

## Assignment 5.2 extra practice

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify. Hint: Use the wedding cake technique**

1)  $\sqrt[3]{48n^2}$

2)  $\sqrt[4]{648m^5}$

3)  $\sqrt[3]{40n}$

4)  $\sqrt[4]{112x^7}$

**Write each expression in exponential form.**

5)  $(\sqrt[5]{10})^3$

6)  $(\sqrt[5]{2})^4$

7)  $(\sqrt[5]{3})^2$

8)  $(\sqrt[3]{6})^4$

**Solve each equation. get the X alone !!**

9)  $-40 = -5\sqrt{x+8}$

10)  $27 = 9\sqrt{12-x}$

11)  $4 + \sqrt{-4-4m} = 10$

12)  $-8 + \sqrt{k-3} = -7$

**Simplify.**

13)  $\frac{\sqrt[3]{-3}}{\sqrt[3]{-125}}$

14)  $\frac{\sqrt{12}}{\sqrt{25}}$

15)  $\frac{\sqrt{6}}{\sqrt{27}}$

16)  $\frac{\sqrt[3]{4}}{\sqrt[3]{27}}$

17)  $\frac{\sqrt[4]{3}}{\sqrt[4]{16}}$

18)  $\frac{\sqrt[3]{6}}{\sqrt[3]{81}}$

19)  $4b^{\frac{2}{3}} \cdot 4b^2$

20)  $3p^{\frac{1}{2}} \cdot 2p^2$

21)  $4x^{\frac{3}{2}} \cdot x^2$

22)  $2x^{\frac{3}{2}} \cdot x^{\frac{5}{4}}$

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

24)  $p^{\frac{4}{3}} \cdot 4p^2$

**Simplify. Your answer should contain only positive exponents with no fractional exponents in the denominator.**

25)  $\frac{4n^{\frac{7}{4}}}{2n^{\frac{2}{3}}}$

26)  $\frac{x^3}{4x^{-1}}$

27)  $\frac{3v^{-2}}{3v}$

28)  $\frac{4r^{\frac{3}{2}}}{4r}$

29)  $\frac{n^{-2}}{4n^{-1}}$

30)  $\frac{3k^{\frac{3}{2}}}{k^{-\frac{7}{4}}}$

31)  $\left(\frac{n^2}{n^{\frac{7}{4}}}\right)^2$

32)  $\frac{n^{\frac{7}{4}}}{(n^{-2})^2}$