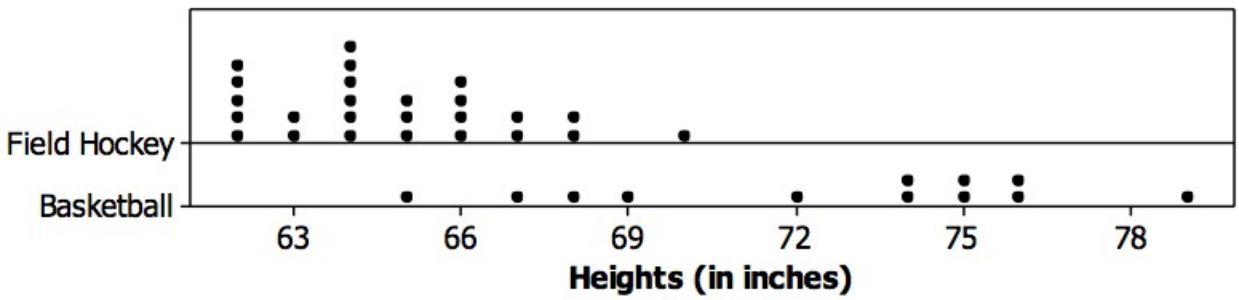
7.SP.3,4 – College Athletes

Task

Below are the heights of the players on the University of Maryland women's basketball team for the 2012-2013 season and the heights of the players on the women's field hockey team for the 2012 season. (Accessed at http://www.umterps.com/sports/w-fieldh/mtt/md-w-fieldh-mtt.html, http://www.umterps.com/sports/w-baskbl/mtt/md-w-baskbl-mtt.html on 1/13/13) Note: it is typical for a women's field hockey team to have more players than a women's basketball team would.

Field Hockey Player Heights (inches)	Basketball Player Heights (inches)
66	75
64	65
66	76
63	75
67	76
62	72
62	67
64	69
64	74
64	68

65	74
66	79
65	
64	
63	
62	
62	
68	
68	
66	
70	
67	
65	
62	
64	



a. Based on visual inspection of the dotplots, which group appears to have the larger average height? Which group appears to have the greater variability in the heights?

b. Compute the mean and mean absolute deviation (MAD) for each group. Do these values support your answers in part (a)?

c. How many of the 12 basketball players are shorter than the tallest field hockey player?

d. Imagine that an athlete from one of the two teams told you she needs to go to practice. You estimate that she is about 65 inches tall. If you had to pick, would you think that she was a field hockey player or that she was a basketball player? Explain your reasoning.

e. The women on the Maryland field hockey team are not a random sample of all female college field hockey players. Similarly, the women on the Maryland basketball team are not a random sample of all female college basketball players. However, for purposes of this task, suppose that these two groups can be regarded as random samples of all female college field hockey players and all female college basketball players, respectiviely. If these were random samples, would you think that female college basketball players are typically taller than female college field hockey players? Explain your decision using answers to the previous questions and/or additional analysis.