Name: _____ Per:_____

T 6-4 Retake Problems

I can simplify radical expressions by multiplying and dividing

Simplify each expression and box your answer.

1. $\sqrt[5]{\frac{-1024}{243}}$
2. $\sqrt[5]{243x^{10}}$
3. $\sqrt{49m^2t^8}$
4. $\sqrt{\frac{16m^2}{25}}$
5. $\sqrt[3]{-64r^2w^{15}}$
6. $\sqrt[3]{216p^3q^9}$
7. $\sqrt[4]{625s^8}$
8. $\frac{3}{7-\sqrt{2}}$
9. $\frac{4}{3+\sqrt{3}}$
10. $\frac{\sqrt{2}-1}{\sqrt{8}}$
11. $y^{-\frac{1}{2}}$
12. $s^{\frac{3}{4}} \cdot s^{\frac{13}{4}}$
13. $\left(u^{\frac{1}{3}}\right)^{\frac{4}{5}}$
14. $b^{-\frac{3}{5}}$
15. $\sqrt{\frac{1}{32}c^4d^7}$
16. $\sqrt[4]{\frac{16}{125a^3}}$

17. **BRAKING** The formula $s = 2\sqrt{5\ell}$ estimates the speed s in miles per hour of a car when it leaves skid marks ℓ feet long. Use the formula to write a simplified expression for s if $\ell = 85$. Then evaluate s to the nearest mile per hour.

Name: _____ Per:_____

T 6-5 Retake Problems

I can simplify radical expressions by adding, subtracting and multiplying

Simplify the following radicals.

1. $2\sqrt{48} - \sqrt{75} - \sqrt{12}$

2. $(2 + \sqrt{3})(6 - \sqrt{2})$

3. $(1 - \sqrt{5})(1 + \sqrt{5})$

4. $(\sqrt{2} - \sqrt{6})^2$

5. $(4\sqrt{12})(3\sqrt{20})$

6. $\sqrt{12} - 2\sqrt{3} + \sqrt{108}$

7. $\sqrt{2}(\sqrt{1} - \sqrt{10})$

8. $6\sqrt{20} + 8\sqrt{5} - 5\sqrt{45}$

9. $\sqrt{810} + \sqrt{240} - \sqrt{250}$

10. $8\sqrt{48} - 6\sqrt{75} + 7\sqrt{80}$

11. $\sqrt[4]{3}(\sqrt[4]{27} - \sqrt[4]{16})$

12. $5\sqrt[3]{32} + 2\sqrt[3]{108} + \sqrt[3]{192}$

Name: _____ Per:_____

T 6-6 RETAKE PROBLEMS

I can solve equations containing radicals.

Solve the following equations. **VERIFY all solutions**. Solutions that don't work with a box around them are considered incorrect! Box your answer!

1. $2\sqrt{4x+8}-4=8$
2. $\sqrt{3x+1}=\sqrt{5x}-1$
3. $(9x-11)^{\frac{1}{2}}=x+1$
4. $\sqrt{5-x}-4=6$
5. $(3x+1)^{\frac{1}{3}}+5=0$
6. $\sqrt[4]{2x+1}-3=0$
7. $5+\sqrt{9x}=4$
8. $3+5x^{\frac{1}{2}}=0$
9. $2\sqrt{2x-7}=\sqrt{2x+2}$
10. $\sqrt{2x^2+5x}=-x-10$