Tatami Mats

Tatami mats are used instead of rugs in Japan. They measure 6 feet by 3 feet. The size of a room is measured by Tatami mats.

Draw a room 12 feet by 12 feet. How many mats needed to exactly cover the floor?

Draw a smaller room and choose the dimensions to fit Tatami mats.

Draw a larger room and choose the dimensions to fit Tatami mats.

Room 4: 11 feet wide and 15 feet long.
Room 5: 15 feet wide and 18 feet long.
Room 6: 9 feet wide and 9 feet long.

How do you decide how many Tatami mats can cover the floor without drawing the floor plan. Write a rule for any room, no matter what length and width.
Rabbits and Hutches

There are rabbits and hutches for them to live in. If seven rabbits are put in each hutch, one rabbit is left over. If nine rabbits are put in each hutch, one hutch is left over.

Can you find out how many rabbit hutches and how many rabbits there are?
My brother works at the garden center where he designs paths to around the edges of ponds. He wants to work out how to quickly estimate the number of paving stones to go around any size of pond. Can you help him to do this?

You can present your work as interesting diagrams and drawings.

See if you could work out a formula for him to use.

What other ponds and borders could you investigate?
Handshakes

My sister invited me to her party last Saturday. There were more people there than I expected. I had to shake hands with them all! There were 12 people. How many handshakes was that? We all shook hands with each other. How many handshakes was that!

Is there a pattern depending on how many people are at the party?

Can you record your work in an interesting way and explain it to someone else?