

More Radicals Practice ☺

Name _____

Date _____ Block _____

Rationalize each denominator. When possible, simplify by reducing the resulting fraction.

1. $\frac{1}{\sqrt{2}}$

2. $\frac{2}{\sqrt{3}}$

3. $\frac{1}{\sqrt{7}}$

4. $\frac{6}{\sqrt{2}}$

5. $\frac{15}{\sqrt{5}}$

6. $\frac{42}{\sqrt{7}}$

7. $\frac{5}{3+\sqrt{2}}$

8. $\frac{\sqrt{6}}{4-\sqrt{15}}$

Simplify Radicals

1.) $\sqrt{196}$

2.) $\sqrt[3]{48}$

3.) $3\sqrt{12}$

4.) $-6\sqrt[3]{32}$

5.) $3\sqrt{75}$

6.) $\sqrt{72}$

7.) $\sqrt{150}$

8.) $\sqrt{700}$

9.) $\sqrt{400}$

10.) $\sqrt[3]{x^{10}}$

11.) $\sqrt{80x^5}$

12.) $\sqrt{x^3y^9}$

13.) $\sqrt{24x^3y^5}$

14.) $\sqrt{x^{10}y^4}$

15.) $4\sqrt{36x^6y^9}$

16.) $\sqrt[3]{2250x^5y^3}$

17.) $\sqrt[4]{1215x^5y^8}$

18.) $\sqrt[5]{-486x^2y^6}$

Solving Equations

$$1) \frac{\sqrt{x+4}}{2} = -5$$

$$6) -3\sqrt{x-4} = -12$$

$$2) \frac{\sqrt{x+4}}{-2} = -5$$

$$7) -4 + \sqrt[3]{x} = -2$$

$$3) \frac{\sqrt[3]{x}}{-4} = 54$$

$$8) \sqrt{3+\sqrt{x}} = 4$$

$$4) \frac{\sqrt[3]{x}}{4} = 54$$

$$9) 2(x^5 - 1) = 0$$

$$10) 3(x^2 + 5) = 21$$

$$5) 3\sqrt{x-4} = -12$$

$$11) 5\left(\frac{x^2}{2} - 1\right) = 85$$