Group members_____

1. Simplify the following: (You will need to combine like terms.)

   (a) $7y + 8y =$ $15y$
   (b) $m - 4m + 2m - 6 =$ $-m - 6$
   (c) $w - m + 4w + m^2 =$ $5w - m + m^2$
   (d) $(8 + x)2 + x =$ $16 + 3x$
   (e) $8x^2 + 3x + 5x^2 =$ $13x^2 + 3x$
   (f) $\frac{1}{3}(9x + 6) + x + w =$ $4x + 2 + w$
   (g) $3(x^2 + y^2) - x^2 + y^2 =$ $2x^2 + 4y^2$

   (h) $xyz^2 + z^2xy + 4 =$ $2xyz^2 + 4$
   (i) $xy + yx + x^2y =$ $2xy + x^2y$
   (j) $x(y + x^2) - xy + x^3 =$ $2x^3$
   (k) $(x + 2x)y + y =$ $3xy + y$
   (l) $xyw + ywx + xwy =$ $3xyw$
   (m) $(xy)^2 + x^2y^2 =$ $2x^2y^2$
   (n) $(xyz)^2 + x^2y^2z^2 =$ $2x^2y^2z^2$

2. Write an expression with 4 terms that simplifies to $3x - 4$.

   $6x - 6 - 3x + 2$

3. Write an expression with 4 terms that simplifies to $4xyz + 4xz$.

   $2xyz + 2xyz + xz + 3xz$

4. Steve suspects he has misplaced a few of his DVD's. Being a fanatical organizer, he knows he had exactly 102 DVD's. Moreover, he knows he lent 20 to his friend Jenny, and 24 are in his car. Write an equation which represents this problem. (Hint: let x be the number of missing DVD's.) Solve the equation to determine how many DVD's Steve is missing.

   SKIP

5. Let x represent the first of two consecutive, positive integers (e.g. $3, 4$ are consecutive). Express the sum of the two integers in terms of x.

   $x + x + 1 = 2x + 1$

6. Ellen is a secret agent. As a secret agent, she must call her fellow secret agents every 6 hours over the next 36 hours. How many times will she have to call? Write an equation which represents this problem with x representing the number of calls.

   $x = \frac{36}{6} = 6$