

**Normal distributions: When do I add or subtract 0.5? When don't I?**

- 1) The lollipops in a bag of Charms Blow Pops have weights that are normally distributed with  $\mu = 19.23$  grams and  $\sigma = 0.41$  grams.
- a) What fraction of pops have a weight less than 19 grams?
  - b) In a sample of 12 pops, what is the probability that the mean weight is less than 19 grams?

- 2) Suppose that 30% of Charms Blow Pops are triple-berry flavor. In a bag of 150 pops, what is the probability that there are fewer than 40 triple-berry pops?