Math 2
Unit 3 Day 2 HW

Name:_____
Date:_____

➢ Complete the table:

Function	Vertex	Horizontal Translation Left or Right	Vertical Translation Up or Down	Vertical Stretch or Compression	Reflection over x-axis	Domain	Range
$y = -\sqrt{x+4} - 1$							
$y = \sqrt{x-3} + 2$							
$y = -3\sqrt{x+1} + 2$							
$y = \sqrt[3]{x} + 4$							
$y = \sqrt[3]{x+4} - 5$							
$y = -4\sqrt[3]{x+3}$							
$y = \frac{1}{2}\sqrt{x+3} - 4$							

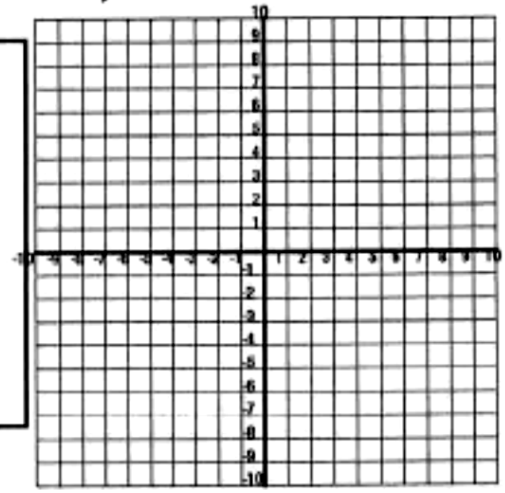
➢ Sketch each graph:

1. $y = \sqrt{x} + 1$

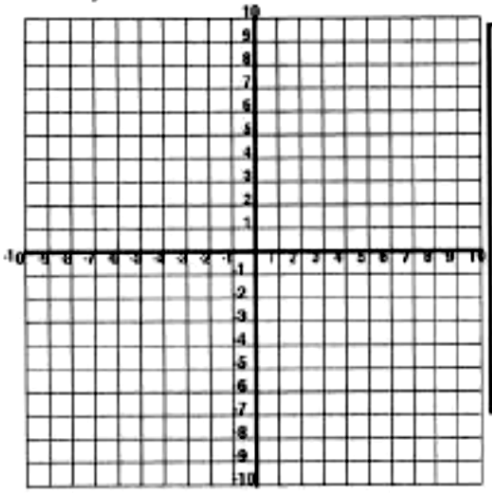
Vertex:

Domain:

Range:



2. $y = \sqrt{x+3} - 1$



Vertex:

Domain:

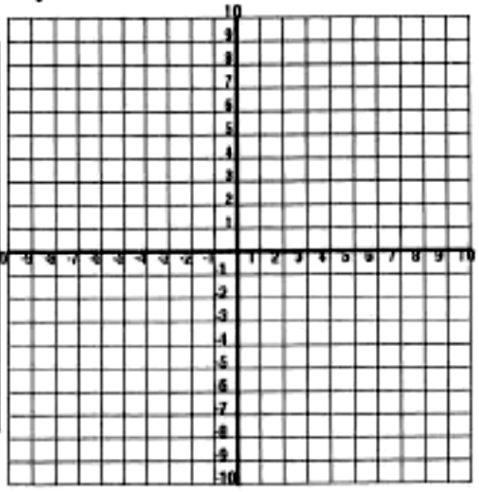
Range:

3. $y = -\sqrt{x-1} + 6$

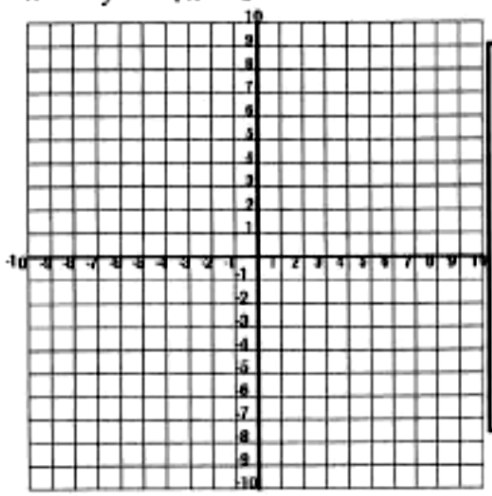
Vertex:

Domain:

Range:



4. $y = \sqrt[3]{x} - 3$



Vertex:

Domain:

Range:

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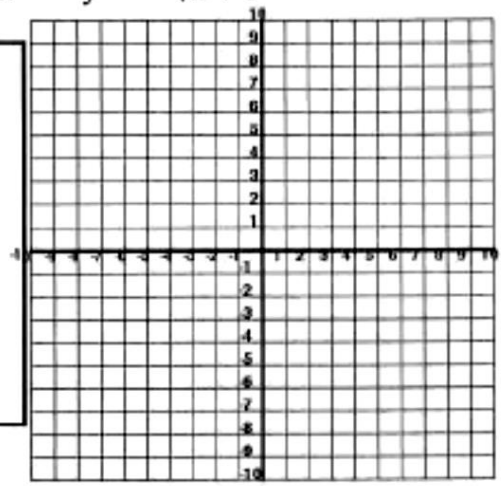
5. $y = -\sqrt[3]{x+3}$

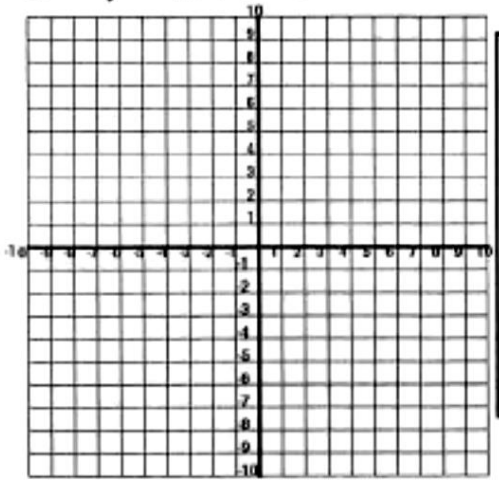
Vertex:

Domain:

Range:



6. $y = \sqrt[3]{x+2} - 5$



Vertex:

Domain:

Range:

➢ Write the equation of the function:

7. Write the equation of a **cubed** function that has been translated left four units and up six units.

8. Write the equation of a **cube root** function that has been translated left seven units and down one unit.

9. Write the equation of a **cube root** function that has been translated left four units and up six units and reflected across the $x - axis$.

10. Write the equation of a **square root** function that has been translated right three units and down two units.

11. Write the equation of a **square root** function that has been translated left two units and reflected across the $x - axis$.

12. Write the equation of a **square root** function that has been translated up two units and reflected across the $x - axis$ and stretched by a factor of 2.