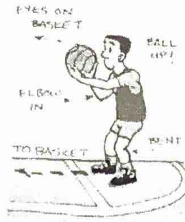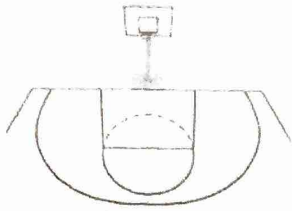# Lesson 5.3 Intro: Does Mrs. Gallas choke under pressure?

In basketball, it is most common that the player shoots two consecutive free throws. Often basketball announcers will talk about how added pressure makes it more difficult to make the second shot if you miss the first shot. Mrs. Gallas thinks she is pretty good under pressure. Do her free throw stats support this? The table below shows how Mrs. Gallas performed on her second free throw shot when she was shooting two consecutive free throws.

		Second Shot		Total
		Make	Miss	
First Shot	Make	18	8	26
	Miss	3	5	8
Total		21	13	34

1. What percentage of the <u>second shot free throws</u> did she make? Show your work.

$$\frac{21}{34} = 0.618$$

P(make)

2. If Mrs. Gallas makes her first shot, what is the probability that she makes the second shot?

$$\frac{18}{26} = 0.692$$

P(make|make)

3. If Mrs. Gallas misses her first shot, what is the probability that she makes the second shot?

$$\frac{3}{8} = 0.375$$

P(make|miss)

4. As mentioned, it is thought to be harder to make the second shot if you miss the first shot due to added pressure. Do you think Mrs. Gallas is affected by the pressure? Explain thoroughly.

Dependent events: Knowing 1st shot affects 2nd.

Yes, when mrs. G misses her first shot she is less likely to make her second shot (0.375). When mrs. G makes her first shot she is more likely to make her second shot (0.692). Her total 2nd shot % is 61.8%.