Probability Worksheet (Equally Likely Outcomes)

In the following problems, round all of your decimal answers to three decimal places. Round all of your percents to the nearest tenth of a percent.

A student randomly selected crayons from a large bag of crayons. The table below shows the number of each color crayon in a bag. Now, suppose the student were to randomly select one crayon from the bag.

Color	Number
Brown	10
Blue	5
Yellow	3
Green	3
Orange	3
Red	6

1. What is the estimate for the probability of selecting a blue crayon from the bag? Express your answer as a fraction, decimal, or percent.

- 2. What is the estimate for the probability of selecting a brown crayon from the bag?
- 3. What is the estimate for the probability of selecting a red crayon or a yellow crayon from the bag?
- 4. What is the estimate for the probability of selecting a pink crayon from the bag?
- 5. Which color is most likely to be selected?

6. If there are 300 crayons in the bag, how many red crayons would you estimate are in the bag? Justify your answer.

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1. What is the estimate for the probability of selecting a blue crayon from the bag? Express your answer as a fraction, decimal, or percent.

$$\frac{5}{30} = \frac{1}{6} \approx 0.167 \text{ or } 16.7\%$$

2. What is the estimate for the probability of selecting a brown crayon from the bag?

$$\frac{10}{30} = \frac{1}{3} \approx 0.333 \text{ or } 33.3\%$$

3. What is the estimate for the probability of selecting a red crayon or a yellow crayon from the bag?

$$\frac{9}{30} = \frac{3}{10} = 0.3 = 30\%$$

4. What is the estimate for the probability of selecting a pink crayon from the bag?

$$\frac{0}{30} = 0\%$$

5. Which color is most likely to be selected?

Brown

6. If there are 300 crayons in the bag, how many red crayons would you estimate are in the bag? Justify your answer.

There are 6 out of 30, or $\frac{1}{5}$ or 0.2, crayons that are red. Anticipate $\frac{1}{5}$ of 300 crayons are red, or approximately 60 crayons.

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