

### S.CP.B.9: Binomial Probability 2

- 1 Which fraction represents the probability of obtaining *exactly* eight heads in ten tosses of a fair coin?  
1)  $\frac{45}{1,024}$  2)  $\frac{64}{1,024}$  3)  $\frac{90}{1,024}$  4)  $\frac{180}{1,024}$
- 2 If a fair coin is tossed four times, the probability of getting *exactly* three heads is  
1)  $\frac{1}{16}$  2)  $\frac{2}{16}$  3)  $\frac{3}{16}$  4)  $\frac{4}{16}$
- 3 If a fair coin is tossed five times, the probability of getting *exactly* two heads is  
1)  $\frac{1}{32}$  2)  $\frac{1}{4}$  3)  $\frac{10}{32}$  4)  $\frac{2}{5}$
- 4 If a fair six-sided die is tossed five times, what is the probability of getting *exactly* three even numbers?  
1)  $\frac{1}{32}$  2)  $\frac{3}{32}$  3)  $\frac{10}{32}$  4)  $\frac{3}{5}$
- 5 In a family of six children, what is the probability that there will be exactly one male child?  
1)  $\frac{6}{64}$  2)  $\frac{7}{64}$  3)  $\frac{32}{64}$  4)  $\frac{58}{64}$
- 6 If six pennies are tossed, what is the probability that exactly four heads will turn up?
- 7 A fair coin is tossed three times. What is the probability of obtaining exactly three heads?
- 8 What is the probability of getting *exactly* two heads in three tosses of a fair coin?
- 9 If a fair coin is tossed four times, what is the probability of obtaining *at most* one head?  
1)  $\frac{1}{16}$  2)  $\frac{4}{16}$  3)  $\frac{5}{16}$  4)  $\frac{11}{16}$
- 10 If three fair coins are tossed, what is the probability of getting *at least* two heads?  
1)  $\frac{1}{8}$  2)  $\frac{3}{8}$  3)  $\frac{1}{2}$  4)  $\frac{2}{3}$
- 11 A certain part of the country has a 50% chance of rain each day.  
*a* What is the probability of *not* having rain on any given day.  
*b* Find the probability of having  
(1) exactly 5 rainy days in one week  
(2) at most 2 days of rain in one week  
(3) at least 6 days of rain in one week

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### Answer Section

1 ANS: 1

$${}_{10}C_8 \left(\frac{1}{2}\right)^8 \left(\frac{1}{2}\right)^2 = \frac{45}{1024}$$

REF: 080201b

2 ANS: 4 REF: 068832siii

3 ANS: 3 REF: 018722siii

4 ANS: 3 REF: 060230siii

5 ANS: 1 REF: 068629siii

6 ANS:

$$\frac{15}{64}$$

REF: 088409siii

7 ANS:

$$\frac{1}{8}$$

REF: 019005siii

8 ANS:

$$\frac{3}{8}$$

REF: 010016siii

9 ANS: 3 REF: 018427siii

10 ANS: 3 REF: 089735siii

11 ANS:

$$\frac{1}{2}, \frac{21}{128}, \frac{29}{128}, \frac{8}{128}$$

REF: 018642siii