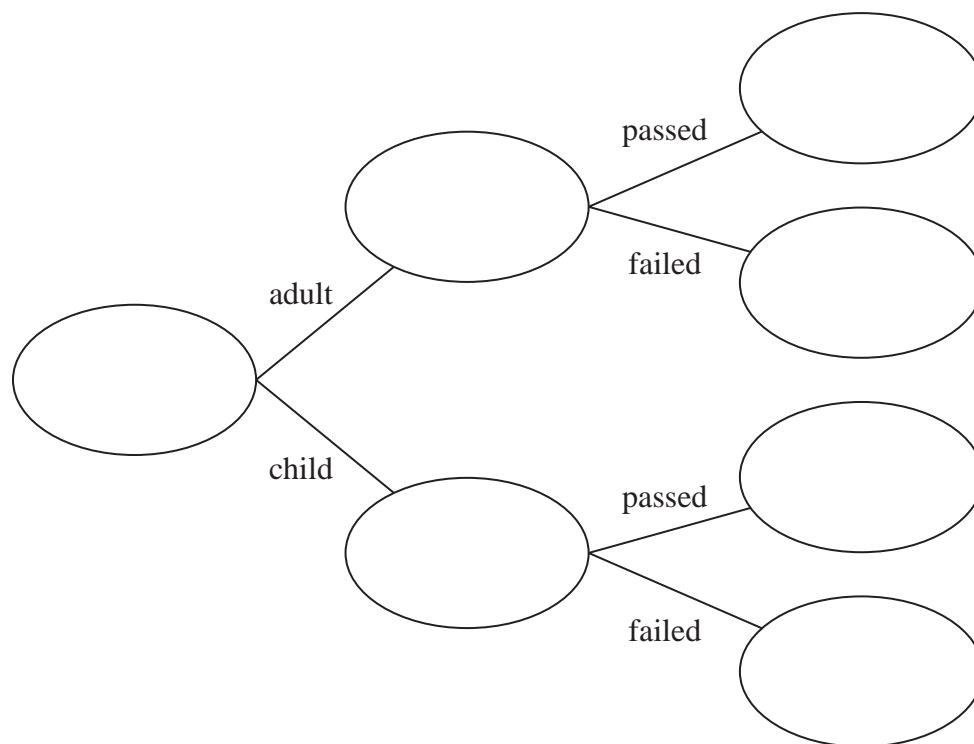
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3 72 people did a test.

20 of the 32 adults who did the test passed.

6 of the children who did the test failed.

(a) Use this information to complete the frequency tree.



(3)

One of these people is picked at random.

(b) Find the probability that this person is an adult who failed the test.

.....  
(2)

**(Total for Question 3 is 5 marks)**

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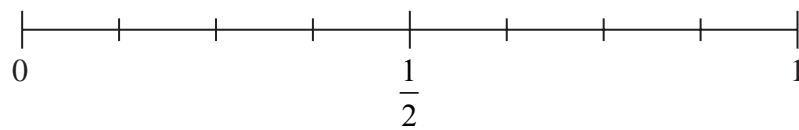


5 Here is a list of 8 letters.

B C A A A A B A

One of the 8 letters is going to be picked at random.

(b) (i) On the probability scale, mark with a cross (×) the probability that this letter will be B.



(1)

(ii) Find the probability that this letter will be C.

.....  
(1)

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**(Total for Question 5 is 3 marks)**

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- 6 There are only blue counters, green counters, red counters and yellow counters in a bag.

The table shows the number of blue counters in the bag.

Colour	blue	green	red	yellow
Number of counters	30			

There is a total of 100 counters in the bag.

Ashin takes at random a counter from the bag.

- (a) Find the probability that the counter is **not** blue.

.....  
(2)

The ratio of the number of blue counters to the number of green counters is 2:3

- (b) Work out the number of green counters in the bag.

.....  
(2)

Bradley says,

“The number of red counters in the bag is the same as the number of yellow counters in the bag.”

