

# Like Terms:

Terms that have both of the following conditions:

- Same variable(s)
- Same exponents on those variable(s)

○ What doesn't matter?

the coefficient

Simplify each.

$$\begin{aligned}
 1. \quad & 6 + 2(4m - 9) - 12m - 5(3m + 7) \\
 & 6 + 8m - 18 - 12m - 15m - 35 \\
 & \underline{6 + 8m - 18 - 12m - 15m - 35} \\
 & \boxed{-19m - 47}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & -\frac{5}{6}(9m^2 - 36m) + 2m^2 - 3m \\
 & -\frac{15}{2}m^2 + 30m + 2m^2 - 3m \\
 & -\frac{15}{2} + \frac{2 \cdot 2}{1 \cdot 2} = -\frac{15}{2} + \frac{4}{2} = -\frac{11}{2} \\
 & -\frac{11}{2}m^2 + 27m
 \end{aligned}$$

$$\begin{aligned}
 3. \quad & -9 + 4m^2(2m - 3) + 6m - 7 - 11m^3 + m^2 + 3m^3 \\
 & -9 + 8m^3 - 12m^2 + 6m - 7 - 11m^3 + m^2 + 3m^3 \\
 & -16 + 6m - 11m^2
 \end{aligned}$$