Absolute Value Word Problems

Write the absolute value inequality for each situation.

1. A machine is used to fill each of several bags with 16 ounces of sugar. After the bags are filled, another machine weighs them. If the bag weighs .3 ounces more or less than the desired weight, the bag is rejected. Write an inequality and determine the range of acceptable weights.

2. The average number of seeds in a package of cucumber seed is 25. The number of seeds in the package can vary at most by three. Write inequality.

3. The mean distance of the Earth from the sun is 93 million miles. The distance varies by 1.6 million miles. Write the inequality and determine the interval of Earth's distance from the sun.

4. Victor has a goal of making $75 per week at his after-school job. Last month, he was within $6.50 of his goal. What are the amounts that Victor might have made last month?

5. Members of the track team can run 400 m in an average time of 58.2 seconds. The fastest and slowest times varied from the average by 6.4 seconds.

6. Amtrak's annual passenger revenue for the years 1980-2000 is modeled approximately by the formula R = -40|x-11|+990 where R is the annual revenue in millions of dollars and x is the number of years since January 1, 1980. In what years was the passenger revenue $790 million?