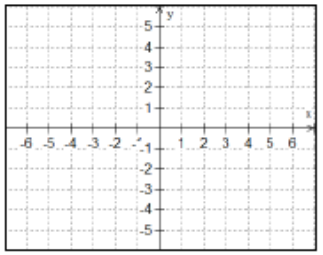
Math 3 2.5 Graphing Radicals Unit 2 Day 5

*SWBAT graph radical functions, state the transformations, and find the domain, range, and end behavior.*

|  |  |
| --- | --- |
| **Families of Radical Functions** | |
| **Radical function:** A function that can be written in the form . For even values of n, the domain of a radical function is the real numbers x > h.  **Square Root Function:** a function that can be written in the form . The domain of a square root function is all real numbers x > h. | |  |  |  | | --- | --- | --- | |  | **SQUARE ROOT** | **RADICAL** | | **Parent Function** |  |  | | **Reflection in x-axis** |  |  | | **Stretch:** a > 1  **Shrink:** 0 < a < 1 |  |  | | **Translation**  Horizontal by h  Vertical by k |  |  | |

Graphing a Square root function

**EXAMPLE #1:** Graph



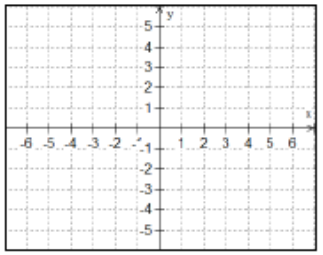
Translations:

Domain:

Range:

End Behavior:

**EXAMPLE #2:** Graph



Translations:

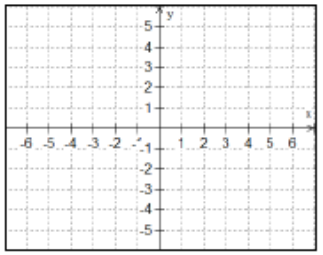
Domain:

Range:

End Behavior:

Graphing a cube root function

**EXAMPLE #3:** Graph



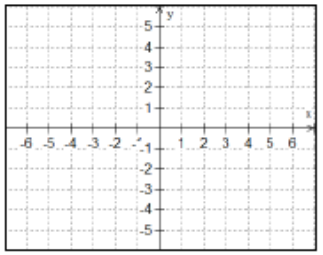
Translations:

Domain:

Range:

End Behavior:

**EXAMPLE #4:** Graph



Translations:

Domain:

Range:

End Behavior:

**EXAMPLE #5:** The population of Corpus Christi, Texas, between 1970 and 2005 can be modeled by the function , where x represents the year. In what year was the population of Corpus Christi 275,000?

**Solve by Graphing: Solve Algebraically:**

