

Section 2.2

The graphs of $y = x^{m/n}$
 (assuming m/n is in reduced form.)

Remember that $x^{m/n} = \sqrt[n]{x^m}$.

If n is even, then $x^{m/n}$ is undefined for $x < 0$.

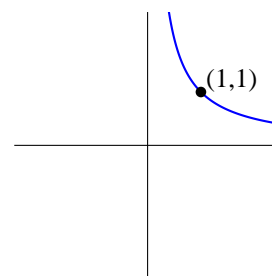
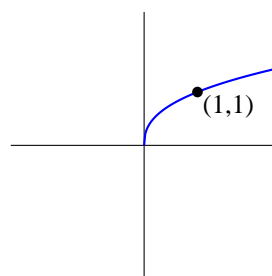
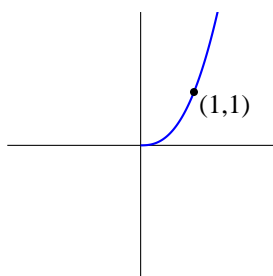
If n is odd, then $x^{m/n}$ is even or odd depending on whether m is even or odd.

$$\frac{m}{n} > 1$$

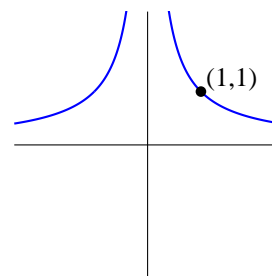
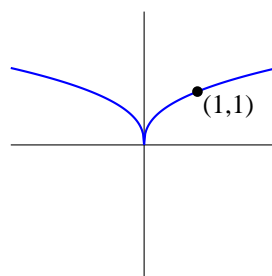
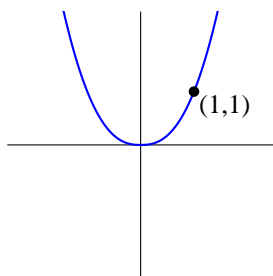
$$0 < \frac{m}{n} < 1$$

$$\frac{m}{n} < 0$$

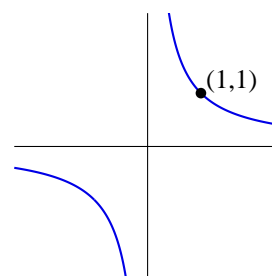
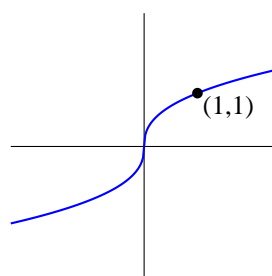
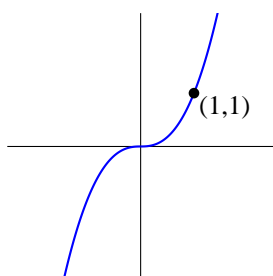
n even



n odd
 m even



n odd
 m odd



notes:

Tangent to
 the x -axis.

Tangent to
 the y -axis.

x - and y -axes
 are asymptotes.