Bellwork Friday, May 9, 2014

1. You still have the following Halloween candy left in a bag: 5 Snickers, 3 pieces of gum, and 4 Milky Way.

a) You randomly grab one eat it then randomly grab another and eat it. Find this probability as a fraction.

P(Snickers and Snickers) $\frac{5}{12} \cdot \frac{4}{11} = \frac{20}{132}$

b) You randomly grab one, look at it and decided not too eat it so you throw it back in the bag and randomly grab another one. Find this probability as a fraction.

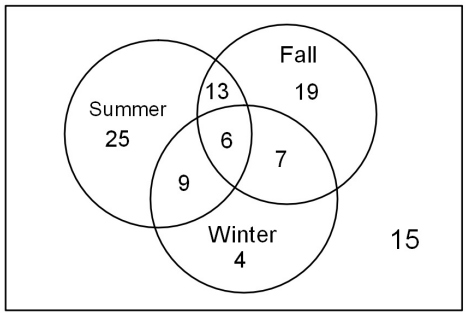
P(Gum and Milky Way) $\frac{3}{12} \cdot \frac{4}{12} = \frac{12}{144}$

2. You are blowing up balloons for a birthday party. In the bag of balloons you bought there are 9 red, 5 green, and 6 blue balloons. You take a random balloon and blow it up and hang it from a chair. You then blow up another random balloon and hang it from another chair. Finally you blow up another random balloon. Find this probability as a fraction.

P(Green and Red and Green)

$\frac{5}{20} \cdot \frac{9}{19} \cdot \frac{4}{18} = \frac{180}{6840}$

3. The Venn Diagram shows the results of a survey of people's favorite seasons. Find each probability as a fraction.



a) P(Winter) $= \frac{26}{98}$

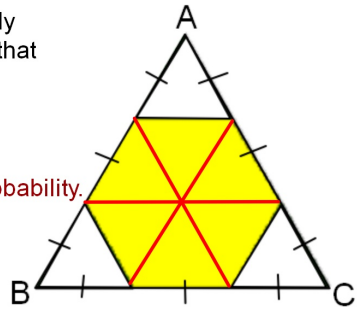
b) P(Summer or Fall) $= \frac{79}{98}$

c) P(Fall and Winter but not Summer) $= \frac{7}{98}$

d) P(Winter or Summer but not Fall) $= \frac{38}{98}$

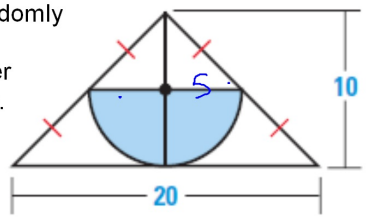
4. Assuming that a dart will land randomly inside triangle ABC. Find the probability that it lands in the shaded region. Give your answer as a fraction.

Draw the extra lines in red to create congruent triangles and count to find probability.



$\frac{\text{Shaded Area}}{\text{Total Area}} = \frac{6}{9}$

5. Find the probability that a randomly selected point falls within the shaded region. Give your answer as a percent to the nearest tenth.



$$\frac{\text{area semicircle}}{\text{area } \triangle} = \frac{\frac{1}{2}\pi r^2}{\frac{1}{2}bh} = \frac{\frac{1}{2}(\pi)(5)^2}{\frac{1}{2}(20)(10)} \quad \frac{12.5\pi}{100}$$

$$= 39.3\%$$