



## Chapter 10: Radical Expressions

### Multiplying Radical Expressions

**Simplify.**

$$1) \sqrt{5} \times \sqrt{5} =$$

$$17) -5\sqrt{9x^3} \times 6\sqrt{3x^2} =$$

$$2) \sqrt{5} \times \sqrt{10} =$$

$$18) -2\sqrt{12}(3 + \sqrt{12}) =$$

$$3) \sqrt{2} \times \sqrt{18} =$$

$$19) \sqrt{18x}(4 - \sqrt{6x}) =$$

$$4) \sqrt{14} \times \sqrt{21} =$$

$$20) \sqrt{3x}(6\sqrt{x^3} + \sqrt{27}) =$$

$$5) \sqrt{5} \times -4\sqrt{20} =$$

$$21) \sqrt{15r}(5 + \sqrt{5}) =$$

$$6) 3\sqrt{12} \times \sqrt{6} =$$

$$22) -5\sqrt{3x} \times 4\sqrt{6x^3} =$$

$$7) 5\sqrt{42} \times \sqrt{3} =$$

$$23) -2\sqrt{18x} \times 4\sqrt{2x} =$$

$$8) \sqrt{3} \times -\sqrt{25} =$$

$$24) -3\sqrt{5v^2}(-3\sqrt{15v}) =$$

$$9) \sqrt{99} \times \sqrt{48} =$$

$$25) (\sqrt{5} - \sqrt{3})(\sqrt{5} + \sqrt{3}) =$$

$$10) 5\sqrt{45} \times 3\sqrt{176} =$$

$$26) (-4\sqrt{6} + 2)(\sqrt{6} - 5) =$$

$$11) \sqrt{12}(3 + \sqrt{3}) =$$

$$27) (2 - 2\sqrt{3})(-2 + \sqrt{3}) =$$

$$12) \sqrt{23x^2} \times \sqrt{23x} =$$

$$28) (11 - 4\sqrt{5})(6 - \sqrt{5}) =$$

$$13) -5\sqrt{12} \times -\sqrt{3} =$$

$$29) (-2 - \sqrt{3x})(3 + \sqrt{3x}) =$$

$$14) 2\sqrt{20x^2} \times \sqrt{5x^2} =$$

$$30) (-2 + 3\sqrt{2r})(-2 + \sqrt{2r}) =$$

$$15) \sqrt{12x^2} \times \sqrt{2x^3} =$$

$$31) (-4\sqrt{2n} + 2)(-2\sqrt{2} - 4) =$$

$$16) -12\sqrt{7x} \times \sqrt{5x^3} =$$

$$32) (-1 + 2\sqrt{3})(2 - 3\sqrt{3x}) =$$