

Factoring: Practice Worksheet

Factor the given polynomials.

1) $200x^2 - 50$

2) $16x^2 - 81$

3) $4x^2 - 49$

4) $x^2 + 3x - 18$

5) $x^2 + 15x + 56$

6) $32x^3 - 4$

7) $18k^4 + 48k^2 + 32$

8) $6a^2r + 54arb - 60b^2r$

9) $5x^2 + 85xy + 350y^2$

10) $2xy - x^2y - 6 + 3x$

11) $180p^3 - 30p^2 + 216p - 36$

12) $6x^4y^5 - 2x^2y^3 + 14x^3y^4$

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Answers

1) $200x^2 - 50$

$$50(2x + 1)(2x - 1)$$

2) $16x^2 - 81$

$$(4x - 9)(4x + 9)$$

3) $4x^2 - 49$

$$(2x - 7)(2x + 7)$$

4) $x^2 + 3x - 18$

$$(x - 3)(x + 6)$$

5) $x^2 + 15x + 56$

$$(x + 7)(x + 8)$$

6) $32x^3 - 4$

$$4(2x - 1)(4x^2 + 2x + 1)$$

7) $18k^4 + 48k^2 + 32$

$$2(3k^2 + 4)^2$$

8) $6a^2r + 54arb - 60b^2r$

$$6r(a - b)(a + 10b)$$

9) $5x^2 + 85xy + 350y^2$

$$5(x + 10y)(x + 7y)$$

10) $2xy - x^2y - 6 + 3x$

$$(2 - x)(xy - 3)$$

11) $180p^3 - 30p^2 + 216p - 36$

$$6(5p^2 + 6)(6p - 1)$$

12) $6x^4y^5 - 2x^2y^3 + 14x^3y^4$

$$2x^2y^3(3x^2y^2 + 7xy - 1)$$