Binomial Theorem and Probability

MATH MONKS

Read the following questions carefully and solve them accordingly (round your answer up to 4 decimal places, wherever applicable).

1. A player has an 85% chance of making a throw in a football match. Find the probability of him making exactly four out of eight throws his team gets.

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2. The probability of Mike's winning a word game is 75%. If Mike plays the game 5 times, what is the probability that he will win exactly 3 games?

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3. Andrew has a 30% chance of hitting the bullseye of the dart board. Find the probability of hitting the bullseye exactly three out of five times.

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4. Find each probability if six coins are tossed.

a. P(3 heads and 3 tails)

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b. P(at least 4 heads)

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c. P(2 heads or 3 tails)

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d. P(all heads or all tails)

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Answers

1. A player has an 85% chance of making a throw in a football match. Find the probability of him making exactly four out of eight throws his team gets.

= 0.0185

2. The probability of Mike's winning a word game is 75%. If Mike plays the game 5 times, what is the probability that he will win exactly 3 games?

= 0.2637

3. Andrew has a 30% chance of hitting the bullseye of the dart board. Find the probability of hitting the bullseye exactly three out of five times.

= 0.1323

4. Find each probability if six coins are tossed.

a. P(3 heads and 3 tails)

= 0.3125

b. P(at least 4 heads)

= 0.3438

c. P(2 heads or 3 tails)

= 0.5469

d. P(all heads or all tails)

= 0.0313