***Building and Using Input Output Diagrams*** USE A SEPARATE SHEET OF PAPER AS NEEDED

1. In each case build an input output-diagram and use it to find the outputs for x=-4, x=0, x=3, x=8

|  |  |
| --- | --- |
| a) | b) |
| c) | d) |
| e) | f) |
| g) | h) |
| i) | j) |

1. Given the input-output diagram, find the inputs for the given outputs.  
   Then write an equation that is represented by the input output diagram.

+4

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| --- | --- |
| a)  5  -1  4  8  Equation: | b)  5  -1  4  8  Equation: |
| c)    11  6  3  -2  Equation: | d)    16  9  4  1    Equation: |
| e)  1  0  -3  -8  Equation: | f)    0  5  12  21  Equation: |

1. Complete the values of the input output diagram by working outwards. Write an equation.

|  |  |
| --- | --- |
| a)    -2  -1  0  1  2  Equation: | b)    -2  -1  0  1  2  Equation: |
| c)    -2  -1  0  1  2  Equation: | d)      -2  -1  0  1  2  Equation: |

1. Given the values, complete the input-output diagram. Write an equation to match.

|  |  |
| --- | --- |
| a)    3 -1 1 5  4 0 0 4  5 1 1 5  6 2 4 8  7 3 9 13  Equation: | b)    -7 -2 4 -8  -6 -1 1 -2  -5 0 0 0  -4 1 1 -2  -3 2 4 -8  Equation: |
| c)      1 1 -1 -3  4 2 -2 -4  9 3 -3 -5  16 4 -4 -6  Equation: | d)    -3 3 0 0  -4 4 1 1  -7 7 4 2  -12 12 9 3    Equation: |