

A2.S.15: Binomial Probability 3: Know and apply the binomial probability formula to events involving the terms exactly, at least, and at most

- In a game of chance, the probability of winning is $\frac{1}{4}$ and the probability of losing is $\frac{3}{4}$. If four games are played, the probability of winning *exactly* three games is
 - $\frac{9}{256}$
 - $\frac{3}{64}$
 - $\frac{27}{256}$
 - $\frac{27}{64}$
- The probability that Laura wins a tennis match against Jennifer is $\frac{2}{3}$. What is the probability that Laura wins *exactly* three of the next four matches she plays against Jennifer?
 - $\frac{32}{81}$
 - $\frac{8}{81}$
 - $\frac{108}{256}$
 - $\frac{27}{256}$
- The probability of rolling exactly three 4's in five rolls of a fair dice is
 - $\frac{250}{7776}$
 - $\frac{500}{7776}$
 - $\frac{250}{1296}$
 - $\frac{3}{5}$
- The probability of hitting a target is $\frac{3}{4}$. What is the probability of hitting the target *exactly* once in four tries?
 - $\frac{3}{256}$
 - $\frac{12}{256}$
 - $\frac{27}{256}$
 - $\frac{36}{256}$

- 5 The probability of winning a game is $\frac{3}{5}$, then the probability of winning exactly 3 games out of 4 played is
- | | |
|---------------------|----------------------|
| 1) $\frac{27}{125}$ | 3) $\frac{216}{625}$ |
| 2) $\frac{54}{625}$ | 4) $\frac{532}{625}$ |
- 6 If the probability that Mike will successfully complete a foul shot is $\frac{4}{5}$, what is the probability that he will successfully complete exactly three of his next four foul shots?
- | | |
|----------------------|----------------------|
| 1) $\frac{64}{625}$ | 3) $\frac{256}{625}$ |
| 2) $\frac{192}{625}$ | 4) $\frac{64}{125}$ |
- 7 In basketball, Nicole makes 4 baskets for every 10 shots. If she takes 3 shots, what is the probability that *exactly* 2 of them will be baskets?
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| 1) 0.288 | 3) 0.600 |
| 2) 0.432 | 4) 0.960 |

A2.S.15: Binomial Probability 3: Know and apply the binomial probability formula to events involving the terms exactly, at least, and at most**Answer Section**

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|---|--------|--------|-----------------|
| 1 | ANS: 2 | PTS: 2 | REF: 068434siii |
| 2 | ANS: 1 | PTS: 2 | REF: 010421siii |
| 3 | ANS: 1 | PTS: 2 | REF: 019430siii |
| 4 | ANS: 2 | PTS: 2 | REF: 089426siii |
| 5 | ANS: 3 | PTS: 2 | REF: 019533siii |
| 6 | ANS: 3 | PTS: 2 | REF: 080024siii |
| 7 | ANS: 1 | PTS: 2 | REF: 089629siii |