Hot Tub Design

Perry is designing a hot tub that he plans to locate behind his house. He has 36 square designer tiles to use for the bottom of his hot tub. He wants to use all of the tiles, but he does not yet know how he will arrange them to form the hot tub. If his hot tub will be rectangular, how many different rectangles with an area of 36 square units does he have to choose from?

Use the square tiles provided to find as many rectangular configurations as you can. Remember to record the length and the width of each rectangle you find. Assume that Perry’s yard is big enough to accommodate any rectangular design you create and that it matters which dimension is the width and which is the length.
Local Crisis

Health officials in Parsnipville are concerned about the recent outbreak of the flu. While scientists are working hard to find a vaccine, the town leaders are turning to you to predict how many people will be sick over time. They hope to find a vaccine in a week. Here are the facts: The epidemic started when Velma and Stanley returned from their exotic vacation with symptoms of the flu. Then, each day, the number of sick people has multiplied by three. The town of Parsnipville has 3800 citizens.

Use the beans (or other material) provided by your teacher to represent the people infected with the flu. Start with two beans to represent Velma and Stanley. Then carefully replace each bean with three beans to represent the growth of the disease. Collect and record data for the first few days until you understand how the disease is growing.
Sign on the Dotted Line

Certain legal documents, such as those used when buying property, sometimes require up to 50 signatures! How long do you think that might take?

To find out, collect data as one person of your team signs his or her name. Have a team member use a stop watch to time how long it takes to sign his or her name 2, 3, 5, 7, and 10 times. In order to collect good, clean data, be sure to have your team member practice signing his or her name before you start.