1) The following equations are all in vertex form: . Complete the table. ➇

/40

|  |  |  |
| --- | --- | --- |
| Equation | Vertex | Step Pattern |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

2) The following equations are all in factored form: . Complete the table. ➇

|  |  |  |
| --- | --- | --- |
| Equation | Zeros (x-intercepts) | Step Pattern |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

3) For the following graphs, write down the equation in **factored form:**

a) b)



Equation: Equation: :

4) Sketch the following relations on the grids provided. ➄ each.



|  |
| --- |
| a) |
| Zeros: |
| Axis of Symmetry: |
| Find the vertex: |



|  |
| --- |
| b) |
| Zeros: |
| Axis of Symmetry: |
| Find the vertex: |

|  |
| --- |
| c) |
| Zeros: |
| Axis of Symmetry: |
| Find the vertex: |



|  |
| --- |
| d) |
| Zeros: |
| Axis of Symmetry: |
| Find the vertex: |

Bonus: Complete each sketch, and indicated properties.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Equation** | **y = 2x2 - 8x + 7** | | |
|  | | | |
| **Table of Values** | | | |
| **x** | | **y** | |
| 0 | | 7 | |
| 1 | | 1 | |
| 2 | | -1 | |
| 3 | | 1 | |
| 4 | | 7 | |
| 5 | | 17 | |
| 6 | | 31 | |
|  | | | |
| Fill in the following information about the parabola: | | | |
| What is the Direction of Opening?  \_\_\_\_\_\_\_\_\_\_\_\_ | | | What is the step pattern?  \_\_\_\_, \_\_\_\_, \_\_\_\_ | | What is the y-intercept?  \_\_\_\_\_\_\_\_\_\_\_\_ |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Equation** | **y = -3x2 + 6x + 2** | | |
|  | | | |
| **Table of Values** | | | |
| **x** | | **y** | |
| -2 | | -22 | |
| -1 | | -7 | |
| 0 | | 2 | |
| 1 | | 5 | |
| 2 | | 2 | |
| 3 | | -7 | |
| 4 | | -22 | |
|  | | | |
| Fill in the following information about the parabola: | | | |
| What is the Direction of Opening?  \_\_\_\_\_\_\_\_\_\_\_\_ | | | What is the step pattern?  \_\_\_\_, \_\_\_\_, \_\_\_\_ | | What is the y-intercept?  \_\_\_\_\_\_\_\_\_\_\_\_ |