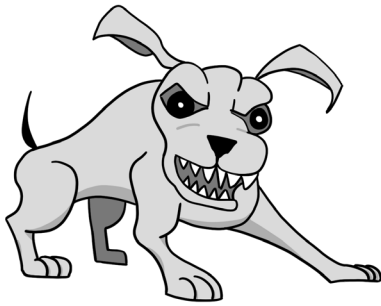


NIGHT OF THE DUCHEON

Dogs love people, but some of them love people a little too much. They love having them for dinner! These are known as “Ducheon”: dogs that eat people.



The Ducheon are attacking the town! Instead of running around like a maniac and getting eaten, Tina sneaks back home and warns her family. Tina’s big brother Jordan helps Dad to haul a bunch of lumber into the basement. They haul 30 boards into the basement, along with a circular saw and Dad’s nail gun. Each board is 6 feet long by 4 inches wide. How many square feet of wood do they have to board things up with?

The basement has a door that is 80 inches high and 36 inches wide. It also has two windows that measure 20x64 inches and a vent measuring 16x20 inches. The family is going to need to cover all of that with wood in order to keep the Ducheon out. How many square feet of wood are they going to need?

Working together, Mom and Dad fortify the basement. Mom cuts the boards while Dad nails them over the windows and doors. He needs about 20 nails per square foot of wood. He brought a box of 1000 nails down into the basement. How many nails will he need? How many will be left over?

Meanwhile, Tina fills up the bathtub with water. They might be trapped in the basement for a while. The bathtub is 2 meters by $\frac{1}{2}$ meter by $\frac{1}{2}$ meter. There are 1000 liters per cubic meter. How many liters of water will Tina be able to collect?

Just in time! The Ducheon attack, but they can’t get in! It’s probably lucky for them... Mom seems to be pretty handy with that power saw. The family will need to hole up for 3 days before the Ducheon get bored and go away. A single person needs about 3 liters of water a day. Does the family have enough water to make it?

