# Probabilities Revision

Exercise 1

Use each diagram to solve the problems.

1) How many pieces are there total in the spinner?

2) If you spun the spinner 1 time, what is the probability it would land on a gray piece? ____

3) If you spun the spinner 1 time, what is the probability it would land on a black piece? ____

4) If you spun the spinner 1 time, what is the probability it would land on a white piece? ____

5) If you spun the spinner 1 time, what is the probability of landing on either a white piece or a gray piece? ____
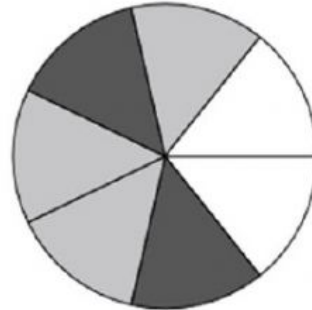
6) If you were to roll the dice one time what is the probability it will land on a 2? ____

7) If you were to roll the dice one time what is the probability it will NOT land on a 5? ____

8) If you were to roll the dice one time, what is the probability of it landing on an odd number? ____

9) How many shapes are there total in the array?

10) If you were to select 1 shape at random from the array, what is the probability it will be a heart? ____

11) If you were to select 1 shape at random from the array, what shape do you have the greatest probability of selecting?

12) Which shape has a 35% chance (7 out of 20) of being selected?

Exercise 2

Use the candy box to solve each problem.
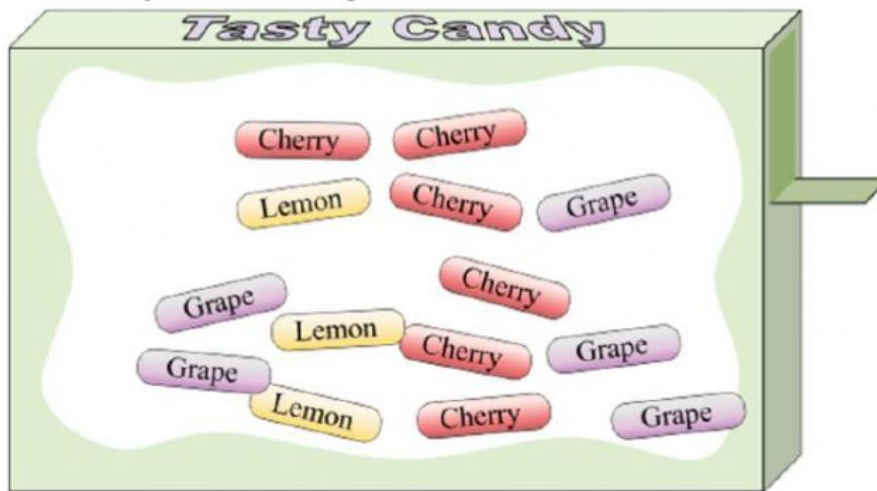
1) How many total pieces of candy are in the box?

2) What is the probability of selecting a cherry piece? ———

3) What is the probability of selecting a lemon piece? ———

4) What is the probability of selecting a grape piece? ———

5) If you picked 1 piece of candy out of the box which flavor would you have the highest probability of selecting?

6) Which flavor has the lowest probability of being selected?

7) If you picked a piece at random would you be more likely to select, a lemon piece or a cherry piece?

8) What is the probability of selecting either a cherry piece OR a grape piece? ——

9) Your friend wants either a cherry piece or a grape piece. If you picked a piece out randomly, which one would you have the highest probability of selecting?

10) If you ate 3 lemon pieces, 5 cherry pieces and 3 grape pieces, which flavor would you have the highest probability of selecting next?
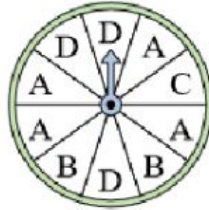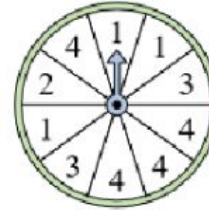
Exercise 3

Solve each problem.
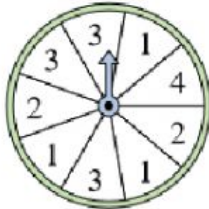
1) Which letter is the spinner most likely to land on?
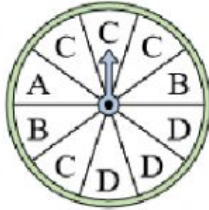
2) Which letter is the spinner most likely to land on?

3) Which number is the spinner least likely to land on?

4) Which two numbers is the spinner equally likely to land on?

5) Which two numbers is the spinner equally likely to land on?

6) Which number is the spinner most likely to land on?
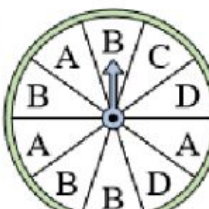

7) Which number is the spinner least likely to land on?

