8.4 and 8.5 Supplement

A. Re-write each expression using parenthesis and only one exponent.

How: identify a common exponent, and rewrite each factor with that exponent.

1. 27x3 2. 25x2y6 3. 81a8b4c12

4. $\frac{27x^{3}}{8y^{3}}$ 5. $\frac{49x^{2}}{121y^{6}}$ 6. $\frac{16a^{4}}{81b^{20}}$

B. Solve for x. NO CALCULATOR.

How: make sure each side is written as a power with the same base. When you have one of the same base on each side, drop the base and solve.

7. 510 = 25x 8. 48 = 82x 9. 8112 = 36x

10. 9(x + 2) = 324 11. 32x = 94 12. 22x = $\frac{1}{8}$

Practice

1. Rewrite each expression using only one exponent.
2. 49x2y2z2 2. 125x6y3 3. 9a2b4c6

4. $\frac{8a}{27b^{9}}^{6}$ 5. $\frac{4m^{2}}{169m^{4}}$ 6. $\frac{125c^{7}}{216c^{4}}$ (hint – simplify first)

1. Solve for x. No calculator.

7. 64x = 3624 8. 816 = 4(x – 5) 9. 730 = 493x

10. 125100 = 5(10z – 50) 11. 115 = 121x 12. 250 = 84x