

$$2) (4 - \sqrt{3}) \cdot (\sqrt{3} + 6) = \underline{4\sqrt{3}} + \underline{24} - \underline{3} - \underline{6\sqrt{3}} = 21 - 2\sqrt{3}$$

$$4) (3\sqrt{5} + \sqrt{3}) \cdot (\sqrt{3} - 4\sqrt{5}) = 3\sqrt{15} - \underline{12\sqrt{25}} + \sqrt{9} - 4\sqrt{15} = \\ = 3\sqrt{15} - \underline{60} + 3 - 4\sqrt{15} = -57 - \sqrt{15}$$

$$6) (\sqrt{x} + 3\sqrt{y}) \cdot (\sqrt{y} - 4\sqrt{x}) = \sqrt{xy} - 4\sqrt{x^2} + 3\sqrt{y^2} - 12\sqrt{xy} = \\ = \sqrt{xy} - 4x + 3y - \underline{12\sqrt{xy}} = 3y - 4x - 11\sqrt{xy}$$

$$8) (4\sqrt{a} - 7\sqrt{b}) \cdot (2\sqrt{b} - 3\sqrt{a}) = 8\sqrt{ab} - 12\sqrt{a^2} - 14\sqrt{b^2} + \\ + 21\sqrt{ab} = \underline{8\sqrt{ab}} - 12a - 14b + \underline{21\sqrt{ab}} = 29\sqrt{ab} - 12a - 14b.$$
