



Probability (F)

Pre-Intervention Assessment

Name: _____

Class: _____

Date: _____

Question	Objective	RAG
1	Solve probability problems	
2	Calculate probability from sample space diagrams	
3	Calculate with relative frequency	
4	Calculate probability from Venn Diagrams	
5	Draw and complete probability trees	

1. A company makes hearing aids.
A hearing aid is chosen at random. The probability that it has a fault is 0.09
Work out the probability that a hearing aid, chosen at random, will **not** have a fault.

2. Kerry has two fair 6-sided dice, A and B.
Kerry is going to roll both dice.
(a) Complete the sample space diagram to show all the possible outcomes.

		Dice B					
		1	2	3	4	5	6
Dice A	1	(1, 1)	(1, 2)	(1, 3)	(1, 4)	(1, 5)	(1, 6)
	2	(2, 1)	(2, 2)	(2, 3)	(2, 4)	(2, 5)	(2, 6)
	3	(3, 1)	(3, 2)	(3, 3)	(3, 4)	(3, 5)	(3, 6)
	4	(4, 1)	(4, 2)	(4, 3)
	5	(5, 1)	(5, 2)	(5, 3)
	6	(6, 1)	(6, 2)	(6, 3)

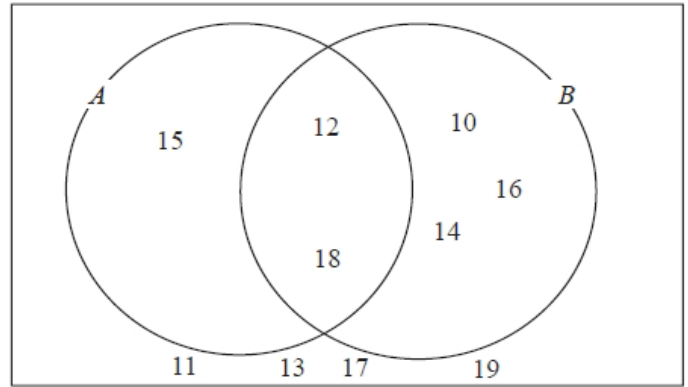
- (b) Write down the probability that Kerry will get a 1 on dice A and a 1 on dice B.

Kerry rolls dice A and dice B.

- (c) Compare the probability that Kerry will get a total of 6 with the probability that she will get a total of 7

3. The probability that a pea plant will grow from a seed is 93%.
Sarah plants 800 seeds.
Work out an estimate for the number of seeds that will grow into pea plants.

4. Here is a Venn diagram.



(a) Write down the numbers

that are in set

(i) $A \cup B$

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(ii) $A \cap B$

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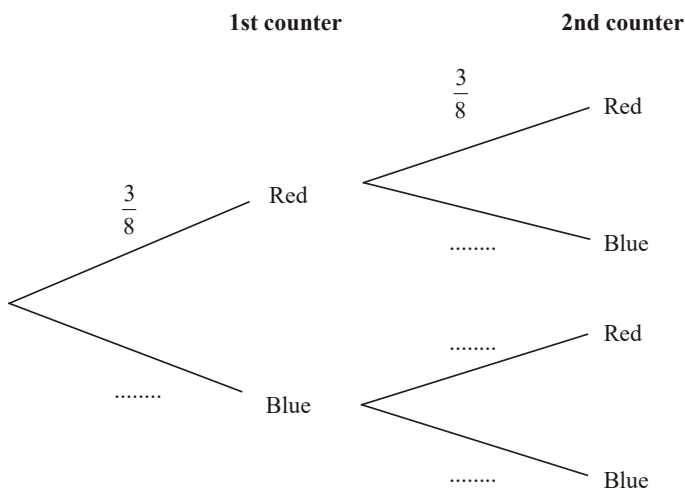
One of the numbers in the diagram is chosen at random.

(b) Find the probability that the number is in set A'

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5. Matthew puts 3 red counters and 5 blue counters in a bag. He takes at random a counter from the bag. He writes down the colour of the counter. He puts the counter in the bag again. He then takes at random a second counter from the bag.

(a) Complete the probability tree diagram.



(b) Work out the probability that Matthew takes two red counters.

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[Glue here]