Group Members:

1. Find the prime factorization for each of the following: $11, 24, 68, 45, 34, 121$.

$$11 = 11$$
$$24 = 2 \cdot 2 \cdot 2 \cdot 3$$
$$68 = 2 \cdot 2 \cdot 17$$
$$45 = 3 \cdot 3 \cdot 5$$
$$34 = 2 \cdot 17$$
$$121 = 11 \cdot 11$$

2. Reduce the following fractions to simplest terms. $\frac{1}{2}, \frac{2}{4}, \frac{6}{9}, \frac{4}{8}, \frac{12}{4}$

$$\frac{1}{2}$$
$$\frac{2}{4} = \frac{1}{2}$$
$$\frac{6}{9} = \frac{2}{3}$$
$$\frac{4}{8} = \frac{1}{2}$$
$$\frac{12}{4} = 3$$

3. Perform the following calculations:

   (a) $\frac{3}{4} + 5 = \dfrac{23}{4}$

   (b) $\frac{3}{4} \cdot 5 = \dfrac{15}{4}$

   (c) $\frac{6}{3} + \frac{5}{6} = \dfrac{17}{6}$

4. Evaluate the following: $3^2, 4^3, 7^2, 3^3$

$$3^2 = 9 \qquad 7^2 = 49$$
$$4^3 = 64 \qquad 3^3 = 27$$

5. Simplify each of the following:

   (a) $2 + 4 \cdot 5 = 22$

(b) $(2+3) \cdot 5 + 3 + 4 = 32$

(c) $3^3 + (2+1)^3 = 54$

6. Evaluate the following

(a) $12x + 3$ when $x = 4$

$= 51$

(b) $23x + (2x - 4)$ when $x = 2$

$= 46$

7. Write an algebraic expression or equation for the following

(a) Thirty-two times more than a number.

$32x$

(b) Four subtracted from an unknown.

$x - 4$

(c) One more than two is three.

$1 + 2 = 3$

(d) Three times a number squared is twelve.

$3x^2 = 12$