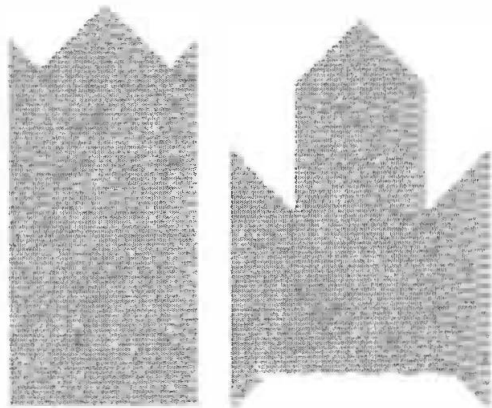


A Page of Problems

A Craig Loewen

Elementary

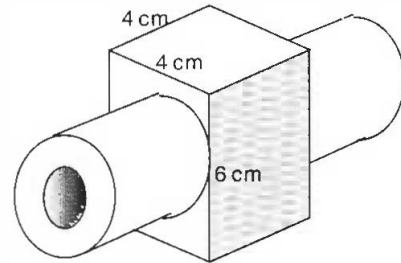
Build the silhouettes below using one seven-piece set of tangrams for each.



Launch Pad Tower and Space Shuttle

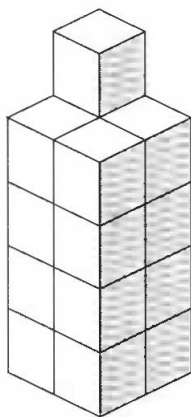
High School

If the hole passes completely through the cylinder, and the tube extends 4 cm on each side of the rectangular centre, calculate both the surface area and volume for the object below.



Outer Diameter = 4 cm
Inner Diameter = 2 cm

Middle School

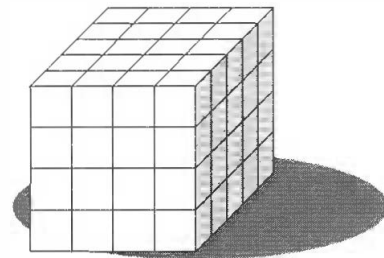


Build the shape shown on the left using exactly 16 linking cubes.

How many solutions can you find if you may use 16 or fewer cubes? What is the smallest number of cubes you could use to build this object?

Elementary

Several sugar cubes are stacked four wide, four high and five deep. The outside of the stack is then painted red.



How many of the sugar cubes are red on one side? How many are red on two sides? Three sides? Four or more sides? How many receive no paint at all?