4.3: Binomial Distributions with Histograms.
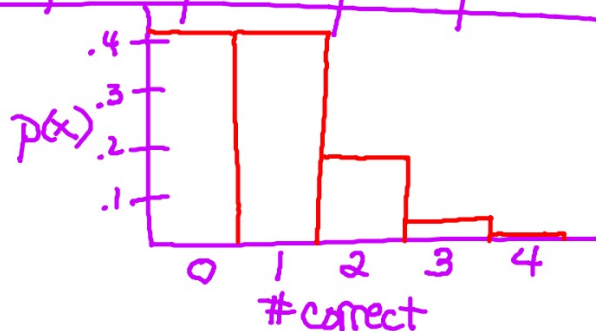
1. You take a multiple choice quiz with 4 questions. There are 5 choices for each question.

$n=4 \quad p=\frac{1}{5}$

Make a probability distribution and then a histogram.

Is the histogram skewed left, skewed right, or symmetrical?

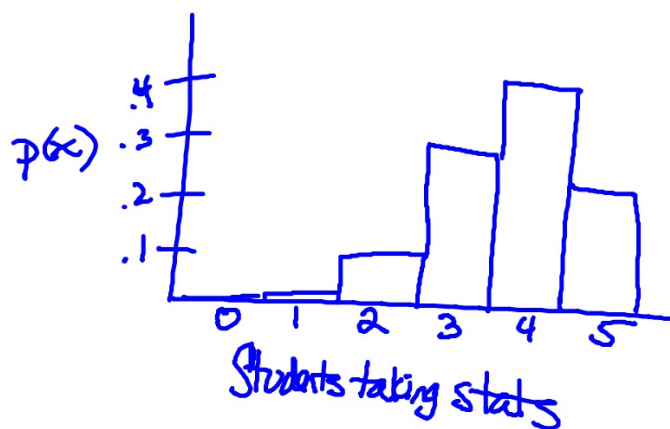| X | 0 | 1 | 2 | 3 | 4 |
|------|------|------|-------|-------|
| p(x) | .410 | .410 | .154 | .0256 | .0016 |

skewed right

2. Suppose 74% of students at Central High take Statistics.
You randomly select 5 students.
Make a probability distribution and a histogram. Is the
histogram skewed left, skewed right, or symmetrical?

X	0	1	2	3	4	5
p(x)	.00119	.0169	.0962	.274	.390	.222

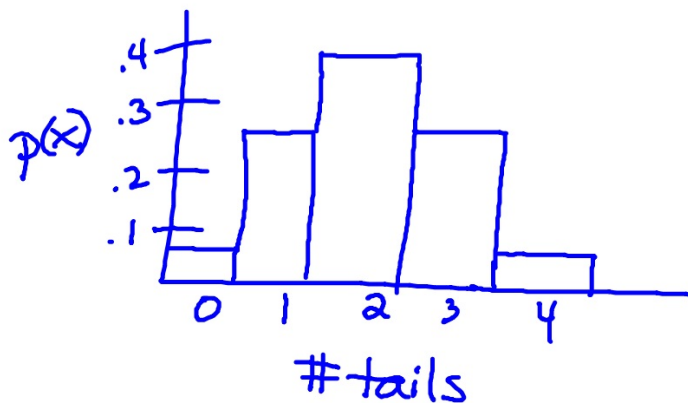skewed left

3. You toss a coin 4 times and record the number of tails. $n=4$ $p=\frac{1}{2}$

Make a probability distribution and a histogram. Is the distribution skewed left, skewed right, or symmetrical?

X	0	1	2	3	4
p(x)	.0625	.25	.375	.25	.0625

symmetrical

#tails

If p = 0.5, the binomial distribution will be
SYMMETRICAL

If p < 0.5, the binomial distribution will be
SKEWED RIGHT

If p > 0.5, the binomial distribution will be
SKEWED LEFT