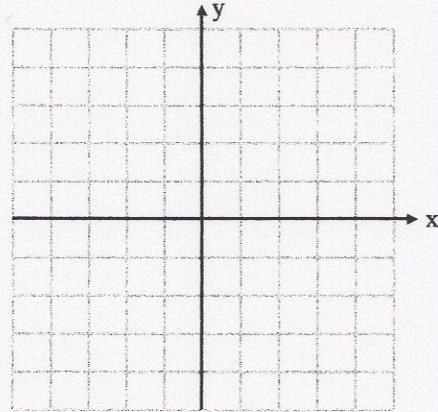# Activity: Graphing Cube Root Functions
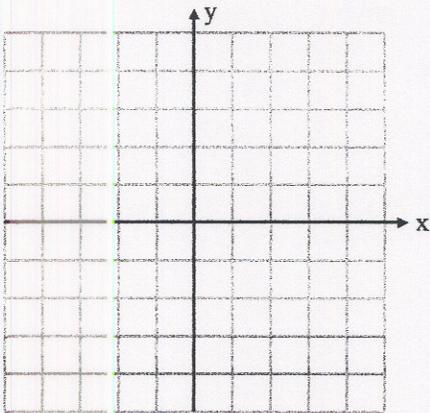
1. Using your graphing calculator - Graph $y = \sqrt[3]{x}$

$y = \sqrt[3]{x}$ is called the "parent function"
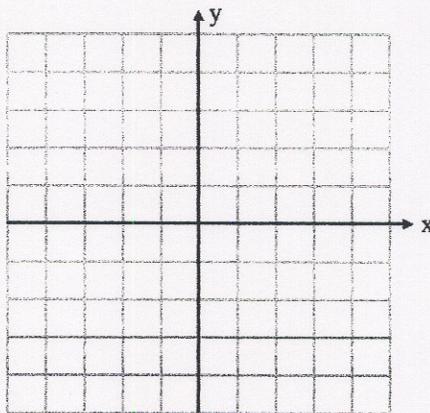for cube root functions
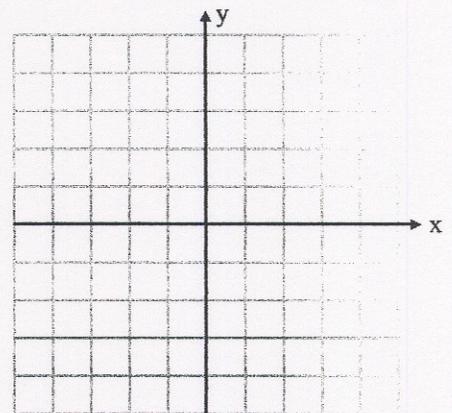

Graph the following:

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

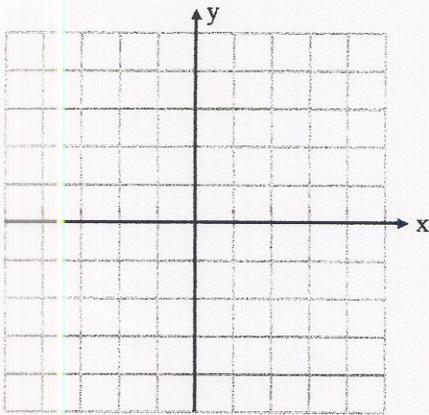3. $y = \sqrt[3]{x} + 3$

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

Describe what happened to $y = \sqrt[3]{x}$ in each of the above graphs.
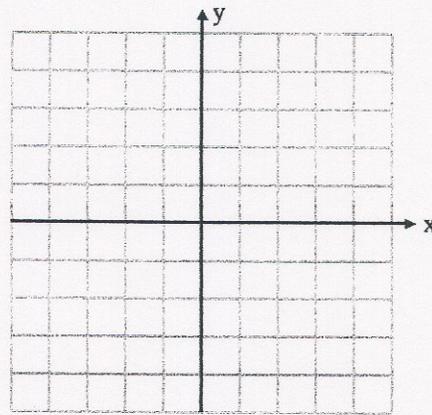
2b.

3b.

4b.

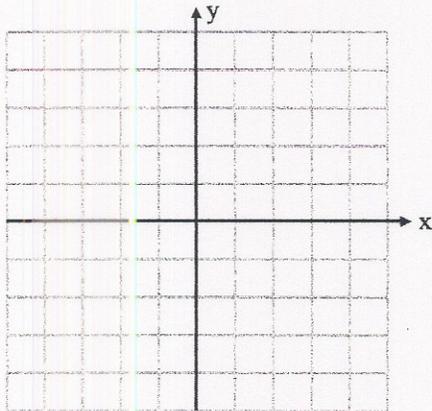5. $y = \sqrt[3]{x} + 3$

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

Describe what happened to $y = \sqrt[3]{x}$ in each of the above graphs.
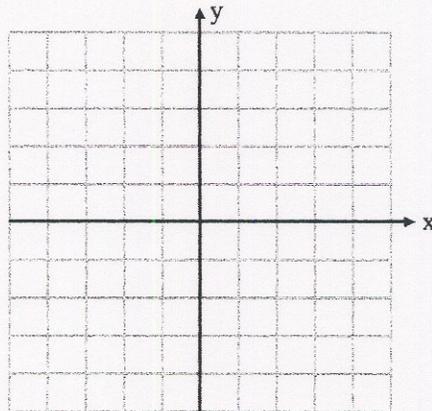
5b.

6b.

Now using what you know about shifting the parent function $y = \sqrt[3]{x}$, graph the following without your calculator. Once you have graphed the equation check yourself with your calculator.

7. $y = -\sqrt[3]{x} - 1$

8. $y = \sqrt[3]{x+2}$

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