

017 practice test 4

Evaluate the following expressions.

1. $6x^0$

2. 2^{-3}

3. $\left(\frac{3}{4}\right)^{-2}$

Write using positive exponents.

4. $p^4 p^{-5}$

5. $\frac{x^{-2}}{x^{-3}}$

Add or subtract the following polynomials.

6. $(x^2 - 3x + 4) + (2x - 3x^2 - 7)$

7. $(x^2 - 3x + 4) - (2x - 3x^2 - 7)$

Multiply.

8. $5x(3x - 8)$

9. $3x^2 \cdot 4x^5$

10. $(x + 4)(x + 2)$

11. $(x - 3)(x + 5)$

12. $(x + 4)^2$

13. $(x - 5)^2$

14. $2x(x - 3)^2$

Factor the difference of two squares.

15. $x^2 - 49$

16. $9x^2 - 16y^2$

Factor the perfect squares:

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

18. $x^2 - 14x + 49$

19. Factor the trinomials:

20. $x^2 - 2x - 3$

21. $x^2 + 6x + 8$

Solve the following quadratic equations.

22. $(x - 3)(x + 2) = 0$

23. $2x(x + 4) = 0$

24. $x^2 - 3x = 0$

25. $x^2 - 3x = 4$

26. $x^2 = 36$

27. $x^2 - 2x - 3 = 0$

28. $x^2 - 14x + 49$

Solve for x :

29. $x^2 = 49$

30. $(x - 1)^2 = 49$

31. $(x + 2)^2 = 100$

32. For the polynomial

$2x^3 - 5x^2 + 3x - 4$ the degree is ____
the leading coefficient is ____ and the
constant is ____.