

Gr 7 Probability Test of Fun!

(show all work and calculations)

Student Name: KEY

1. A bag contains 10 marbles. One marble is chosen from the bag randomly by not looking. (In the bag are 5 gray marbles, 4 green marbles and 1 pink).
- a. What is the probability of selecting a green marble?(1.5 marks)

| fraction | ratio | percent |
|---------------------------------|-------|---------|
| $\frac{4}{10}$ or $\frac{2}{5}$ | 4:10 | 40% |

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- b. What is the probability of selecting a gray or pink marble?(1.5 marks)

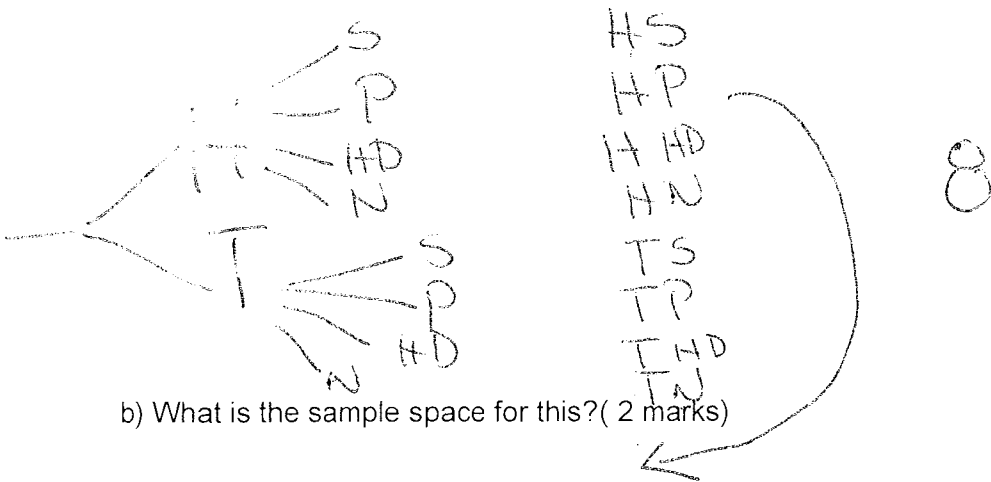
| fraction | ratio | percent |
|---------------------------------|------------------------|---------|
| $\frac{6}{10}$ or $\frac{3}{5}$ | 3:5 or 6:10 | 60% |

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- c. What is the probability of selecting a pink marble, placing it back in the bag and selecting it again...so in other words, what is the probability of selecting a pink marble twice in a row? (Show work in space provided. (2 marks)

| fraction | ratio |
|-----------------|-------|
| $\frac{1}{100}$ | 1:100 |

2. Milly flips a coin(heads/tails) and then spins a spinner with the selections: skittles, popcorn, hotdog or nachos.
- a) Neatly draw a tree diagram to organize the possible outcomes of these two events.(2 marks)



- b) What is the sample space for this?(2 marks)

- c) What is the probability of flipping heads and skittles or popcorn?(1 mark)(Show answer as a fraction and ratio).

$\frac{2}{8}$ or $\frac{1}{4}$ 1:4

- d) What is the probability of not getting heads or tails?(1 mark)(Please explain your answer.)

$\frac{0}{8}$

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3. A spinner with four equal sections is spun twice. The spinner's four sections are the following: 2,3, 4, 5.

a. Neatly fill in the table below with the possible outcomes.(2 marks)

| | | | | |
|---|-----|-----|-----|-----|
| | 2 | 3 | 4 | 5 |
| 2 | 2,2 | 2,3 | 2,4 | 2,5 |
| 3 | 3,2 | 3,3 | 3,4 | 3,5 |
| 4 | 4,2 | 4,3 | 4,4 | 4,5 |
| 5 | 5,2 | 5,3 | 5,4 | 5,5 |

b. What is the probability that the sum of the two numbers is ^{even} positive?(show answer as ratio and percent)
(2 marks)

$$\frac{8}{16}$$

c. What is the probability that the product of the two numbers will be greater or equal to 12?(2 marks)

$$\frac{6}{16}$$

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4. Matching: Match the following definition with the correct word.(1 mark each, total 7 marks)

1. F Tree Diagram

~~A~~. All the possible outcomes of an experiment.

2. D Independent Event

~~B~~. Probability of an event occurring based on experimental results.

3. E Random

~~C~~. The expected probability of an event occurring.

4. A Sample Space

~~D~~. The outcome of one event has no effect on the outcome of another.

5. G Probability

E. The outcome has an equal chance of occurring.

6. B Experimental Probability. ~~F~~. A diagram used to organize outcomes.

7. C Theoretical Probability ~~G~~. The likelihood or chance of an event occurring.

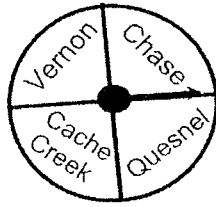
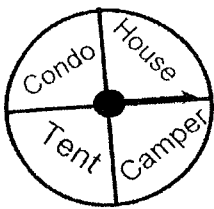
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5. Jack and Jill create spinners about places to live. They spin each spinner once (shown below the table).

a. Neatly fill in the following table to show the sample space. (2 marks)

| | Vernon (V) | Chase (Ch) | Cache Creek (C) | Quesnel (Q) |
|-------------|------------|------------|-----------------|-------------|
| Condo (Co) | CoV | CoCh | CoC | CoQ |
| House (H) | HV | HCh | HC | HQ |
| Tent (T) | TV | TCh | TC | TQ |
| Camper (Ca) | CaV | CaCh | CaC | CaQ |



b. How many possible outcomes are there? (1 mark)

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c. What is the probability of getting (Tent, Vernon)? (1 mark)

$\frac{1}{16}$

d. What is the probability of getting (house or condo, Chase)? (1 mark)

$\frac{2}{16}$ or $\frac{1}{8}$

At the end...check of syntax and calculation errors!

J