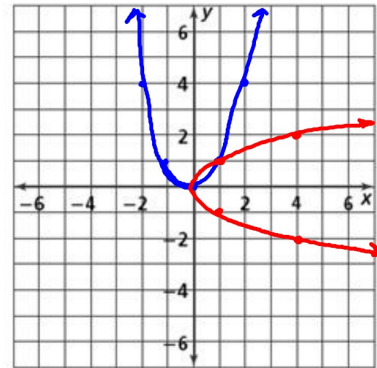


7-8 Graphing Radical Functions

Investigation:

A. Graph $f(x) = x^2$ and its inverse $f^{-1}(x) = \pm\sqrt{x}$.

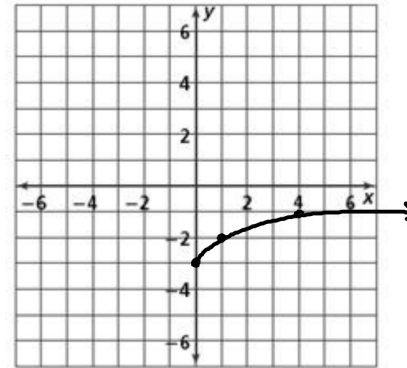


B. Is $f^{-1}(x) = \pm\sqrt{x}$ a function? **no**

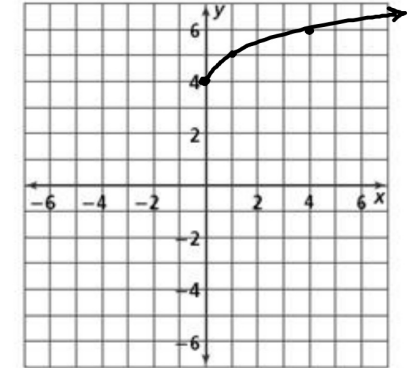
C. If it is not a function, what could we do to it to make it a function? **$y = \sqrt{x}$**

Graph the following:

A. $y = \sqrt{x - 3}$



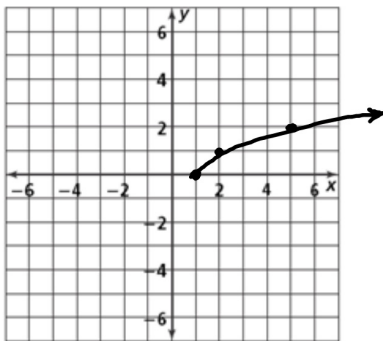
B. $y = \sqrt{x + 4}$



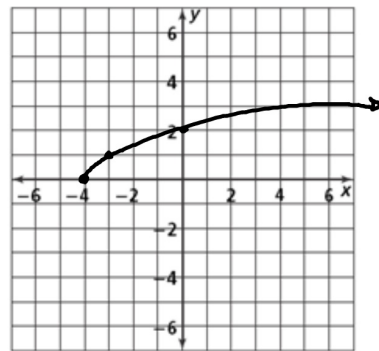
Page 1

Example 2: Graph the following.

$y = \sqrt{x - 1}$



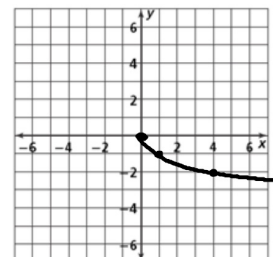
$y = \sqrt{x + 4}$



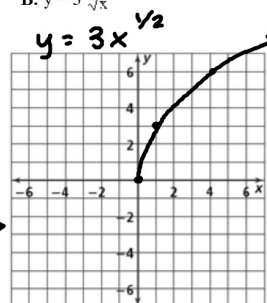
Page 2

Example 3: Graph the following.

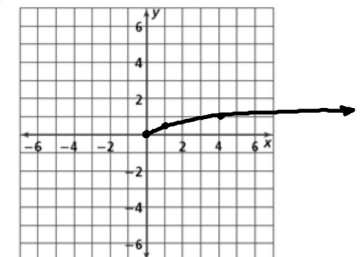
A. $y = -\sqrt{x}$



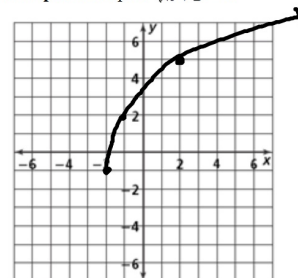
B. $y = 3\sqrt{x}$



C. $y = \frac{1}{2}\sqrt{x}$



Example 4: Graph $3\sqrt{x + 2} - 1$.



Example 5: The function $h(x) = 0.4 \sqrt[3]{x}$ models the height h in meters of a female giraffe that has a mass of x kilograms. Estimate the mass of a 3.2 meter female giraffe.

$$\frac{3.2}{0.4} = \frac{0.4 \sqrt[3]{x}}{0.4}$$

$$8 = \sqrt[3]{x}$$

$$8^3 = (\sqrt[3]{x})^3$$

$$512 = x$$

$$512 \text{ kg}$$

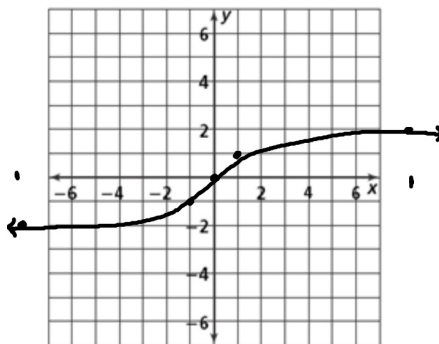
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Homework:
page 411 # 2-34 even. No Graphing Calculators

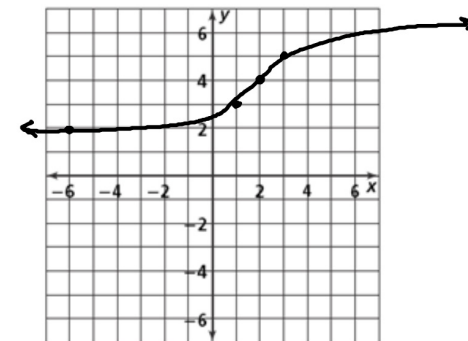
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Example 6: Graph the following.

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



B. $y = \sqrt[3]{x-2} + 4$



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