

SHARP

Worksheet 5 Memorandum – Probability

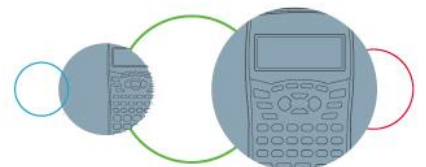
Mathematical Literacy – Grade 11

1. a) *Probability of drawing the blue marble : $\frac{1}{9} = 0.11$*
b) *Probability of drawing a blue marble after 4 red marbles have been removed*
 $P(\text{blue}): \frac{1}{5} = 0.20$
c) *Probability of drawing a red marbles after 2 red marbles have been removes*
 $P(\text{red}): \frac{6}{7} = 0.86$
d) *Probability of drawing a blue marble after 1 has been removed is 0*

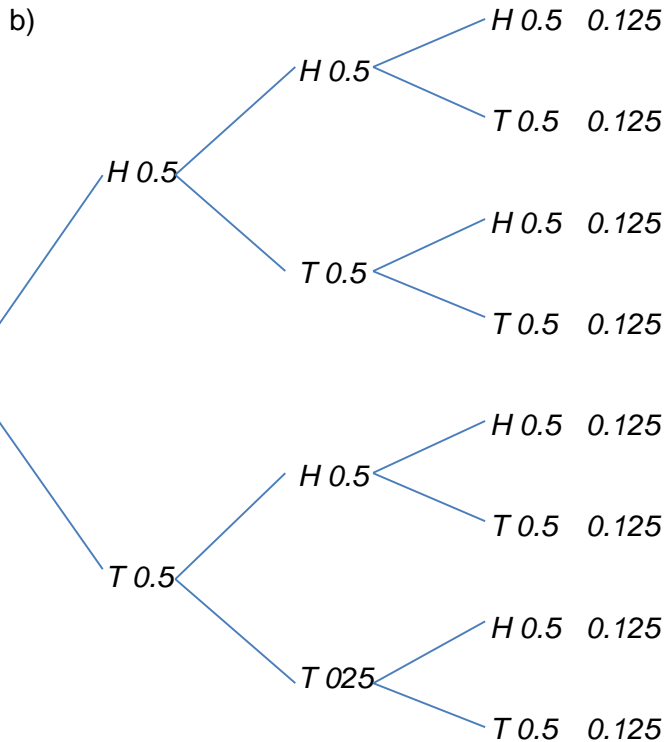
2. a)

	1	2	3	4	5	6
1	1 1	2 1	3 1	4 1	5 1	6 1
2	1 2	2 2	3 2	4 2	5 2	6 2
3	1 3	2 3	3 3	4 3	5 3	6 3
4	1 4	2 4	3 4	4 4	5 4	6 4
5	1 5	2 5	3 5	4 5	5 5	6 5
6	1 6	2 6	3 6	4 6	5 6	6 6

- b) $P(6): \frac{5}{36} = 0.14$
c) $P(7): \frac{6}{36} = \frac{1}{6} = 0.167$
d) $P(5; 5): \frac{1}{36} = 0.028$
e) $P(\text{doubles}): \frac{6}{36} = 0.167 \therefore P(\text{doubles})\text{three times}: 0.167 \times 0.167 \times 0.167 = 0.0047$
f) $P(\geq 9): \frac{10}{36} = 0.278$
g) $P(1) = 0$ You cannot roll a one using two die. The minimum result is two.



3. a) $P(\text{tails}) = 0.5$ so $P(\text{tails}) \times P(\text{tails}) \times P(\text{tails}) = 0.125$



c) $P(H,H,T) = 0.125$

d) $P(T,H,T) = 0.125$

e) $1 - P(T,T,T) = 0.875$

4 a) $P(\text{red}) : \frac{17}{50} = 0.34$

b) $\text{green sweets} = 50 - 17 - 20$
 $\text{green sweets} = 13$

c) $P(\text{green}) : \frac{13}{50} = 0.26$

d) $P(\text{green or red}) : \frac{13+17}{50} = \frac{30}{50} = 0.6$ OR $P(\text{not blue}) : 1 - P(\text{blue}) = 1 - \frac{20}{50} = \frac{30}{50} = 0.6$

5. a) $P(J) \times P(W) = 0.65 \times 0.4 = 0.26$

b) Maria has 12 different choices. She is most likely to choose jeans, a white shirt and either pair of shoes. This is because the probabilities of each of these items are the highest.

c) $P(B) \times P(G) \times P(T) = 0.35 \times 0.3 \times 0.5 = 0.0525$

