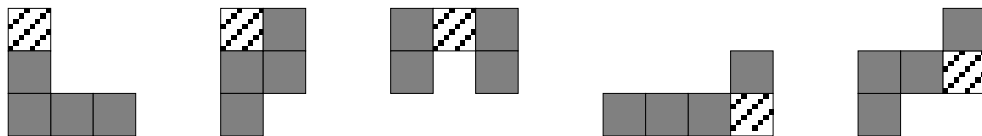


“Pentominoes”

**Problem:** A *pentomino* is a shape formed by combining 5 squares. Here are the five pentominoes that we’ll use in this problem:



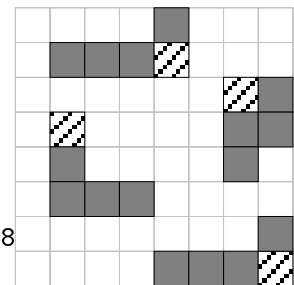
Let’s call them A, B, . . . , E, from left to right. One of the squares in each pentomino is drawn differently; this is called the *reference square*.

We’ll give you the position of up to 10 of these pentominoes within a 8x8 grid. Some of the pentominoes will overlap, but they will all fit within the grid. Your job is to print how many of the 64 cells in the grid are covered by a pentomino.

For example, the input line “4, A,2,5, D,5,7, B,7,6, D,8,1” means the following: There are 4 pentominoes on the grid. The first one, shape A, has its reference square at cell (2,5); the second one, shape D, has its reference square at cell (5,7); B is at (7,6) and another pentomino of shape D is at (8,1). None of the squares of any of the pentominoes overlap, so 20 cells of the grid are covered. See the top diagram below. If the input line also included “E,4,6,” three additional cells of the grid would be covered, and the cells at (2,5) and (4,7) would be covered by squares from two different pentominoes). See the lower diagram below.

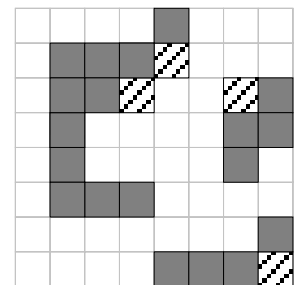
**Sample Input:**

- Line #1: 3, A,5,5, B,5,5, C,5,5
- Line #2: 6, A,1,8, A,4,6, D,4,4, E,3,6, B,2,7, C,4,7
- Line #3: 6, E,5,7, E,8,7, D,8,7, C,5,5, A,1,3, B,7,3
- Line #4: 5, A,4,4, B,5,6, E,4,7, C,2,4, D,8,3
- Line #5: 7, C,5,2, C,5,3, C,5,4, C,5,5, C,5,6, C,5,7, C,5,8



**Sample Output:**

- Output #1: 9
- Output #2: 20
- Output #3: 25
- Output #4: 25
- Output #5: 23



**“Pentominoes”**

**Test Input:**

Line #1: 5, A,1,8, B,2,8, C,4,3, D,5,2, E,4,2

Line #2: 5, A,1,3, B,4,4, C,4,4, D,4,4, E,6,4

Line #3: 9, A,4,8, B,4,8, C,4,8, D,6,6, E,8,2, D,8,2, C,5,3, B,4,3, A,4,3

Line #4: 7, A,2,4, B,3,3, C,2,2, D,4,1, E,4,2, A,3,3, B,4,4

Line #5: 10, E,8,7, E,8,5, E,8,3, D,8,1, C,2,8, C,2,6, C,2,4, C,2,2, B,4,3, B,4,6

**Test Output:**

Output #1: 17

Output #2: 17

Output #3: 23

Output #4: 16

Output #5: 50