

## Assignment 1.1

Carlos and Clarita had 360 square feet of space to use for their pet sitting business, each cat pen uses 6 square feet and each dog run uses 24 square feet. They created this table to show all combinations that would use the entire space.

cats	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
dogs	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

1. Write five ordered pairs that have cats as the input value and dogs as the output value.
2. Write an explicit equation that shows the number of dogs they can accommodate based on how many cats they have. [d will be a function of c or  $d = f(c)$ ]
3. Write five ordered pairs that have dogs as the input value and cats as the output value.
4. Write an explicit equation that shows the number of cats they can accommodate based on how many dogs they have. [c will be a function of d or  $c = g(d)$ ]
5. Describe how are the ordered pairs you made in #1 and #3 are different?
6.
  - a. Describe the domain for #2
  - b. Describe the domain for #4
  - c. What is the relationship between them?

