Algebra 2

Name: Key

Date: _____ Block: _____

Radicals & Rational Exponents

Rewrite each expression by using rational exponents.

1. $\sqrt[5]{11^2}$ $11^{2/5}$	2. $\sqrt[8]{y^2}$ $y^{2/8} = y^{1/4}$
3. $\sqrt[3]{20xyz}$ $(20xyz)^{1/3}$	4. $\sqrt{(3a)^3}$ $(3a)^{3/2}$

Write each expression in radical form.

5. $49^{1/2}$ $\sqrt{49}$	6. $x^{2/3}$ $\sqrt[3]{x^2}$
7. $(xy)^{4/5}$ $\sqrt[5]{(xy)^4}$	8. $16^{7/9}$ $\sqrt[9]{16^7}$

Write each expression in radical form and simplify completely.

9. $25^{1/2}$ $\sqrt{25} = 5$	10. $x^{5/3}$ $\sqrt[3]{x^5} = x\sqrt[3]{x^2}$	11. $(16x^4y)^{1/2}$ $\sqrt{16x^4y} = 4x^2\sqrt{y}$