

DO NOW

Simplify:

1. $\sqrt{a^8}$
 a^4

2. $\sqrt{a^4 b^{10}}$
 $a^2 b^5$

Page 1

1.7 Simplifying Radicals - Day 2

1. $\sqrt{x^{14}}$
 x^7

2. $\sqrt{x^{12} y^6}$
 $x^6 y^3$

3. $\sqrt{36a^2}$
 $\sqrt{36} \sqrt{a^2}$
 $6a$

4. $\sqrt{98b^4}$
Separate
break apart $\rightarrow \sqrt{49} \sqrt{2} \sqrt{b^4}$
Reorganize $\rightarrow \sqrt{49} \sqrt{b^4} \sqrt{2}$
Take roots $\rightarrow 7b^2 \sqrt{2}$

5. $\sqrt{x^7}$
 $\sqrt{x^6} \sqrt{x}$
 $x^3 \sqrt{x}$

6. $\sqrt{n^9}$
 $\sqrt{n^8} \sqrt{n}$
 $n^4 \sqrt{n}$

Page 2

7. $2\sqrt{108}$
 $2\sqrt{36} \sqrt{3}$
 $2(6) \sqrt{3}$
 $12\sqrt{3}$

8. $\sqrt{b^7}$
 $\sqrt{b^6} \sqrt{b}$
 $b^3 \sqrt{b}$

9. $\sqrt{y^{13}}$
 $\sqrt{y^{12}} \sqrt{y}$
 $y^6 \sqrt{y}$

10. $\sqrt{24x^8}$
 $\sqrt{24} \sqrt{x^8}$
 $\sqrt{4} \sqrt{6} \sqrt{x^8}$
 $\sqrt{4} \sqrt{x^8} \sqrt{6}$
 $2x^4 \sqrt{6}$

11. $\sqrt{72a^5}$
 $\sqrt{72} \sqrt{a^5}$
 $\sqrt{36} \sqrt{2} \sqrt{a^4} \sqrt{a}$
 $\sqrt{36} \sqrt{a^4} \sqrt{2a}$
 $6a^2 \sqrt{2a}$

12. $3\sqrt{20p^3}$
 $3\sqrt{20} \sqrt{p^3}$
 $3\sqrt{4} \sqrt{5} \sqrt{p^2} \sqrt{p}$
 $3\sqrt{4} \sqrt{p^2} \sqrt{5p}$
 $3(2) \sqrt{5p}$
 $6p \sqrt{5p}$

Page 3

HOMEWORK

Worksheet - HW 1.7
Simplify Radicals

Page 4