

Coins Sample Space

H = Heads, T = Tails \rightarrow 1 Head + 1 Tail = 2

One Coin

$2^1 = 2$ outcomes

| | 2^0 |
|----|--------------|
| | " |
| | 1 |
| | \downarrow |
| 1. | H |
| 2. | T |

Two Coins

$2^2 = 4$ outcomes

| | 2^1 | 2^0 |
|----|--------------|--------------|
| | " | " |
| | 2 | 1 |
| | \downarrow | \downarrow |
| 1. | H | H |
| 2. | H | T |
| 3. | T | H |
| 4. | T | T |

Three Coins

$2^3 = 8$ outcomes

| | 2^2 | 2^1 | 2^0 |
|----|--------------|--------------|--------------|
| | " | " | " |
| | 4 | 2 | 1 |
| | \downarrow | \downarrow | \downarrow |
| 1. | H | H | H |
| 2. | H | H | T |
| 3. | H | T | H |
| 4. | H | T | T |
| 5. | T | H | H |
| 6. | T | H | T |
| 7. | T | T | H |
| 8. | T | T | T |