



## Square with Wonder

1. Note the lengths of the edges of each piece.
2. There are two kinds of edges - what are they?
3. If you add together edges of the first kind, can you ever get a length of the second kind? If you add together edges of the second kind, will you ever get a length of the first kind? If you mix the two kinds, will you ever get a length just of one kind?
4. For the first problem, what is the edge length of the square? Is it the first or second kind of edge?
5. Can you put the 5 large pieces together to form the square of problem 1 (area 49)?
6. For problems 2 & 3, what is the edge length of the square? Which kind of edge? Can you solve both problems?
7. For the last 2 problems, you will make an isosceles right triangle. Given the two sizes, can you figure out which edges must be which kind of edge? From this, can you figure out which way each piece must face, and solve the two problems.
8. This puzzle was designed by Mineyuki Uyema in Japan, made by George Miller in Sonoma and Stan Isaacs in Palo Alto. Four of the five problems have unique solutions, and the 5th has a second solution that is just a reflection of 2 pieces.