**5.6 Independent Events**



**By the end of the lesson you will be able to:**

1. Understand and solve problems that involve independent events.

Recall from yesterday, dependent events are events which the probability of one event \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on the probability of another.



Today we will look at **independent events**, which are events where the probability the event occurs is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the probability that another event occurs.



The probability that two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ events, A and B, will both occur is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of their individual probabilities:



\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_\_\_\_\_



**Example 1**

Chantelle is playing a really lame game, where she rolls a dice and tosses a coin. She gets points for rolling a 6 on the die or tossing heads:



* 1 point for either outcome (6 or heads)



* 3 points for both outcomes



* 0 points for neither outcomes

Determine the probability that Chantelle will get 1, 3 or 0 points on her first turn.



**Example 2**



1000 tickets are sold for a charity raffle and placed in a large bowl. There will be 2 draws, the firs twill be for the grand price and the second will be for the consolation prize. After the first draw, the winning ticket will be put back into the bowl, so it might be drawn again. Max bought 5 tickets. Determine the probability that he will win at least one prize.



**Assignment**: p. 360 # 1-3, 5-8, 13

