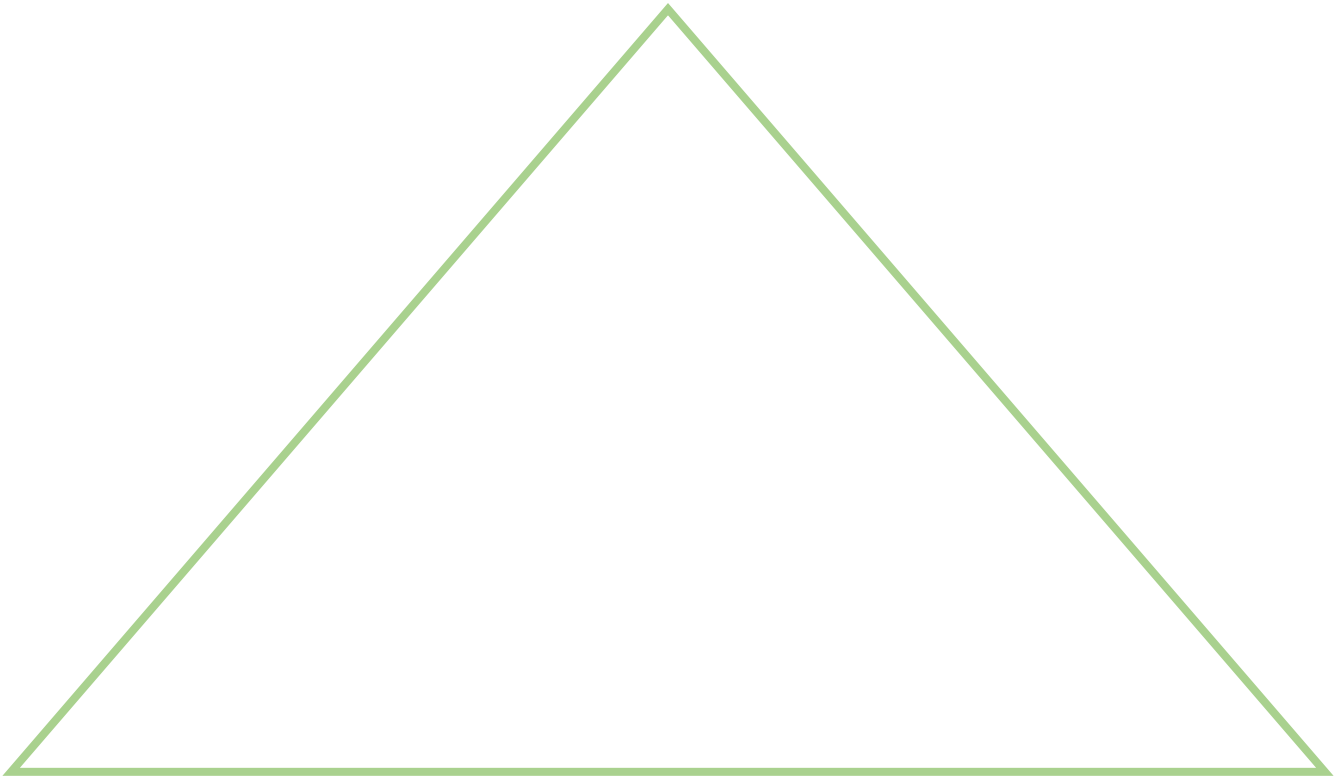### 7.6: Pascal's Triangle and the Binomial Distribution

Example) A basketball player has a 65% chance of making a 3-point shot. They take five 3-point shots. Complete the distribution table to determine the probability that the play makes 0, 1, 2, 3, 4, or all 5 shots.

n = _____   p = _____   q = _____

$P(X = k) =$

# shots made	0	1	2	3	4	5
$_5C_k$						

What is the probability that the player makes exactly three out of five 3-pointers?

What is the probability that the player makes **at least** 3, 3-pointers?

Example) A surfer has a 27% chance of riding a wave each time they paddle out and attempt to stand. The surfer makes 6 attempts to ride a wave. Complete the distribution table below to determine the probability that the surfer catches an even number of waves.

n = _____   p = _____   q = _____

$P(X = k) =$

# of waves	0	1	2	3	4	5	6
$_6C_k$							