

$$\begin{aligned} \underline{1a} \quad (2x+y)(x+2y) &= 2x^2 + 4xy + xy + 2y^2 = \\ &= 2x^2 + 5xy + y^2 \end{aligned}$$

$$\begin{aligned} \underline{1b} \quad (2x+y)(x-2y) &= 2x^2 - 4xy + xy - 2y^2 = \\ &= 2x^2 - 3xy - 2y^2 \end{aligned}$$

$$\begin{aligned} \underline{1c} \quad (a-2b)(a+2b) &= a^2 + \cancel{2ab} - \cancel{2ab} - 4b^2 = \\ &= a^2 - 4b^2 \end{aligned}$$

$$\begin{aligned} \underline{1d} \quad (x+2y+3)(x-2) &= x^2 - 2x + 2xy - 4y + 3x - 6 = \\ &= x^2 + 2xy + x - 4y - 6 \end{aligned}$$

$$\begin{aligned} \underline{1e} \quad (2a-b+c)(2a-3b) &= 4a^2 - \underline{6ab} - \underline{2ab} + 3b^2 + 2ac - 3bc = \\ &= 4a^2 - 8ab + 2ac - 3bc + 3b^2 \end{aligned}$$

$$\begin{aligned} \underline{1f} \quad (a+2b-3c)(2a-3b) &= 2a^2 - \underline{3ab} + \underline{4ab} - 6b^2 - 6ac + 9bc = \\ &= 2a^2 + ab - 6ac + 9bc - 6b^2 \end{aligned}$$