

*A.S.18 Know the definition of conditional probability and use it to solve for probabilities in finite sample spaces*

A survey of middle school students asked: What is your favorite winter sport?  
The results are summarized in the table below.

Favorite Winter Sport				
<u>Grade</u>	<u>Snowboarding</u>	<u>Skiing</u>	<u>Ice Skating</u>	<i>Total</i>
6 <sup>th</sup>	68	41	46	155
7 <sup>th</sup>	84	56	70	210
8 <sup>th</sup>	59	74	47	180
<i>Total</i>	211	171	163	545

Using these 545 students as the sample space, a student from this study is randomly selected. What is the probability of selecting a student whose favorite winter sport is skiing?

What is the probability of selecting a 6th grade student?

If the student selected is a 7th grade student, what is the probability that the student prefers ice-skating?

If the student selected prefers snowboarding, what is the probability that the student is 6th grade student?

If the student selected is an 8th grade student, what is the probability that the student prefers skiing or ice skating?