# Probability Revision Mat

## Probability

1) I roll a normal, 6 sided dice. What is the probability that I get:
a) a 6?
b) an even number?
c) a number less than 2?

2) The spinner shown in spun. What is the probability that the spinner lands on:
a) red?
b) red or yellow?
c) not blue?


3) I put the letters from the word EXERCISE on cards, place them face down and then mix them up. I pick one card at random. What is the probability that the card is:
a) an X?
b) a vowel?
c) not an E?

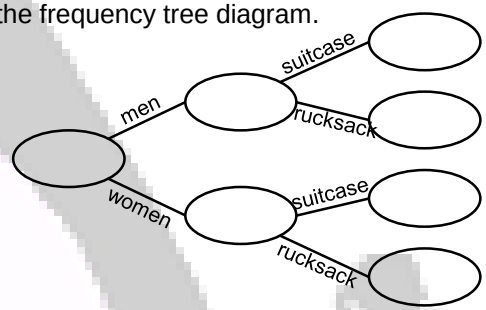
4) The probability that I win a 100m race is 3/10. What is the probability that I don't win the race?

5) The probability that is rains tomorrow is 0.14. What is the probability that it doesn't rain tomorrow?

## Frequency Trees

200 adults go on an international flight. Each travel with a suitcase or a rucksack. 70 are men. 50 men and 115 women have suitcases.

1) Fill in the frequency tree diagram.




2) What is the probability that a passenger chosen at random is a man with a rucksack?

3) What is the probability that a passenger chosen at random is a woman with a suitcase?

## Systematic Listing

1) Three friends Andrew, Billy and Chris are sitting in the same row at a concert. Show the different seating arrangements that are possible.

2) A restaurant menu allows a choice of one each of starter, main course and sweet. The choices are:

| Starter | Main Course | Sweet |
|---|---|---|
| Melon | Pasta | Gateaux |
| Soup | Fish | Ice-cream |
| | Chicken | |

## Sample Space Diagrams

Two fair dice are thrown together and the scores are added together.

1) Complete the sample space diagram showing all the possible outcomes

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |

2) How many outcomes are there altogether?
3) What is the most likely score?
4) What are the least likely scores?
5) What is probability of scoring 10 or more?

6) What is the probability of scoring less than 5?

## Relative Frequency

1) The probability that a biased dice will land on a five is 0.3. Megan is going to roll the dice 400 times. Work out an estimate for the number of times the dice will land on a five.

2) Jack sows 300 wildflower seeds. The probability of a seed flowering is 0.7. Work out an estimate for the number of these seeds that will flower.