

Name: Key Date: _____

Secondary 2
Mod Quiz 3.1-3.3 Practice

Instructions: Please simplify the following expression. Be sure to only use positive exponents. 2 points per question.

1. x^0 $= 1$	2. $x^2 * x^5$ x^7
3. $(x^2)^5$ x^{10}	4. $\frac{x^7}{x^2}$ x^5
5. $(\sqrt[3]{x^2})^4$ $(x^{2/3})^4 = x^{8/3}$	6. $\frac{x^2}{x^7}$ $\frac{1}{x^5}$

12

Instructions: Simplify the following into simplest radical form. 2 points each.

7. $\sqrt{112}$ $4 \cdot 4 \cdot 7 = \sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 7}$ $4\sqrt{7}$	8. $\sqrt[3]{112}$ $\sqrt[3]{8 \cdot 14}$ $\sqrt[3]{2 \cdot 2 \cdot 2 \cdot 2 \cdot 7}$ $2\sqrt[3]{14}$	9. $\sqrt[4]{112}$ $\sqrt[4]{2 \cdot 2 \cdot 2 \cdot 2 \cdot 7}$ $2\sqrt[4]{7}$
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6

Instructions: Use the given function to find the values. 1 point each.

10. $f(x) = 4x - 7$ Find $f(-2)$ $f(-2) = 4(-2) - 7$ $= -15$	11. $f(x) = 2 * 7^x$ find $f(\frac{1}{2})$ $f(\frac{1}{2}) = 2 * 7^{1/2}$ $= 2\sqrt{7}$
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4

Instructions: Factor the following equations. 1 points each.

12. $x^2 + 4x + 3$ $1 \cdot 3 = 3$ $(x+3)(x+1)$	13. $x^2 - 4x - 12$ $1 \cdot -12 = -12$ $(x-6)(x+2)$
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Instructions: Change each from radical form to exponential form or from exponential form to radical form. 1 point each.

14. $\sqrt[4]{5^9}$ $5^{9/4}$	15. $25^{7/4}$ $\sqrt[4]{25^7}$
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