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Setion: M 2:30

Lab 6/ Homework 6

1)

% Variability captured by the first PC is 31.2%; the % variability captured by the first 3 PCs is 72.8% (by looking at Cumulative proportion).

An example of a pair of colleges that are close to each other on the scatterplot are Princeton University and University of Pennsylvana. They are well aligned with PC2, which is heavily weighted in terms of percentage of new students from top 10% and 25% or their class, and so it makes sense that they would be similar (both are Ivey league schools that are looking for high performing students)

By examining the "direction" of principal component 2, we see that its most heavily weighted dimensions are % of incoming students that were top 10% and 25% of their class. Out of state tuition is also a significant dimension for PC2, suggesting that these schools have students that come from a wide range of geographic backgrounds (which makes sense, high performers are not limited by grography). This fits well with our understanding that

The most important dimensions for principal component 1 are number of new students enrolled, and number FT. undergrad; these are generally larger schools that are publicly funded. Schools that are important in these regards are University of Arizona, and University of Wisconsin at Madison; both are large state schools.