- (c) Can Bradley be correct?  
Give a reason for your answer.

.....  
.....  
.....  
(1)

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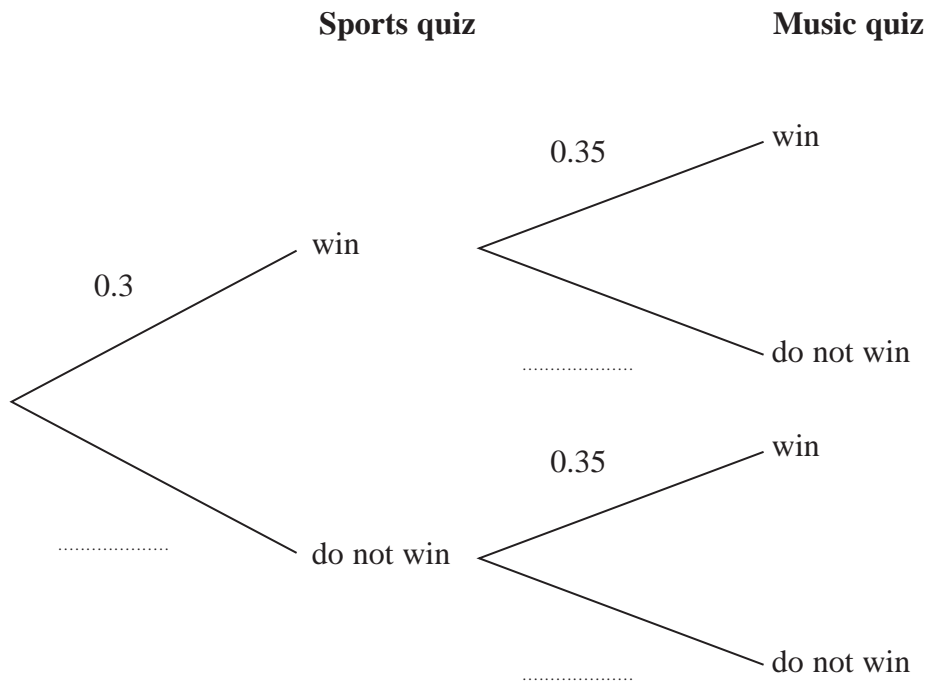
**(Total for Question 6 is 5 marks)**

7 One weekend the Keddie family is going to do a sports quiz and a music quiz.

The probability that the family will win the sports quiz is 0.3

The probability that the family will win the music quiz is 0.35

(a) Complete the probability tree diagram.



(2)

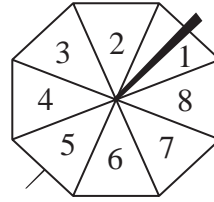
(b) Work out the probability that the Keddie family will win both the sports quiz and the music quiz.

.....  
(2)

**(Total for Question 7 is 4 marks)**

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8 Here is a fair ordinary dice and a fair 8-sided spinner.



Charlie throws the dice once and spins the spinner once.

Is Charlie more likely to get

a number less than 3 on the dice  
**or** a number greater than 5 on the spinner?

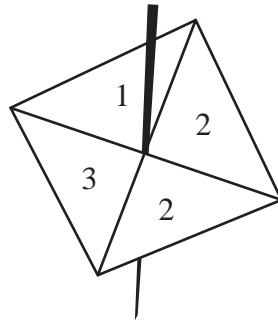
You must show all your working.

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**(Total for Question 8 is 3 marks)**



9 Here is a 4-sided spinner.



Samina spins the spinner once.

(a) Choose the word that best describes the probability that the spinner lands on 2

impossible	unlikely	evens	likely	certain
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.....  
(1)

(b) Choose the word that best describes the probability that the spinner lands on a number less than 4

impossible	unlikely	evens	likely	certain
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.....  
(1)

Ralph rolls a biased dice once.

The probability that he gets the number 5 is 0.4

(c) Work out the probability that Ralph does **not** get the number 5

.....  
(1)

**(Total for Question 9 is 3 marks)**