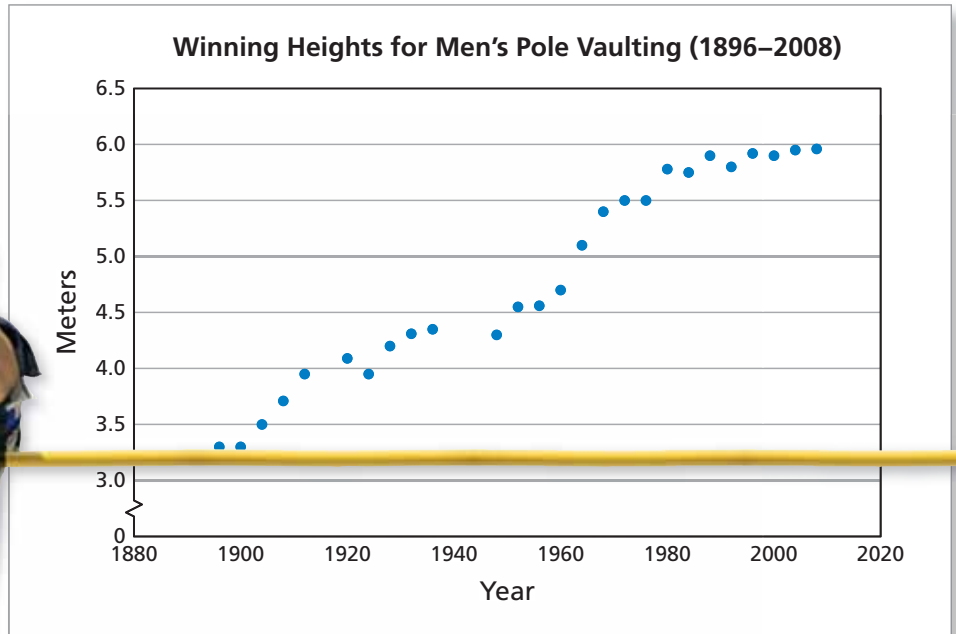


EXAMPLE 2 Analyzing Winning Heights

Pole vaulting has been an event at the Olympic Games since 1896 for men and since 2000 for women. Early Olympians used solid wood or bamboo poles. Describe the pattern of the winning heights for men’s pole vaulting from 1896 through 2008. When do you think fiberglass poles were first used?



Many years ago, pole vaulters went over the bar with their feet pointing downward. Today, they do a complicated gymnastic maneuver, turning upside down as the jump takes place.



SOLUTION

The winning heights increased until around 1950 when it appeared as though they would level off at around 4.25 meters. Then in the 1950s, pole-vault technology improved with fiberglass poles. With that, the heights started rising again. Now they seem to have leveled off at around 6 meters.



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Today, high school students can pole vault at heights that would have broken Olympic records in 1950. How is this possible?