8) Which letter is the spinner most likely to land on?

9) Which number is the spinner most likely to land on?

10) Which letter is the spinner least likely to land on?
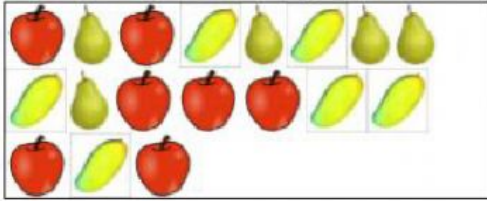

11) Which number is the spinner most likely to land on?

12) Which number is the spinner least likely to land on?

Exercise 4

The given figure shows some fruits in a basket. Andrea is getting late for school and just picks up a fruit from the basket without looking at it. Which fruit is most likely to be picked?

Exercise 5

It is Adam's birthday today and he distributed toffees to his classmates. The toffees were in a bag as shown below. Adam's puts his hand in the bag and takes out a toffee without looking. What is the probability that he picked out a striped toffee?

                                      _____
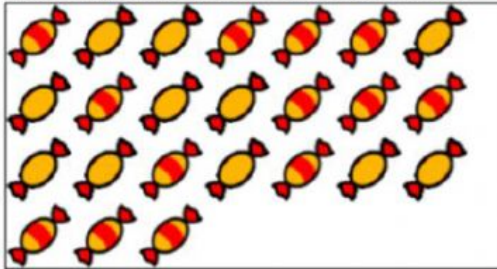
Exercise 6

One of the following shapes are chosen at random.

What is the probability of that shape being a triangle? __

What is the probability of that shape being a square? __

What is the probability of that shape being a circle? __

What is the probability of that shape **not** being a circle? __

Exercise 7

Alice selects a letter a random from the word BANANA.

a) What is the probability that her selected letter is the letter N?_

b) What is the probability that her selected letter is a vowel? __

c) What is the probability that her selected letter is a T?__

Exercise 8

Here are the probabilities of some events happening, write down the probabilities of the events not happening:

a) P (h) = 0.3   P (not h) = _____

b) P (h) = 0.52   P (not h) = _____

c) P (h) = 0.21   P (not h) = _____

d) P (h) = 25%   P (not h) = _____

e) P (h) = 98%   P (not h) = _____

f) P (h) = 55.5%   P (not h) = _____

g) P (h) = 2/5   P (not h) = _____

Exercise 9

There are 5 cards numbered 1 to 5. One card is selected at random then replaced in the pack. A second card is then selected at random. Find the probability of:

a) The sum of the scores is 6 or more   ____

b) The sum of the scores is less than 4 ____

c) The product of the scores is greater than 9 ____

d) The product of the scores is a square number ____

e) The difference in the scores is exactly 3 ___

Exercise 10

There are 2 bags of marbles. The first contains 2 red, 3 blue and 1 green, the second contains 1 red, 2 blue and 1 green. A marble from each is removed. Find the probability of getting:

a) 2 reds __

b) 2 blues __

c) a red and blue __

d) 2 greens ___

e) a green and a blue ___

Exercise 11

All members of a club were asked if they eat apples (A) and if they eat bananas (B). The information was represented on a Venn Diagram
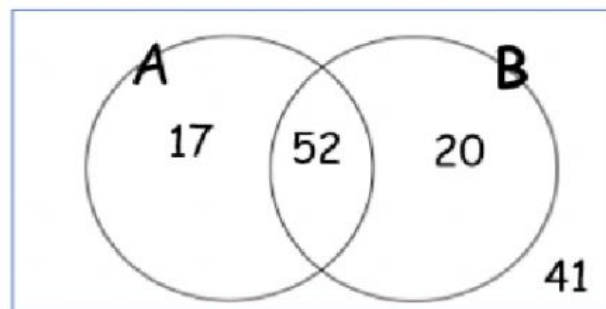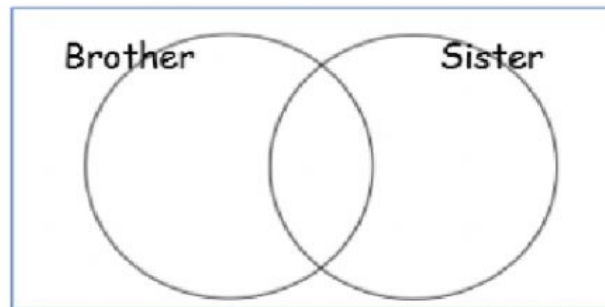

a) How many people are in the club? ___

b) A member of the club is selected at random. What is the probability the person eats both apples and bananas? ___

Exercise 12

Out of 50 people surveyed 30 have a brother 25 have a sister 6 have neither a brother or a sister.

a) Use this information to complete the Venn Diagram

Brother   Sister

b) A person is picked at random. What is the probability that person not to have a sister? ___

