Expectations

1.1   The student will represent functions and relations numerically, graphically, and algebraically.
1.2   The student will describe and apply properties of functions and relations.
1.3   The student will perform a variety of operations and geometrical transformations on functions and relations.
1.4   The student will use numerical, algebraic, and graphical representations of functions and relations in order to solve real-world problems.
4.1   The student will describe and represent numbers and their relationships.
4.2   The student will estimate and compute using mental strategies, paper and pencil, and technology.

Essential Questions

How do power and radical functions model real-world problems and their solutions?

How are expressions involving radicals and exponents related?

Enduring Understanding

The characteristics of power and radical functions and their representations are useful in solving real-world problems.

Indicators

1.1.A2.3   write a radical function or expression as an equivalent power function or expression.

1.1.A2.9   represent radical functions numerically, algebraically, and graphically.

1.2.A2.6   describe the properties of radical functions.

1.3.A2.3   describe the effect of transformations on the graphs of radical functions, $f(x) = \sqrt[n]{(x-h)} + k$.

1.4.A2.5   solve radical equations graphically or algebraically, and check for extraneous roots.

1.4.A2.14   interpret and solve problems involving radical functions.

4.1.A2.2   write equivalent expressions involving radicals and exponents, including negative exponents.

4.2.A2.4   evaluate expressions involving radicals and exponents.