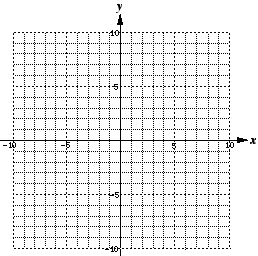
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**Chapter 7 Review**

1. Graph *y* = –*x*2 – 4*x +* 12 and fill in the

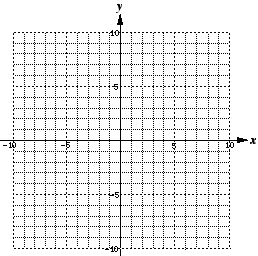
table for the relation.

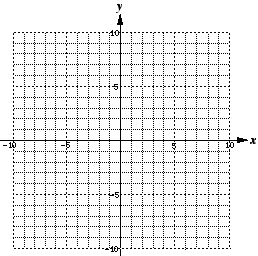
|  |  |
| --- | --- |
| ***y-intercept*** |  |
| ***x*-intercept(s)** |  |
| **Axis of symmetry** |  |
| **Vertex** |  |
| **Domain** |  |
| **Range** |  |

****

2. Fill in the table for the relation

|  |  |
| --- | --- |
| ***y-intercept*** |  |
| ***x*-intercept(s)** |  |
| **Axis of symmetry** |  |
| **Vertex** |  |
| **Domain** |  |
| **Range** |  |

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****3. Solve the equation 3*x*2 + *x* = –4*x* + 5 two different ways:

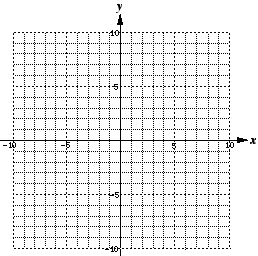
Method 1: Graph two equations.

***y1*=** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***y2*=** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

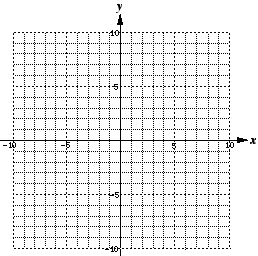
Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Method 2: Rewrite in standard form. Then solve the equation in standard form by graphing. (find x-intercepts)

****

***y1*=** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

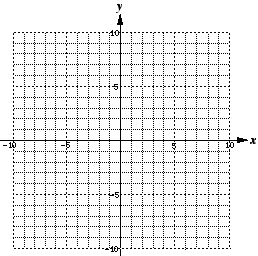
Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

****4. Solve the equation using either method

**Review:** When determining the solution of a quadratic function in the form ***a****x*2 + ***b****x* + ***c*** = 0, you are determining the or or .

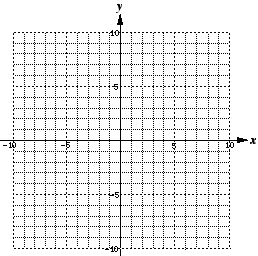
The factored form of a quadratic function can be written as: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

where,

****

5. Sketch the graph of f(x) = 2 (*x* + 3) (*x* – 1).

1. Determine the root(s).
2. Determine the *y*-intercept.
3. Determine the axis of symmetry. d) Determine the vertex.

****

6. Sketch the graph of

a) Determine the root(s).

b) Determine the *y*-intercept.

c) Determine the axis of symmetry. d) Determine the vertex.

7. A quadratic function has an equation that can be written in the form *f*(*x*) = *a*(*x* – *r*)(*x* – *s*)*.* The graph of the function has *x*-intercepts at (1, 0) and (3, 0) and passes through the point (–1, 16). Write the equation of the function.

8. A quadratic function has an equation that can be written in the form *f*(*x*) = *a*(*x* – *r*)(*x* – *s*)*.* The graph of the function has *x*-intercepts at (, 0) and (4, 0) and passes through the point (1, –9). Write the equation of the function.

9. Fill in the table for the quadratic function *f*(*x*) = *–*2(*x* + 5)(*x* + 2)*.*

|  |  |
| --- | --- |
| ***y*-intercept** |  |
| **Zeros** |  |
| **Axis of symmetry** |  |
| **Vertex** |  |

10. Solve using the quadratic formula

a) b)