

9.2 Key Concepts 2 Subtracting Polynomials Worked Example

Example: Subtract $(6x + y - 4z) - (3x - 2y - 5z)$.

Solution: Remove the brackets. When you remove the brackets from the second polynomial, change the sign of each term. Then, collect like terms.

$$\begin{aligned}(6x + y - 4z) - (3x - 2y - 5z) &= 6x + y - 4z - 3x + 2y + 5z \\ &= 6x - 3x + y + 2y - 4z + 5z \\ &= 3x + 9y + z\end{aligned}$$

Practice:

1. Subtract $(2x + 5y - 2z) - (3x - 4y - z)$.

2. Subtract $(5x - 3y - z) - (3x + 2y - 4z)$.

Answers: 1. $-x + 9y - z$ 2. $2x - 5y + 3z$