GEOMETRY · CLASSWORK

Use a Binomial Distribution to Make Decisions

SCORE / 25

01 Part A · Practice

Use binomial probabilities to judge a claim or a plan: if a result would be very unlikely under the claim, doubt the claim.

EXAMPLE

A company claims 90% of its bulbs last 5 years. In a sample of 10, only 6 did. Believe it?

1. Binomial: $n = 10$, $p = 0.9$.
2. $P(X \leq 6) \approx 0.013$.
3. This is less than 0.05, so the claim is doubtful.

1 ●○○ Chloe's coin lands heads 10 times in 12 tosses. If the coin is fair, find $P(X \geq 10)$ (thousandth). Should you doubt the coin is fair?

2 ●○○ A small shuttle has 10 seats and books 12 riders. Each shows up with probability 0.9. Find P(more riders than seats) to the nearest thousandth.

3 ●○○ A store accepts a shipment if a sample of 20 has no defective items. The defect rate is 8%. Find P(accept) to the nearest thousandth.

4 ●○○ Liam's coin lands heads 10 times in 12 tosses. If the coin is fair, find $P(X \geq 10)$ (thousandth). Should you doubt the coin is fair?

© 2026 Math Teacher Prints · 12-6d Classwork · Regular

Preview - the full worksheet and its answer key are at primeworksheet.com