

NAME: _____

P.I. A2.S.15: Know and apply the binomial probability formula to events involving the term exactly

1. Use Pascal's Triangle to determine the probability that you will get four red lights in a row of five lights. Assume red and green are equally likely occurrences.

[A] $\frac{5}{32}$ [B] $\frac{3}{16}$ [C] $\frac{1}{32}$ [D] $\frac{5}{16}$

2. Use Pascal's Triangle to determine the probability of getting three heads when tossing a coin four times.

3. Use a graphing calculator to enter the function

$$y_1 = \left({}^7C_r X \right) * .5 ^ X * .5 * \left({}^7C_r X \right).$$

4. Game cards are given out at the bank for any deposit made. The probability of winning a prize P is 0.3. Make a tree diagram and find the probability of getting two winning cards from three game cards.

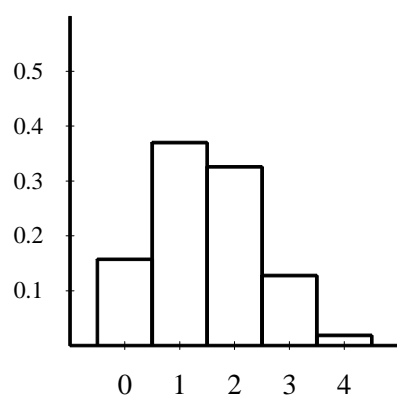
5. The probability of a successful outcome in a scientific experiment is 0.37. Suppose the experiment is performed 4 times. Construct a histogram for this binomial distribution.

[1] A

[2] $\frac{1}{4}$

[3] Check students' graphs.

[4] Check students' tree diagrams; 0.189



[5] _____