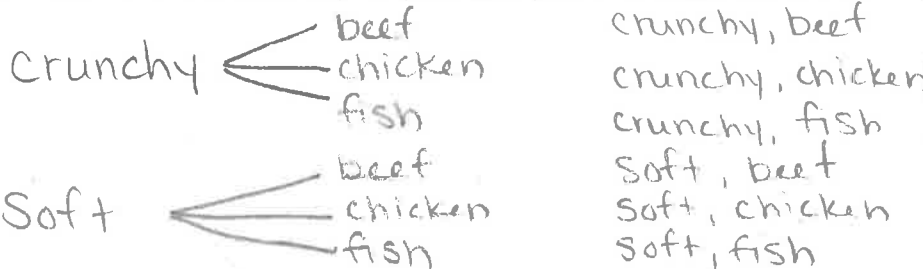


Probability Practice (Use after ML #2)

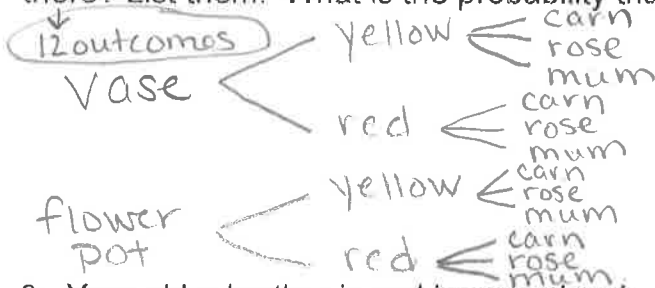
Name _____

1. You are going to Taco Bell for dinner to get tacos. You can either get a crunchy taco or a soft taco. You can get either ground beef, chicken, or fish. Create a tree diagram. Find all possible outcomes. List them. What is the probability of getting a taco with ground beef?



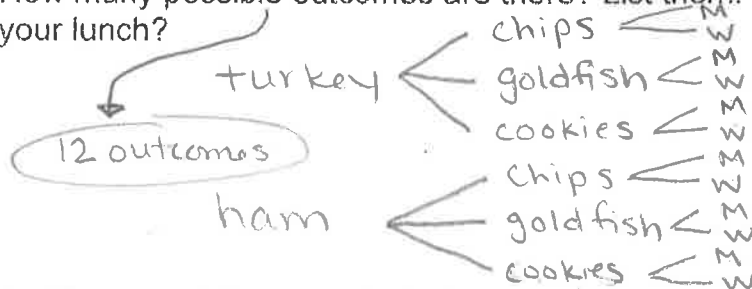
$$P(\text{taco w/ beef}) = \frac{2}{6} = 33\%$$

2. Francisco is arranging flowers. He can use a vase or a flower pot. He can use yellow flowers or red flowers. He can use carnations, roses, or mums. Create a tree diagram. How many possible outcomes are there? List them. What is the probability that Francisco will have red flowers?



$$\Rightarrow \frac{6}{12} = \frac{1}{2} = 50\%$$

3. Your older brother is making your lunch. He will give you a turkey or ham sandwich, for snack choices are chips, goldfish or cookies and drink choices are milk or water. Create a tree diagram. How many possible outcomes are there? List them. What is the probability you will have cookies in your lunch?



$$\frac{4}{12} = \frac{1}{3} = 33\%$$

4. There are 3 flavor drinks in the cooler, cola, grape and sprite. If the probability of getting cola is $\frac{2}{5}$ and the probability of getting grape is $\frac{8}{25}$, what is the probability of getting a sprite?

$$\frac{2}{5} + \frac{8}{25} + P(\text{sprite}) = 1$$

$$\times 5 \downarrow \frac{10}{25} + \frac{8}{25} + \frac{x}{25} = \frac{25}{25}$$

$$10 + 8 + x = 25$$

$$18 + x = 25$$

$$x = 7$$

$$P(\text{sprite}) = \frac{7}{25}$$

5. There are four types of cookies; chocolate chip, sugar, peanut butter and oatmeal. The probability of chocolate chip is $\frac{13}{20}$, oatmeal is $\frac{1}{20}$, sugar is $\frac{1}{5}$, what is the probability of getting a peanut butter cookie? Which cookie are you most likely to get? Why?

$$\frac{13}{20} + \frac{1}{20} + \frac{1}{5} + P(\text{PB}) = 1$$

$$\downarrow \frac{13}{20} + \frac{1}{20} + \frac{4}{20} + \frac{x}{20} = \frac{20}{20}$$

$$\frac{18}{20} + \frac{x}{20} = \frac{20}{20}$$

$$x = 2, \text{ so } \frac{2}{20} = \frac{1}{10}$$