

5.4 If 80 percent of all college freshmen take a course in English composition, what is the probability that, in a random sample of 100 college freshmen (a) exactly 75 study English composition? (b) at least 80 study English composition?

Is this a binomial experiment?

- ✓ F n = 100
- ✓ I
- ✓ T
- ✓ Constant p = .80

Recall:  $\text{binompdf}(n, p, x)$

$\text{binomcdf}(n, p, \text{hi-bound})$   
fromleft

$$(a) P(X = 75) = \text{binompdf}(100, .80, 75) \approx 0.0438778 \approx \boxed{0.044}$$

$$(b) P(X \geq 80) = 1 - \text{binomcdf}(100, .80, 79) \approx 0.559462$$
$$\approx \boxed{0.559}$$

STUDY: Chapter 4: Section 4.3

- Binomial Experiments