

ACT Day Worksheet for Math 2

Name _____

Directions: Below (and on the back) are practice problems that you must complete during your homeroom on Tuesday, 3/1. This will be a classwork grade and is due on Wednesday, 3/2 at the beginning of class. Remember to SHOW YOUR WORK for full credit.

Simplifying Radicals:

1) $\sqrt{40x^2y^3z^8}$

2) $\sqrt{98ab^7c^5}$

3) $\sqrt[3]{24m^6n^4}$

4) $\sqrt[3]{250d^2e^7f^{14}}$

5) $\sqrt{12} \cdot \sqrt{48}$

6) $\sqrt[3]{4} \cdot \sqrt[3]{14}$

7) $5\sqrt{6x^4y^3} \cdot 4\sqrt{2xy^5}$

8) $-2\sqrt[3]{9a^2b^4} \cdot 6\sqrt[3]{3ab^5}$

Adding + Subtract Radicals:

9) $3\sqrt{7} + 8\sqrt{7}$

10) $14\sqrt{20} - 3\sqrt{125}$

11) $6\sqrt{50} - 2\sqrt{8} + 5\sqrt{12}$

12) $45^{1/2} - 4\sqrt{5}$

Multiply & Dividing Radicals

(Note: Try your best on dividing! We will discuss in class)

13) $\sqrt{6}(5+\sqrt{3})$

14) $\frac{\sqrt{2}+\sqrt{3}}{\sqrt{5}}$

15) $\frac{\sqrt{200}}{\sqrt{5}}$

16) $\frac{\sqrt{7}}{\sqrt{8x}}$

17) $(3+\sqrt{2})(5-4\sqrt{2})$

18) $(4+\sqrt{3})(4-\sqrt{3})$

19) $(\sqrt{5}+\sqrt{6})^2$

20) $(8-3\sqrt{2})^2$

skip 21 & 22

Write each expression in radical form.

23) $x^{\frac{2}{3}}$

24) $m^{\frac{5}{2}}$

25) $y^{1.5}$

26) $q^{-\frac{1}{3}}$

Write each expression in exponential form.

27) \sqrt{x}

28) $\sqrt[3]{y^2}$

29) $(\sqrt[4]{a})^3$

30) $\sqrt{5xy^3}$

Simplify each expression. Assume all variables are positive.

31) $49^{\frac{3}{2}}$

32) $64^{\frac{2}{3}}$

33) $9^{-1.5}$

34) $(-32)^{\frac{2}{5}}$

35) $\left(x^{\frac{2}{3}}\right)^6$

36) $(64a^3b^6)^{\frac{1}{3}}$

37) $x^{\frac{1}{4}} \cdot x^{\frac{2}{3}}$

38) $\frac{y^2}{y^{\frac{1}{3}}}$