

HW: Worksheet/1-13, 21

Warm up

A spinner is divided into 8 sections numbered from 1 to 8. You spin the spinner once. Find each probability.

1) P(3)

$$\frac{1}{8}$$

2) P(odd)

$$= \frac{4}{8} = \frac{1}{2}$$

3) P(greater than 5)

$$= \frac{3}{8}$$

4) P(2 or 5)

$$= \frac{2}{8} = \frac{1}{4}$$

5) P(not 1)

$$= \frac{7}{8}$$



HW Solutions

$$(4) \quad 3 \cdot 4 \cdot 6 = 72$$

$$\left(\frac{1}{72} \right)$$

$$(9) \quad 6 \cdot 2 \cdot 2 = (24)$$

⑫

$$3 \cdot 6 = 18$$

$$\frac{1}{18}$$

~~12~~

(14)

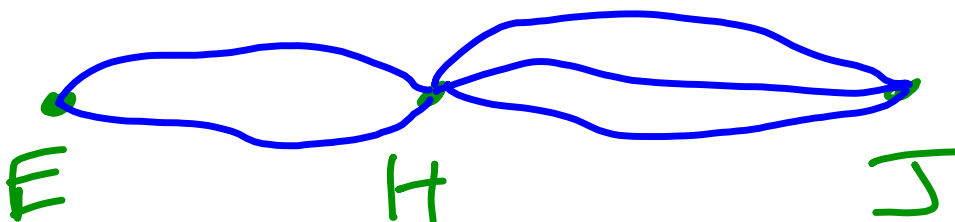
$$\underline{8} \cdot \underline{10} = 80$$

$$\underline{10} \cdot \underline{9} \cdot \underline{8} \cdot \underline{7}$$

$$\underline{5040}$$

(11)

$$2 \cdot 3 = 6$$



$\frac{1}{6}$

① 2

$$\underline{2} \cdot \underline{2} = 4$$

$$\underline{2} \cdot \underline{2} \cdot \underline{2} = 8$$



Theoretical Probability

in theory

$$P(\text{event}) = \frac{\text{\# of favorable outcomes}}{\text{total \# of possible outcomes}}$$

Experimental Probability - probability based on experimental data

$$P(\text{event}) = \frac{\text{\# of times event occurs}}{\text{total \# of trials}}$$

100 kids
experimental

blue
53

53
100

3 red
3 blue
theoretical

$$P(\text{blue}) = \frac{3}{6} = \frac{1}{2}$$

Rolling a Die



Theoretical

1 - 1/6
 2 - 1/6
 3 - 1/6
 4 - 1/6
 5 - 1/6
 6 - 1/6

Experimental

(we will do 30 trials)

1 - IIII III $\frac{8}{30} = \frac{4}{15}$
 2 - IIII $\frac{4}{30} = \frac{2}{15}$
 3 - IIII $\frac{5}{30} = \frac{1}{6}$
 4 - IIII I $\frac{6}{30} = \frac{1}{5}$
 5 - II $\frac{2}{30} = \frac{1}{15}$
 6 - IIII $\frac{5}{30} = \frac{1}{6}$

You flipped a coin 50 times and got heads 28 times.

What is the theoretical probability of getting heads?

$$\frac{1}{2}$$

What is the experimental probability of getting heads?

$$\frac{28}{50} = \frac{14}{25}$$

You roll 2 dice and observe the sum.

$$P(2) = \frac{1}{36}$$

$$P(9) = \frac{4}{36} = \frac{1}{9}$$

$$P(\text{less than } 6) = \frac{10}{36} = \frac{5}{18}$$

Rolling 2 Dice

Die 1

Die 2

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

