PROBABILITY TEST

Grade 10 Mathematics

Marks: **40**
Time: **50 MINUTES**

Name: _____

REFRACTION
www.refractions.co.za

QUESTION 1

The following letter cards have been laid face down on a table. One card is chosen at random.

C	H	O	C	O	L	A	T	E	S

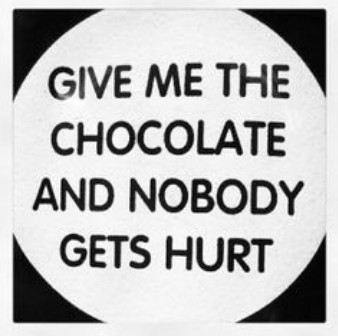
1.1 Calculate the probability that the card chosen will be C. (2) S1901

1.2 Calculate the probability that the card chosen will not be an T. (2) S1901

1.3 Calculate the probability that the card chosen is an E or an O. (3) S1901

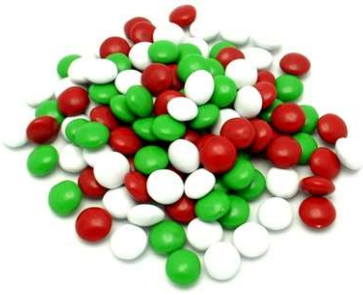
1.4 Calculate the probability that the card chosen is a S and a L. (1) S1901

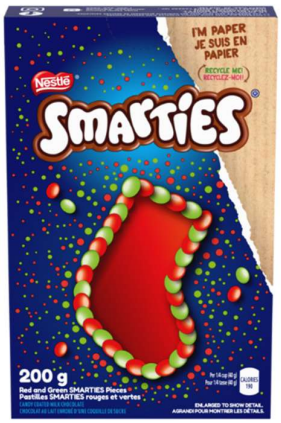
[8]



QUESTION 2

During December, Smarties sold cartons of smarties that only contain red and green smarties. The specific carton that you bought contain 15 green and 21 red smarties.





2.1 Draw a tree diagram to represent all the possible outcomes for the colours of the first 2 smarties that you eat. (4) S1902

2.2 Determine the probability that the first 2 smarties you eat will be one of each colour. (3) S1902

[7]

QUESTION 3

In a group of 85 learners, 48 likes M&M's, 43 likes Astros and 12 do not like either of these.

3.1 Draw a Venn diagram to illustrate this information and to determine how many learners like M&Ms and Astros. Let x = number of learners that like M&Ms and Astros. (6) S1904

3.2 Determine the value of x (3) S1904

3.3 Determine the probability that if a learner is chosen at random, that he/she:

a) Only likes M&Ms. (2) S1904

b) Does not like Astros. (2) S1904

c) Likes M&Ms or Astros. (2) S1904

[15]

VRAAG 4

It is given that $P(A) = 0{,}22$, $P(B) = 0{,}6$ and $P(A \text{ or } B) = 0{,}59$.

4.1 Calculate $P(A \text{ and } B)$ (3) S1904

Events A and B are **mutually exclusive**. If $P(A) = 0{,}71$ and $P(B) = 0{,}13$:

4.2 Calculate $P(A \text{ or } B)$ (2) S1905

4.3 Calculate $P(A \text{ and } B)$ (1) S1905

Events A and B are **complimentary**. If $P(A) = 0{,}71$:

4.4 Calculate $P(A \text{ or } B)$ (1) S1905

4.5 Calculate $P(A \text{ and } B)$ (1) S1905

4.6 Calculate $P(B)$ (2) S1905

[10]

Total: 40 Marks