

Factor the following polynomials completely.

1. $x^2 + 7x + 10$

2. $x^2 - 11x + 24$

3. $2x^2 - 11x + 15$

4. $64 - y^2$

5. $2r^2 - 6r - 20$

6. $8x^2 + 2x - 15$

7. $6x^2 + 17x - 3$

8. $1 + 2x + x^2$

9. $3x^2 + 4x + 1$

10. $5x^2y + 10xy + 5y$

11. $5x^2 + 4x - 1$

12. $x^2 + 6x + 9$

13. $4x^2 + 6x - 4$

14. $4x^2 - 36$

15. $8x^4 + 24x^3 + 18x^2$

16. $2x^3 - 6x^2 - 10x + 30$

17. $8 - x^3$

18. $x^4 + 64x$

Answers

1. $(x + 5)(x + 2)$

2. $(x - 3)(x - 8)$

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

4. $(8 + y)(8 - y)$

5. $2(r + 2)(r - 5)$

6. $(2x + 3)(4x - 5)$

7. $(6x - 1)(x + 3)$

8. $(1 + x)^2$

9. $(3x + 1)(x + 1)$

10. $5y(x + 1)^2$

11. $(5x - 1)(x + 1)$

12. $(x + 3)^2$

13. $2(x + 2)(2x - 1)$

14. $4(x - 3)(x + 3)$

15. $2x^2(2x + 3)^2$

16. $2(x - 3)(x^2 - 5)$

17. $(2 - x)(4 + 2x + x^2)$

18. $x(x + 4)(x^2 - 4x + 16)$