Expanding and Solving Equations Review

1. Collect like terms
Add or subtract the _____ of terms that have the same _____.

Examples: 
\[ 2a + 3a = \text{______} \]
\[ m^2n^2 (m^2 - 3m) \]

2. Distributive Property
Multiply each term of the _____ by the _____.

\[ a(b + c) = \text{______} \]

Example 1: \[-2a(3a - 2b) = \text{______} \]
Example 2: \[2x - (x-8y) - 3y = \text{______} \]

3. Multiply Binomials (FOIL)

Skip Until Quadratics Unit

Example: 
\[ (2a + 4b)(3a - 5b) = \text{______} \]

4. Solving Linear Equations Algebraically

- Eliminate any brackets by using the distributive property
- Rearrange the equation to isolate for the variable. (remember to do the opposite to undo)

*You may have extra steps before isolating for x.

Examples:
\[ 6x = 8 \quad \text{or} \quad x = \frac{8}{6} \]
\[ 3x + 8 = 20 \]
\[ 2x = 12 \]
\[ x = 6 \]

\[ 3(x - 26) = 56x + 20) - 33 \]
\[ 3x - 6 = 5x + 7 \]
\[ 3x - 5x = 7 + 6 \]
\[ -2x = 13 \]
\[ x = \frac{-13}{2} \]
\[ x = 6.5 \]

\[ a \]
\[ b \]
\[ c \]