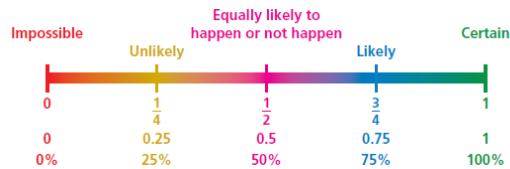


# Lesson 10.2a Probability

## 10.2a Probability

Probability - the measure of a likelihood that an event will occur. Probabilities will always be between 0 and 1 (including 0 and 1)



Ex. 1 There is an 80% chance of thunderstorms tomorrow. Describe the likelihood of the event.

*Thunderstorms are likely to occur tomorrow.*

Finding Probability  $P = \frac{\text{\# favorable outcomes}}{\text{\# possible outcomes}}$

Ex. 2 Flip a coin

$$P_{(\text{heads})} = \frac{1}{2} \quad P_{(\text{tails})} = \frac{1}{2}$$

Ex. 3 Roll a die

$$P_{(1)} = \frac{1}{6} \quad P_{(\text{even})} = \frac{3}{6} = \boxed{\frac{1}{2}}$$

$$P_{(\text{odd})} = \frac{3}{6} = \boxed{\frac{1}{2}} \quad P_{(>4)} = \frac{2}{6} = \boxed{\frac{1}{3}}$$

Ex. 4 Alphabet

$$P_{(\text{vowel})} = \frac{5}{26} \quad P_{(A-Z)} = \frac{26}{26} = \boxed{1}$$

$$P_{(R-Y)} = \frac{8}{26} = \boxed{\frac{4}{13}}$$

|   |    |    |
|---|----|----|
|   | a  | b  |
| c | ac | bc |
| d | ad | bd |