Probability (H)

Pre-Intervention Assessment
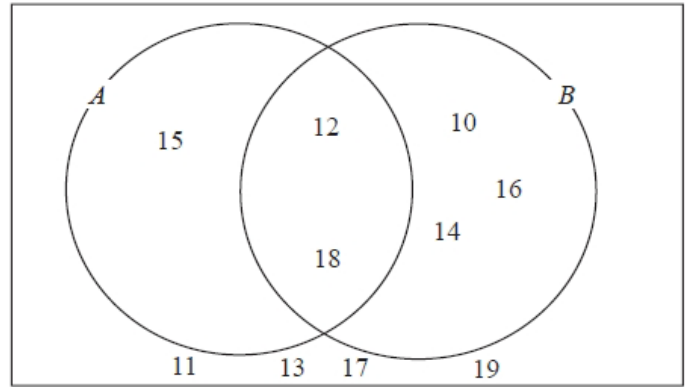
Name: _____

Class: _____

Date: _____

Question	Objective	RAG
1	Calculate probability from Venn Diagrams	
2	Draw and complete probability trees	
3	Calculate with conditional probability	
4	Solve probability problems involving algebra	

1. Here is a Venn diagram.

(a) Write down the numbers that are in set
(i) $A \cup B$

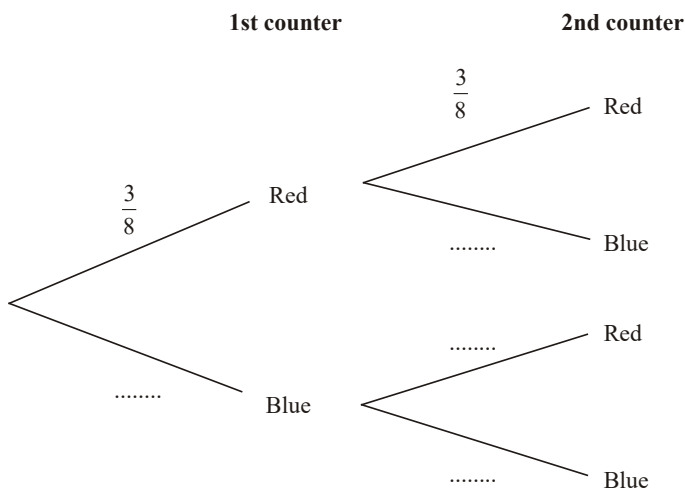..

(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'

The Venn diagram shows: A only: 15, 11; A∩B: 12, 18, 13, 17; B only: 10, 16, 14, 19

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2. 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.

1st counter   2nd counter

$\frac{3}{8}$ Red

Red — $\frac{3}{8}$ → Red
      — .... → Blue

Blue — .... → Red
       — .... → Blue

.... Blue

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

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3. These 6 coins are in a box.

10p	10p	10p	20p	20p	50p

Pritesh takes at random 2 coins from the box.
Work out the probability that the total value of the 2 coins is at least 40p.

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4. There are *N* beads in a jar.
40 of these beads are black.
Julie takes at random a sample of 50 beads from the jar.
5 of the beads in her sample are black.
Work out an estimate for the value of *N*.

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[Glue here]