

Name: Key Date: _____ Per: _____

Math 7 Unit 1 Study Guide

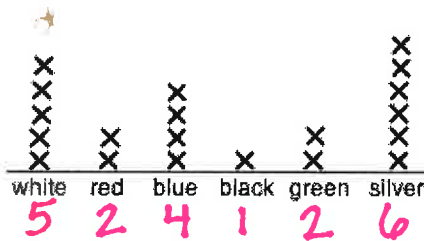
Directions: Answer each question completely. Show ALL work to defend your answers.

1. There are 12 green, 3 white, 10 purple and 5 blue gumballs in the gumball machine. 30 total

5/5

- a. What is the probability of getting a blue gumball? $\frac{5}{30}$ or $\frac{1}{6}$
- b. What is the probability of getting a red gumball? 0
- c. What is the probability that she will get a 3 white or 12 green gumball? $\frac{15}{30}$ or $\frac{1}{2}$
- d. If you are going to reach into the bag and pull out a gumball at random, what color are you most likely to get? Explain. You would most likely get a green marble because there are more green than any other color.

2. Monica made the following line plot for the first 20 cars that drove past her school.



20 total

4/4

Based on this data,

- a. what is the probability that the next car will be silver? Why? $\frac{6}{20}$ or $\frac{3}{10}$
because there are 20 cars in total and 6 are silver
- b. what is the probability that the next car will NOT be white? Why? $\frac{15}{20}$ or $\frac{3}{4}$
because 5 of the 20 cars are white, so 15 cars are not white.

3. Marcia just bought a game that came with the spinner at right. On each turn, the player rolls a die and then spins the spinner. The spinner determines if the player actually gets to move.



2/2

- a. What is the most likely outcome with this spinner? Why? Move ahead
because 2 of the 3 spaces are move ahead. It's the most.
- b. What is the probability of moving ahead? Explain. $\frac{2}{3}$ there are 3 choices on the spinner and 2 are more ahead.

4. Calculate.

8/8

a. $\frac{3}{4} + \frac{2}{5} = 1\frac{3}{20}$

b. $\frac{1}{2} - \frac{4}{9} = \frac{1}{18}$

c. $\frac{4}{5} - \frac{3}{4} = \frac{1}{20}$

d. $\frac{2}{3} + \frac{5}{9} = 1\frac{2}{9}$

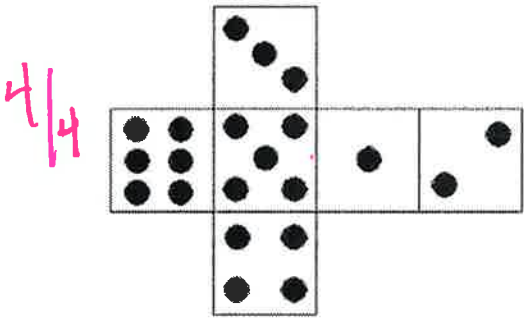
(a) $\frac{15}{20} + \frac{8}{20} = \frac{23}{20} = 1\frac{3}{20}$

(b) $\frac{9}{18} - \frac{8}{18} = \frac{1}{18}$

(c) $\frac{16}{20} - \frac{15}{20} = \frac{1}{20}$

(d) $\frac{6}{9} + \frac{5}{9} = \frac{11}{9} = 1\frac{2}{9}$

5. The shape below shows an unfolded cube.



a. If the cube is folded up and rolled, what are all the possible outcomes? Are they all equally likely? Explain.

You can get a 1, 2, 3, 4, 5, or 6. They are all equally likely because each outcome is only once.

b. What is the probability of getting an even number?

3/6 or 1/2

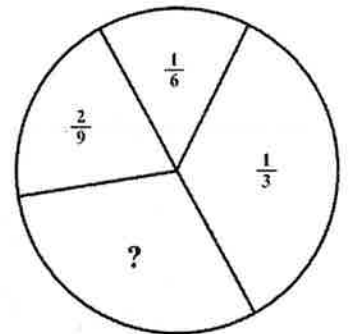
c. What is the probability of not getting a 4?

5/6

6. The spinner to the right is incomplete. If the numbers in the sections of the spinner represent the probabilities of spinning each section, what fraction is missing in the spinner?

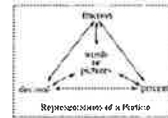
2/2

$$\frac{2}{9} + \frac{1}{6} + \frac{1}{3} = \frac{4}{18} + \frac{3}{18} + \frac{6}{18} = \frac{13}{18}$$



7. Below is a sample of the portions web. Each part below

represents one part of the web. For each one, give the other three parts to complete the web.



Fraction	Decimal	Percent	Words/ Picture
$\frac{23}{100}$	0.23	23%	twenty-three percent
$\frac{2}{5}$	0.4	40%	
$\frac{3}{10}$	0.3	30%	
$\frac{38}{100} = \frac{19}{50}$	0.38	38%	thirty-eight hundredths