Practice 17.3 & 17.4a

Name_____

Simplify the expression. If any variables are present, assume that they are positive.

1) $\sqrt[3]{xy^5} \cdot \sqrt[3]{x^{19}y^8}$

2) $\sqrt{2} \cdot \sqrt{4x^3}$

3) $\dfrac{\sqrt[3]{40}}{\sqrt[3]{5}}$

4) $\dfrac{\sqrt{14xy^3}}{\sqrt{2x}}$

Complete the equation.

5) $\sqrt{32} = \_\_\_\sqrt{2}$

Simplify the radical expression by factoring out the largest perfect nth power.

6) $\sqrt{27}$

7) $-\sqrt{80}$

Simplify the radical expression by factoring out the largest perfect nth power. Assume that all variables are positive.

8) $-\sqrt[3]{125x^4y^5}$

9) $\sqrt[4]{256a^4}$

10) $\sqrt[3]{\dfrac{y^7}{125}}$

Simplify the expression. If any variables exist, assume that they are positive and write your answer in radical notation.

11) $\sqrt[4]{x^2} \cdot \sqrt[5]{x^3}$

If possible, simplify the expression. If any variables exist, assume that they are positive.

12) $\sqrt{25} + \sqrt{16}$

13) $2\sqrt{3} + 2\sqrt{12}$

14) $6\sqrt{32x^2} - 3\sqrt{18x^2} - \sqrt{2x^2}$

15) $\frac{\sqrt{150}}{3} - \frac{4\sqrt{6}}{3} + \frac{\sqrt{6}}{\sqrt{9}}$

Answer Key
Testname: WKS_17.3_17.4A

1) $x^6y^4\sqrt[3]{x^2y}$
2) $2x\sqrt{2x}$
3) 2
4) $y\sqrt{7y}$
5) 4
6) $3\sqrt{3}$
7) $-4\sqrt{5}$
8) $-5xy\sqrt[3]{xy^2}$
9) 4a
10) $\frac{y^2\sqrt[3]{y}}{5}$
11) $x\sqrt[10]{x}$
12) 9
13) $6\sqrt{3}$
14) $14x\sqrt{2}$
15) $\frac{2\sqrt{6}}{3}$