Factoring Polynomials Worksheet

Factor out the GCF in each expression

1. $2x^2y - 2xy$

2. $6a^2 - 7a - 10$

3. $y^3 + 8$

4. $x^2 - 8x - 9$

5. $15x^2 - 18x - 24$

6. $25x^3 + 8x^2$

7. $12x^2 - 16x$

8. $3x^3 - 6x^2 - 9x$

9. $x^2 + 9x + 20$

10. $6a^2 - 11a + 4$

11. $x^2 - 9x + 20$

12. $6x^2 + 13x + 6$

13. $8x^2 - 6x - 2$

14. $6n^2 + 12n - 144$

15. $10x^2 - 105x + 135$

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Answers

1. $2x^2y - 2xy$

   $2xy(x - 1)$

2. $6a^2 - 7a - 10$

   $(6a + 5)(a - 2)$

3. $y^3 + 8$

   $(y + 2)(y^2 - 2y + 4)$

4. $x^2 - 8x - 9$

   $(x + 1)(x - 9)$

5. $15x^2 - 18x - 24$

   $(5x^2 - 6x - 3)$

6. $25x^3 + 8x^2$

   $x^2(25x^2 + 8)$

7. $12x^2 - 16x$

   $4x(3x - 4)$

8. $3x^3 - 6x^2 - 9x$

   $3x(x^2 - 2x - 3)$

9. $x^2 + 9x + 20$

   $(x + 4)(x + 5)$

10. $6a^2 - 11a + 4$

    $(2a - 1)(3a - 4)$

11. $x^2 - 9x + 20$

    $(x - 4)(x - 5)$

12. $6x^2 + 13x + 6$

    $(3x + 2)(2x + 3)$

13. $8x^2 - 6x - 2$

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

14. $6n^2 + 12n - 144$

    $6(n - 4)(n + 6)$

15. $10x^2 - 105x + 135$

    $5(2x - 3)(x - 9)$