Multiply Radicals

Multiplying a monomial by a monomial:
- Multiply the "outsides"
- Multiply the "insides"
- Simplify, if possible.

\[(2\sqrt{3})(4\sqrt{15}) \quad (2\sqrt{3}y)(5\sqrt{2x})\]

Multiply a square root by the SAME square root:
\[\left(\sqrt{3}\right)\left(\sqrt{3}\right) \quad (\sqrt{7}y)(\sqrt{7}y) \quad (\sqrt{5-y})(\sqrt{5-y})\]

Perform the indicated operations and simplify your answers:

1. \[3\sqrt{5y}\left(\sqrt{5y} + \sqrt{x} - 2\sqrt{3}\right)\]

2. \[(4\sqrt{2} - 2\sqrt{3})(5\sqrt{3} - 8\sqrt{6})\]

3. \[(3\sqrt{x} - 2\sqrt{y})^2\]

4. \[(5 + \sqrt{x + 3})^2\]

5. \[(2 - 3\sqrt{5x - 1})^2\]