

**EXAMPLE 6** Analyzing Olympic Scoring

Olympic ski jumping scores are based on a point system that combines *style points* and *distance points*.

**Style points:** For style points, a jump is divided into three parts: flight, landing, and outrun. A panel of five judges evaluate the jump. Each judge awards a maximum of 20 points. The highest and lowest scores are discarded, and the remaining three scores are totaled.

**Distance points:** A “K-point” is marked in the landing area. When the K-point is at 120 meters, jumpers are awarded 60 points plus 1.8 points for each meter that they exceed the K-point, or 60 points minus 1.8 points for each meter that they are short of the K-point.



In the 2014 Winter Olympics, women will be allowed to compete in ski jumping for the first time.



Suppose the K-point is at 120 meters. Find the score for a ski jumper with the following style points and distance.

Style points: 17.0, 18.0, 18.5, 20.0, 19.0

Distance: 125 meters

**SOLUTION**

Style points: Discard the 20.0 and 17.0.

$18.0 + 18.5 + 19.0 = 55.5$  points

Distance points:  $60 + 1.8(5) = 69$  points

Total points:  $55.5 + 69 = 124.5$  points

**✓ Checkpoint**

Help at [Math.andYOU.com](http://Math.andYOU.com)



Sketch a graph of the winning points for Olympic ski jumping from 1932 through 2010. Describe any patterns in the graph.

(1932, 228.1), (1936, 232.0), (1948, 228.1), (1952, 226.0), (1956, 227.0),  
 (1960, 227.2), (1964, 230.7), (1968, 231.3), (1972, 219.9), (1976, 234.8),  
 (1980, 271.0), (1984, 231.2), (1988, 224.0), (1992, 239.5), (1994, 274.5),  
 (1998, 272.3), (2002, 281.4), (2006, 276.9), (2010, 283.6)