Exercise 13

Sami asked 50 people which drinks they liked from tea, coffee and milk. All 50 people like at least one of the drinks

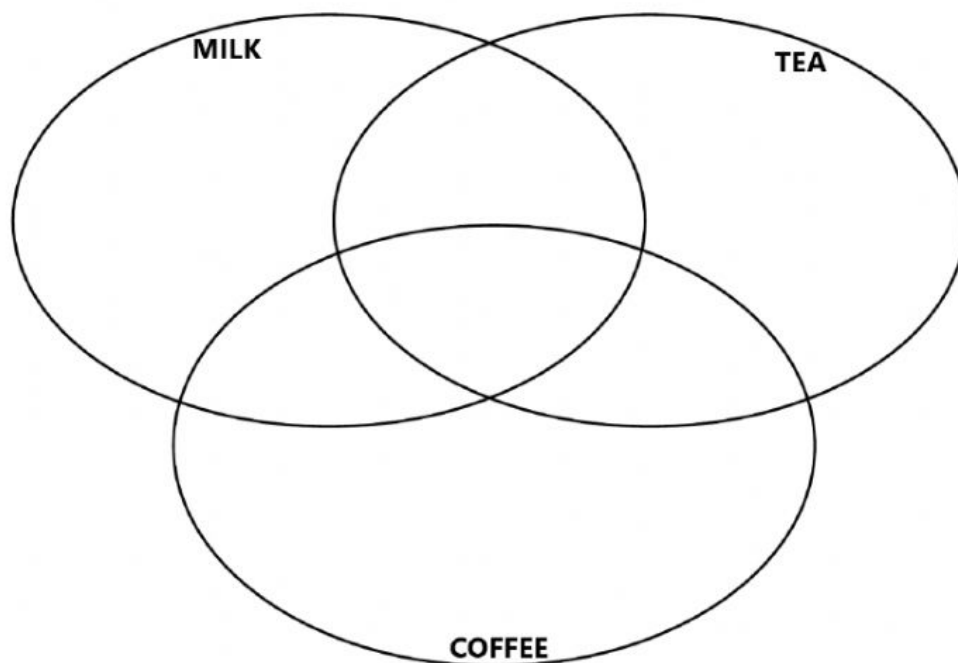19 people like all three drinks

16 people like tea and coffee but do not like milk

21 people like coffee and milk

24 people like tea and milk. 40 people like coffee

1 person likes only milk

   a) Use the information to complete the Venn diagram.

   b) Sami selects at random one of the 50 people. Work out the
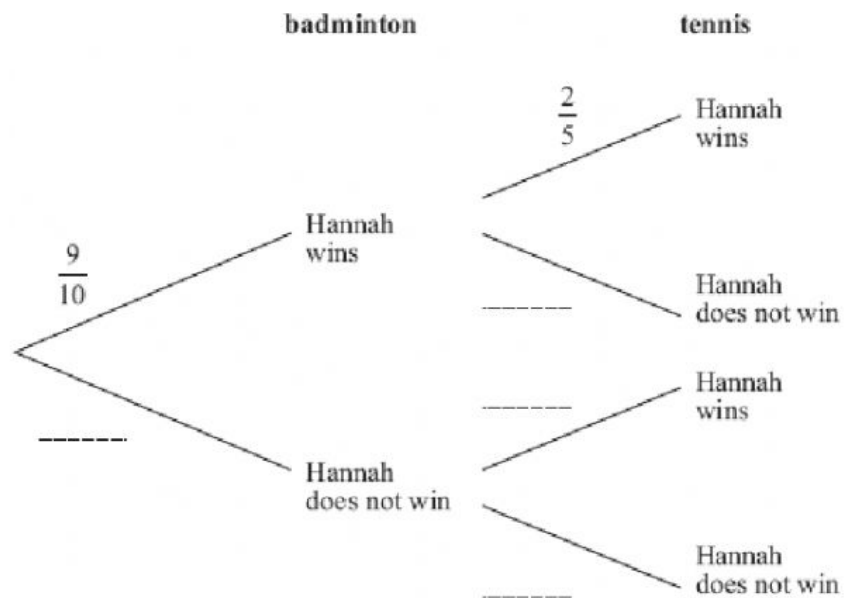   probability that this person likes tea. ___

Exercise 14

Hannah is going to play one badminton match and one tennis match.

The probability that she will win the badminton match is $\frac{9}{10}$

The probability that she will win the tennis match is $\frac{2}{5}$

(a) Complete the probability tree diagram.

badminton		tennis

$\frac{9}{10}$ Hannah wins

$\frac{2}{5}$ Hannah wins

_____ Hannah does not win

_____ Hannah wins

_____ Hannah does not win

_____ Hannah does not win

(b) Work out the probability that Hannah will win **both** matches. _____