GSE Algebra 1 **HW** #**6.3** **Characteristics** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For the following, list out all that you know.

|  |
| --- |
| Vertex: Axis of symmetry: Function?y-intercept: x-intercepts: Domain: Direction: Max or min? Range: Increasing: Decreasing: Disc/Cont |
| $$y=x(x+2)$$Vertex: Axis of symmetry: Function?y-intercept: x-intercepts: Domain: Direction: Max or min? Range: Increasing: Decreasing: Disc/ContWhat do you notice about the equation and the graph? Multiply out the equation to give you standard form.  |
| 1. Multiply out the following binomials to put in standard form. $ ax^{2}+bx+c$
2. $(x+5)(x-7)$ b. (8x – 3)(2x – 1) c. (4x – 2)(8x + 10)
3. –(x + 1)(x – 4) e. (3x – 5)(x – 1) f. –x(4x – 17)
 |

1. For the following tables, tell whether they are **linear**, **quadratic** or **neither**. Then show what the pattern is.

|  |  |
| --- | --- |
| x | y |
| -3 | -23 |
| -2 | -17 |
| -1 | -11 |
| 0 | -5 |
| 1 | 1 |
| 2 | 7 |
| 3 | 13 |

|  |  |
| --- | --- |
| x | y |
| -3 | 4 |
| -2 | 0 |
| -1 | -2 |
| 0 | -2 |
| 1 | 0 |
| 2 | 4 |
| 3 | 10 |

|  |  |
| --- | --- |
| x | y |
| -3 | 48 |
| -2 | 22 |
| -1 | 0 |
| 0 | 1 |
| 1 | 4 |
| 2 | 9 |
| 3 | 16 |

1. For the following pictures, tell what the **Domain**, **Range**, **Vertex** and **Direction** are.

 

Domain:

Range:

Vertex:

Direction:

Domain:

Range:

Vertex:

Direction:

 

Domain:

Range:

Vertex:

Direction:

Domain:

Range:

Vertex:

Direction: