



Problem of the Week

Problem B

Melody's Posts

Melody is building a fence around her beautiful garden. She bought ten wooden posts from Thrifty Buys Used Lumber for the fence. Unfortunately, her bargain posts are all of different lengths.

Using a tape measure, she has found the lengths, in inches, to be:

$$57\frac{2}{3}, 55\frac{7}{12}, 55, 56\frac{3}{4}, 57\frac{1}{2}, 55\frac{3}{4}, 56\frac{7}{12}, 57\frac{1}{3}, 56\frac{2}{3}, \text{ and } 56\frac{11}{12}.$$

Now she needs to decide how to build her fence using these posts.

- Write the ten lengths of the posts in order from shortest to longest.
- Melody decides to adjust the depth of the hole for each post so that all the posts will be the same height above the ground. If she wants all the posts to be 3 feet above the ground, what is the deepest hole she will need to dig? It may be helpful to note that 12 inches equals one foot.
- Suppose that Melody's garden is rectangular. The fence posts are needed in every corner and every 10 feet along the fence, as measured from the middle of one fence post to the middle of the next fence post. Draw a diagram for a possible fenced rectangular garden that uses all ten posts. What are the dimensions of your garden, in feet?

