## Algebra and Representation HW \#11 Tabular Representations of Functions

1. What are the domain and range of the function $f$ given by the following table?

| $x$ | 1 | 2.5 | 3.7 | 4.2 | 15 | 26 | 37 | 84 | 95 | 102 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $f(x)$ | 12 | $\pi$ | 3.7 | 18 | -2 | 3.5 | 12 | 32 | 212 | $1 / 4$ |

2. Give a table representation for the function $g$ that assigns to each of the counting numbers $n$ from 1 to 10 the sum of the first $n$ odd counting numbers.

| $n$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $g(n)$ |  |  |  |  |  |  |  |  |  |  |

3. Give a table representation for the function $A$ that assigns to each of the counting numbers $r$ from 1 to 10 the area of a circle of radius $r$. (Give exact values of the function in terms of $\pi$; for example, $A(2)=4 \pi$.)

| $r$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $A(r)$ |  |  |  |  |  |  |  |  |  |  |

4. What are some of the advantages and some of the disadvantages of giving a tabular representation of a function? In what situations might it be preferable to other types of representations?
