

Red Belt Warm-Up

Wednesday November 16, 2005

1. Simplify the following algebraic expressions (multiply through all parentheses and brackets, combine like terms, cancel common factors in numerator and denominator).

a. $2x + 3y + 3x + 4y =$

b. $2x \times 3y + 4 =$

c. $-8x \div 12y =$

d. $4(\frac{1}{2}a - 5) =$

e. $x(x - 2) + 5x^2 =$

f. $5x + 3(x + 2) - (2x - 5) + 9 =$

g. $\frac{(-3x)}{2y} \div \frac{9y}{4x} =$

h. $\frac{2x-1}{5} + \frac{x-2}{3} =$

2. Write and simplify algebraic expressions for each case.

a. One-third of the number that is 2 less than x .

b. The sum of Abe and Betty's ages if Abe is x years old and Betty is 8 years younger.

c. The total number of apples in x boxes, if each box contains y apples.

3. If $(d - 1)$ is a multiple of 8, what is the next multiple of 8?

4. If x is an even number, what is the sum of the next two odd numbers?