Bellwork Thursday, May 13, 2014

1. The probability that I'm using my cell phone is $\frac{7}{10}$ and the probability that I'm driving somewhere is $\frac{3}{8}$. Find the probability that I'm driving or I'm using my cell phone as a fraction.

P(driving or using cell phone) =

$\frac{3}{8} + \frac{7}{10} - \frac{3}{8} \cdot \frac{7}{10}$

$\frac{30}{80} + \frac{56}{80} - \frac{21}{80}$

$= \frac{65}{80}$

2. Use the results of a survey about people's favorite car shown below to find each probability as fraction.

	Chevy	Ford	Cadillac	Mercedes	Total
Under 30	32	37	10	15	94
≥ 30	15	18	38	29	100
Total	47	55	48	44	194

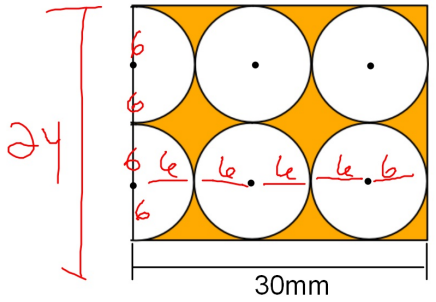
a) P(Chevy and Under 30) $= \frac{32}{194}$

b) P(≥ 30 or Cadillac) $= \frac{116}{194}$

c) P(Ford | Under 30) $= \frac{37}{94}$

d) P(Under 30 | Ford) $= \frac{37}{55}$

3. Find the probability that a random point is in the shaded region. Give your answer as a percent to the nearest tenth.



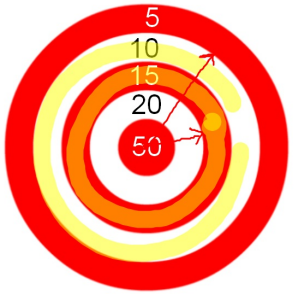
$\frac{\text{Shaded}}{\text{Rect}}$

$= \frac{\text{Rect} - 5\text{circles}}{720}$

$\frac{720 - 180\pi}{720} \times 100$

$= 21.5\%$

4. Find the probability that a dart that lands randomly on the target scores 10 or 15 points. The radius of the bulls-eye is the same measure as the width of each ring.



$\frac{10\text{PT RING} + 15\text{PT RING}}{\text{TOTAL AREA}} = \frac{\pi(4x)^2 - \pi(3x)^2}{\pi(5x)^2}$

$\frac{16\pi x^2 - 9\pi x^2}{25\pi x^2}$

$= \frac{12}{25}$