EXPONENTS AND FRACTIONS

1. An exponent is a short way of writing a repeated _____.

2. 6^3 means _____ factors of _____.

3. Simplify 6^3. _____ In the same way

$\frac{2}{3} \cdot \frac{2}{3} \cdot \frac{2}{3}$ can be written as $\left(\frac{2}{3}\right)^3$

The parentheses are used to show that all of the fraction is a factor.

3^2 $\frac{3}{4} \cdot \frac{3}{4}$ means $\frac{9}{16}$ or

$\left(\frac{3}{4}\right)^2$ $\frac{3}{4} \cdot \frac{3}{4}$ means $\frac{9}{16}$

A WORD OF WARNING:
When you write the same fraction as a factor, you will have common denominators, but you still use the rule for multiplication: multiply the denominators as well as the numerators.

REMEMBER: We had to have common denominators to add or subtract, but we just kept that denominator.

ADD: $\frac{1}{4} + \frac{1}{4} + \frac{5}{6}$ = =

$\frac{6}{6} \quad \frac{6}{6} \quad \frac{5}{6}$

SUBTRACT: $\frac{7}{2} - \frac{7}{2} - 5$ = =

99 9 9

In multiplication, we do not have to have a common denominator, but if we do, we multiply the denominators.

MULTIPLY: $\frac{3}{8}\cdot\frac{3}{8}=\frac{3\cdot 3}{8\cdot 8}=\frac{9}{64}$

4. - 8. Simplify:

4. $\frac{5^2}{6}$ 5. $\frac{1^3}{4}$ 6. $\frac{2^4 3}{3 8}$

$\frac{5^2 3^3}{}$ 1 ^{3} 7. $\cdot$

8. $\frac{6 4}{10}$

ANSWERS:

1. multiplication

2. 3 factors of 6

3. 216 (It's 6 6 6)

4. $\frac{25}{36}$

5. $\frac{1}{64}$

6. $\frac{2}{27}$

75

7. $\frac{\quad}{256}$

8. $\frac{1}{1000}$