Name: ____ Period: __________ Date: ______________

ROOTS AND RADICAL EXPRESSIONS Guided Notes

1. The root of a number k is a _________, which when multiplied by itself a given number of times, equals _________.

2. If the radicand is positive (or negative) and index is even, the roots will be ___________.

If the radicand is positive and index is odd, the roots will be ___________.

If the radicand is negative and index is odd, the roots will be ___________.

The real roots of $\sqrt[2]{81}$ are _________.

The real roots of $\sqrt[3]{-125}$ are ____________.

3. By nth root property, $\sqrt[n]{a^n} =$ ____________.

By quotient property of radicals, $\sqrt[n]{\frac{a}{b}} =$ _____________.

By product property of radicals, $\sqrt[n]{ab} =$ ______________.

4. $\sqrt[2]{\boldsymbol{25x^2}}$ = ______________

$\sqrt[3]{\boldsymbol{y^3}}$ = ______

$\sqrt[2]{\frac{\boldsymbol{x^4}}{\boldsymbol{y^4}}}$ = ________