



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Onur S. Olmez</b>	<b>Project Number</b> <b>J0214</b>
<b>Project Title</b> <b>The More Pulleys, The More Pull</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My project was to find out if there were any disadvantages to using pulleys to lift weight. I think when you use more pulleys it gets easier to lift a certain amount of weight, but you pull more string to lift it. <b>Methods/Materials</b> Three pulley setups with identical weights but different number of pulleys were constructed. Setup 1 has only one pulley; Setup 2 has two pulleys, and Setup 3 has four pulleys. When the weights were lifted to the exact height, the string pulled on each setup were measured and the each distance were color marked on each setup's string. <b>Results</b> The amount of string pulled increased as the number of pulleys in each setup increased. On Setup 1 (one pulley), the distance pulled was the same as the lift height. On Setup 2 (two pulleys), the distance pulled was twice the lift height. On Setup 3 (four pulleys), the distance pulled was four times the lift height. <b>Conclusions/Discussion</b> My conclusion is that number of pulleys determine the number of string segments going around them. The number of string segments determine how long the string will be pulled to lift the weight to a certain height.	
<b>Summary Statement</b> My project is about the price you pay when you increase the number of pulleys to lift weights easier.	
<b>Help Received</b> My mother helped to type and to make the tables for my display.	