

Bellwork Tuesday, May 6, 2014

1. In your drawer at home you have 14 white socks, 10 black socks, 6 brown socks, and 4 blue socks. You wake up late and just reach in and grab a single sock. Find each probability as a fraction.

$$\text{a) } P(\text{black or blue}) = \frac{14}{34}$$

$$\text{b) } P(\text{white and black}) = \frac{0}{34}$$

c) $P(\text{brown or not white}) = \frac{20}{34}$

6 Brown + 10 BLK
4 BLUE
~~6 BROWN~~

3. Given a standard deck of cards find each probability as a fraction assuming that you take out one card at random.

a) $P(\text{King or Queen}) = \frac{8}{52}$ b) $P(5 \text{ of Clubs}) = \frac{1}{52}$

c) $P(\text{Heart and a Face Card}) = \frac{3}{52}$ d) $P(10 \text{ or a Diamond}) = \frac{16}{52}$
 $4 + 13 - 1$

$$e) P(\text{Red } 8) = \frac{2}{52}$$

2. Using the same sock drawer from #1: You reach in and grab a random sock, put it back in, then grab another sock. Find this probability as a fraction:

P(black first and then a brown)

$$\frac{10}{34} \cdot \frac{6}{34} \approx \frac{60}{1156}$$

4. A survey of people's favorite fruit is conducted. The results are shown below. You will pick a person at random, find each probability as a fraction.

	Apple	Pear	Orange	Banana	Total
Male	73	64	80	51	268
Female	68	75	83	56	282
Total	141	139	163	107	550

a) $P(\text{Apple}) = \frac{141}{550}$

b) $P(\text{Banana or Orange}) = \frac{270}{550}$

c) $P(\text{Female and Pear}) = \frac{75}{550}$

$$d) P(\text{Male or Apple}) = \frac{336}{550}$$