




Binomial Distribution

Chapter: Probability · Level ★★★ · Time: 30 min

SCORE

___ / 20

Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

- ✓ Compute a binomial probability. ✓ Find the mean np . ✓ Find the variance $np(1-p)$.
- ✓ Use combinations $C(n,k)$.



Section A · Concept Check

• BEGINNER

$4 \times 1 = 4$

- 1 A coin is flipped 5 times. $P(\text{exactly 3 heads}) =$:
☐ A. 0.3125 ☐ B. 0.5 ☐ C. 0.125 ☐ D. 0.625
- 2 For $n = 10$, $p = 0.4$, the mean is:
☐ A. 4 ☐ B. 6 ☐ C. 10 ☐ D. 2.4
- 3 For $n = 10$, $p = 0.4$, the variance is:
☐ A. 2.4 ☐ B. 4 ☐ C. 6 ☐ D. 10
- 4 $C(6,2) =$:
☐ A. 15 ☐ B. 30 ☐ C. 12 ☐ D. 720



Section B · Problem Solving

• INTERMEDIATE

$2 + 3 \times 3 = 11$

- 5 The mean of a binomial is _____
- 6 The variance of a binomial is _____
- 7 A coin is flipped 5 times. Find $P(\text{exactly 3 heads})$.

- 8 For $n = 10$, $p = 0.4$, find the mean.

- 9 For $n = 10$, $p = 0.4$, find the variance.



Section C · Challenge

• CHALLENGE

5

- 10 Find $C(6,2)$.



Reflection — the most useful thing I learned: _____

A ___/4

B ___/11

C ___/5

Total ___/20

Teacher's Signature

Parent's Signature

ANSWER KEY — FOLD OR CUT BEFORE HANDING OUT

1-A 2-A 3-A 4-A | 5 np 6 $np(1-p)$ 7 = 0.3125 8 = 4 9 = 2.4 | 10 = 15