Multiplying Binomial Radical Expressions

Simplify the radical expressions.

1 $(\sqrt{3} - \sqrt{5})(\sqrt{3} + \sqrt{5})$

2 $(-\sqrt{2}x + \sqrt{7})(-\sqrt{2}x + \sqrt{7})$

3 $(\sqrt{27} - \sqrt{3})(\sqrt{27} + \sqrt{3})$

4 $(2\sqrt{x} + 3\sqrt{7})(2\sqrt{x} + 3\sqrt{7})$

5 $(-\sqrt{2} + \sqrt{x})(\sqrt{2} + \sqrt{x})$

6 $(3\sqrt{3} + 6\sqrt{11})(3\sqrt{3} + 6\sqrt{11})$

7 $(\sqrt{2} - 3)(\sqrt{6} + 5)$

8 $(5\sqrt{3} + 4)^2$

9 $(2 - \sqrt{5})^2$

10 $(\sqrt{3}x^2 - \sqrt{5})(\sqrt{3}x^2 + \sqrt{5})$

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Answers

1 $(\sqrt{3} - \sqrt{5})(\sqrt{3} + \sqrt{5})$

-2

2 $(-\sqrt{2}x + \sqrt{7})(-\sqrt{2}x + \sqrt{7})$

$2x - 2\sqrt{14}x + 7$

3 $(\sqrt{27} - \sqrt{3})(\sqrt{27} + \sqrt{3})$

24

4 $(2\sqrt{x} + 3\sqrt{7})(2\sqrt{x} + 3\sqrt{7})$

$4x + 12\sqrt{7}x + 63$

5 $(-\sqrt{2} + \sqrt{x})(\sqrt{2} + \sqrt{x})$

$x - 2$

6 $(3\sqrt{3} + 6\sqrt{11})(3\sqrt{3} + 6\sqrt{11})$

$423 + 36\sqrt{33}$

7 $(\sqrt{2} - 3)(\sqrt{6} + 5)$

$2\sqrt{3} + 5\sqrt{2} - 3\sqrt{6} - 15$

8 $(5\sqrt{3} + 4)^2$

$91 + 40\sqrt{3}$

9 $(2 - \sqrt{5})^2$

$9 - 4\sqrt{5}$

10 $(\sqrt{3}x^2 - \sqrt{5})(\sqrt{3}x^2 + \sqrt{5})$

$3x^2 - 5$