

# AP Statistics

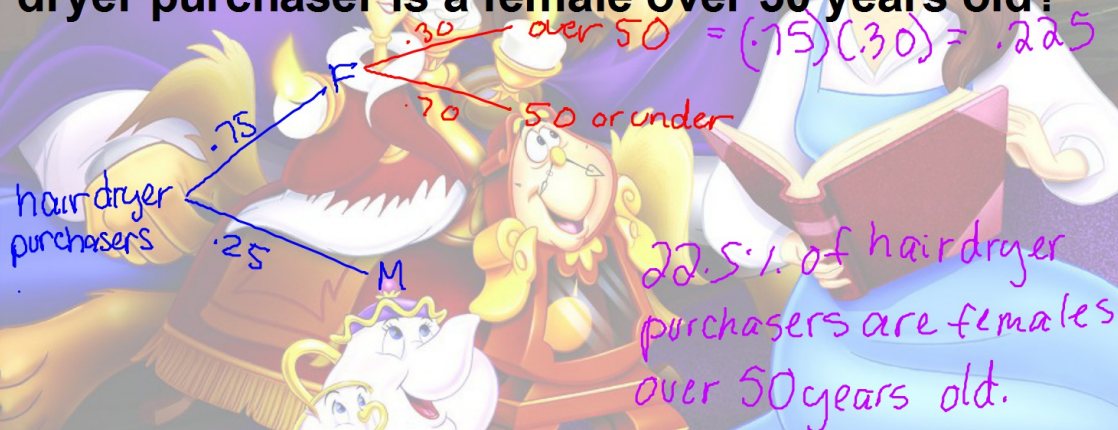
## Chapter 5: Probability

### Day 5

HW: p. 330-331, #77, 78, 83, 87

## Example

Seventy-five percent of people who purchase hair dryers are female. Of these female purchasers of hair dryers, 30 percent are over 50 years old. What is the probability that a randomly selected hair dryer purchaser is a female over 50 years old?





## Example

The Pew Internet and American Life Project finds that 93% of teenagers (ages 12 to 17) use the Internet, and that 55% of online teenagers have posted a profile on a social-networking site. What percent of teens are online and have posted a profile?



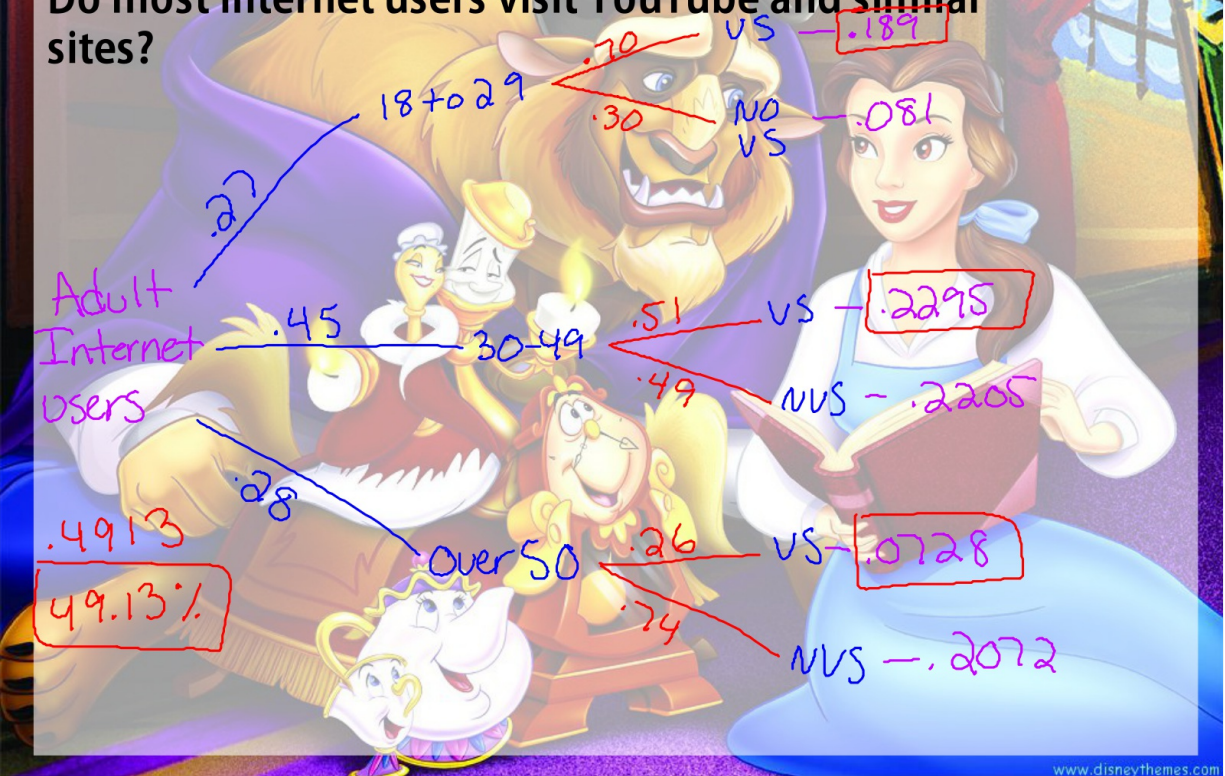
## Example

Video-sharing sites, led by YouTube, are popular destinations on the Internet. Let's look only at adult Internet users, aged 18 and over. About 27% of adult Internet users are 18 to 29 years old, another 45% are 30 to 49 years old, and the remaining 28% are 50 and over. The Pew Internet and American Life Project finds that 70% of Internet users aged 18 to 29 have visited a video-sharing site, along with 51% of those aged 30 to 49 and 26% of those 50 or older. Do most Internet users visit YouTube and similar sites?



## Example

Do most Internet users visit YouTube and similar sites?



## Example

What percent of adult Internet users who visit video-sharing sites are aged 18 to 29?

$$P(A|B) = \frac{A \cap B}{P(B)} = \frac{.189}{.4913} = .3847$$

$$P(18 \text{ to } 29 | \text{Int. vs})$$

$38.47\%$  (boxed)