Math Grades 9 – 12
Rational Exponents

MA.912.A.6.3

A Short Account of the History of Mathematics
"John Wallis"
W. W. Rouse Ball

Reading Level: 12

Activity:

The following statement is made in the reading, "*He commences by proving the law of indices; shows that* x^0, x^{-1}, x^{-2} *... represents 1, 1/x, 1/x_...; that* $x^{1/2}$ *represents the square root of x, that* $x^{2/3}$ *represents the cube root of* x^2*, and generally that* x^{-n} *represents the reciprocal of* x^n*, and that* $x^{p/q}$ *represents the qth root of* x^p*."
Use this information to do the following problems.

Rewrite in exponential form.

1. $\sqrt{\quad}$
2. $\sqrt{\quad}$
3. $\sqrt{\quad}$
4. $\sqrt{\quad}$
5. $\sqrt{\quad}$

Rewrite in radical form.

6. $\quad$
7. $\quad$

8.

9.

10.