

Probability of Simple Events

3/13

Probability - The chance of something happening

↳ It can be written as a...

- * ① fraction $\left(\frac{\text{\# of desired outcomes}}{\text{\# of total outcomes}} \right)$
 ② Decimal
 ③ percent

ALWAYS Simplify the Fraction

Examples

① Rolling Die (6 outcomes) ← Sample Space
 1, 2, 3, 4, 5, 6

$$P(3) = \frac{1}{6}, 0.\overline{16}, 17\%$$

↳ probability of Rolling a 3

$$P(\text{even}) = \frac{3}{6} = \frac{1}{2}, 0.5, 50\%$$

$$P(\text{Not } 5) = \frac{5}{6}, 0.\overline{83}, 83\%$$

1, 2, 3, 4, 6

$$P(7) = \frac{0}{6}, 0, 0\% \leftarrow \text{impossible}$$

Probability Percentages

0% = impossible

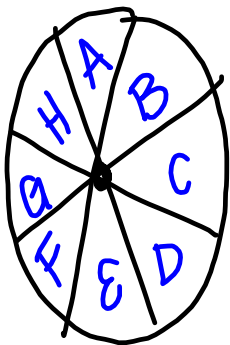
1-49% = Unlikely

50% = Neither likely or unlikely

51-99% = Likely

100% = Certain

② Spinning a Spinner (8 outcomes)



$$P(\text{vowel}) = \frac{2}{8} = \frac{1}{4}, 0.25, 25\% \text{ unlikely}$$

$$* P(\text{A, B or C}) = \frac{3}{8}, 0.375, 37.5\%$$

$$P(\text{Not F}) = \frac{7}{8}, 0.875, 87.5\% \text{ likely}$$

$$P(\text{letter}) = \frac{8}{8} = 1, 100\% \text{ Certain}$$