

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

$$y_1 = \left( \left[ 7 \right] n C_r X \right) \left[ * \right] .5 \left[ ^ \right] X \left[ * \right] .5 \left[ * \right] \left( \left[ 7 \right] \right. \\ \left. \left[ - \right] X \left[ \right] \right).$$

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.

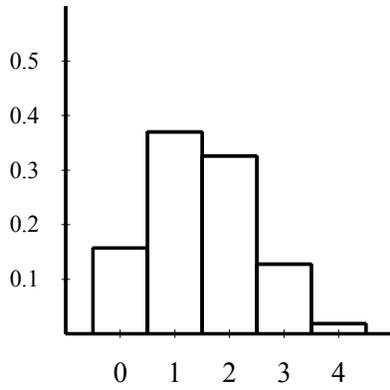
5. The probability of a successful outcome in a scientific experiment is 0.37. Suppose the experiment is performed 4 times. Construct a histogram for this binomial distribution.

[1] A

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

[3] Check students' graphs.

[4] Check students' tree diagrams; 0.189



[5] \_\_\_\_\_