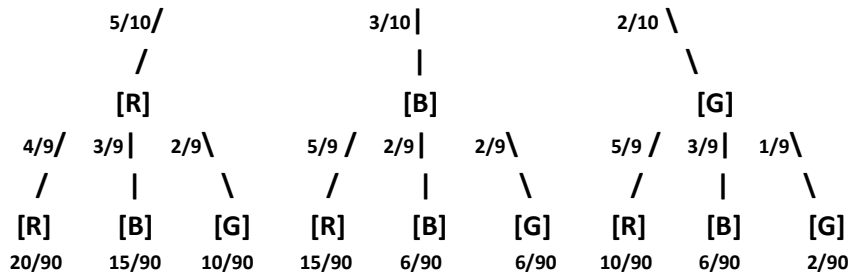


7. Assume a box has 5 red balls, 3 blue balls and 2 green balls. Two balls are drawn out without replacement.  
 a. Construct a tree diagram of all possibilities (there will be 9 total)



- b. Find the following probabilities:  
 i. No red balls.

$$(6+6+2)/90 = 20/90 = 2/9 = .22222$$

- ii. One blue ball and one green ball.

$$(6+6)/90 = 12/90 = 2/15 = .13333$$

- iii. Two balls of the same color.

$$(20+6+2)/90 = 28/90 = 14/45 = .31111$$

1. A poll of American registered voters was taken by Politico/Morning Consult in November, 2017 after the Las Vegas mass shooting, in which 58 concertgoers were murdered by a single gunman. The poll asked the question, "Do you support or oppose stricter gun laws in the United States? The results of the poll, cross-tabulated by gender, are shown in the contingency table.

	Strong Support	Somewhat Support	Somewhat Oppose	Strong Oppose	Don't Know	Total
Male	350	208	127	191	54	930
Female	476	250	130	136	73	1065
Total	826	458	257	327	127	1995

- a. Combine the strong and somewhat groups for both support and oppose, and fill in the missing boxes.

	Support	Oppose	Don't Know	Total
Male	558	318	54	930
Female	726	266	73	1065
<b>Total</b>	1284	584	127	1995

- b. What percentage of all registered voters support (strong or somewhat) stricter gun laws?

$$1284/1995 = 0.643 \text{ or } 64.3\%$$

- c. What percentage of males support (strong or somewhat) stricter gun laws?

$$558/930 = 0.60 \text{ or } 60\%$$

- d. What percentage of females support (strong or somewhat) stricter gun laws?

$$726/1065 = 0.682 \text{ or } 68.2\%$$

- e. Are gender and support of stricter gun laws independent events? Explain

**They are dependent events since  $P(\text{Support}) \neq P(\text{Support} | \text{Male})$  and  $P(\text{Support}) \neq P(\text{Support} | \text{Female})$**