

## HW 5.0 – Probability Practice

**Name:** \_\_\_\_\_ **Block:** \_\_\_\_\_

A bowl contains 12 M&Ms – 5 are blue, 3 of them are red, and 4 of them are yellow.

**EX1)** If we select two M&Ms at random (without replacement), what is the probability that both are red?

$$P(\text{both are red}) = \frac{3}{12} \times \frac{2}{11} = 0.0455$$

**EX2)** If we select three M&Ms at random, what is the probability that the first two are yellow and the third is blue?

$$P(\text{first 2 are yellow, third is blue}) = \frac{4}{12} \times \frac{3}{11} \times \frac{5}{10} = 0.0455$$

**Show all work and use probability notation. Round probabilities to the nearest ten-thousandths when appropriate.**

A bowl contains 12 M&Ms – 5 are blue, 3 of them are red, and 4 of them are yellow.

- If we select three M&Ms at random (by closing our eyes, stirring them up in the bowl, then selecting one at a time WITHOUT replacement), what is the probability that all three are blue?
- If we select four M&Ms at random, what is the probability that all four are yellow?
- If we select four M&Ms at random, what is the probability that the first three are yellow, and the fourth is red?
- If we select four M&Ms at random, what is the probability that NONE of the four are blue?