

**Homework Day 1**  
**Due Thursday 3/31**

Table One		Table Two		Table Three	
A	B	C	D	E	F
0	3	0	3	0	1
2	3	2	1	0	2
4	3	4	-1	4	3
6	3	6	-3	4	4

**Figure 1**

1. Consider the relationships above in Table One, Two and Three (Figure 1). For each of the given six (input, output)-relationships (a. – f.) below, answer the questions (i. – iii.):
- a. A a function of B      b. B a function of A      c. C a function of D
- d. D a function of C      e. E a function of F      f. F a function of E
- i) Is the relationship a function? Why or why not?

For the relationships that are functions; also answer:

ii) What is the domain of the function?

iii) What is the range of the function?

2. What is the domain and range for each of the following functions? Show your work for determining the domain when applicable. You may find graphing the function or using the calculator table feature for the function to be helpful; especially for determining the range. If you do so, include a sketch of the graph (label key points).

a.  $f(x) = x^2 + 4$       b.  $g(x) = 4 - x^2$       c.  $h(x) = \frac{1}{3x}$

d.  $f(t) = \frac{1}{2t+1}$       e.  $k(r) = \frac{1}{4+r^2}$       f.  $j(t) = \sqrt{2t-3}$

g.  $f(p) = \sqrt{4-p^2}$       h.  $f(x) = \frac{1}{\sqrt{x^2+2}}$       i.  $v(t) = \frac{1}{\sqrt{3-t}}$