

Math Sheet

Name _____ Score _____ Teacher _____ Date _____

Binomial Distribution

Assume fixed independent trials with constant success probability. Identify n , p , and X before using the binomial formula; round only final probabilities.

1. Let X count successes in 10 trials with $p = 3/10$. Find $P(X = 8)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

2. Let X count successes in 6 trials with $p = 1/10$. Find $P(X \leq 4)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

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3. Let X count successes in 16 trials with $p = 17/20$. Find $P(X \geq 14)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

4. Let X count successes in 18 trials with $p = 7/10$. Find the mean and population variance of X .

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

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5. Let X count successes in 20 trials with $p = 3/5$. Find $P(X = 6)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

6. Let X count successes in 15 trials with $p = 1/4$. Find $P(X \leq 9)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

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7. Let X count successes in 19 trials with $p = 4/5$. Find the mean and population variance of X .

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.

8. Let X count successes in 9 trials with $p = 3/4$. Find $P(X \geq 5)$.

Assumptions: The number of trials is fixed; trials are independent; each trial has two outcomes and the same success probability.
