

7.1–7.4 Quiz

Write the polynomial in standard form. Identify the degree and leading coefficient of the polynomial. Then classify the polynomial by the number of terms. (Section 7.1)

1. $-8q^3$
2. $9 + d^2 - 3d$
3. $\frac{2}{3}m^4 - \frac{5}{6}m^6$
4. $-1.3z + 3z^4 + 7.4z^2$

Find the sum or difference. (Section 7.1)

5. $(2x^2 + 5) + (-x^2 + 4)$
6. $(-3n^2 + n) - (2n^2 - 7)$
7. $(-p^2 + 4p) - (p^2 - 3p + 15)$
8. $(a^2 - 3ab + b^2) + (-a^2 + ab + b^2)$

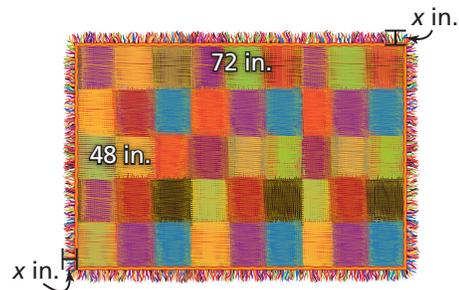
Find the product. (Section 7.2 and Section 7.3)

9. $(w + 6)(w + 7)$
10. $(3 - 4d)(2d - 5)$
11. $(y + 9)(y^2 + 2y - 3)$
12. $(3z - 5)(3z + 5)$
13. $(t + 5)^2$
14. $(2q - 6)^2$

Solve the equation. (Section 7.4)

15. $5x^2 - 15x = 0$
16. $(8 - g)(8 - g) = 0$
17. $(3p + 7)(3p - 7)(p + 8) = 0$
18. $-3y(y - 8)(2y + 1) = 0$

19. You are making a blanket with a fringe border of equal width on each side. (Section 7.1 and Section 7.2)
 - a. Write a polynomial that represents the perimeter of the blanket including the fringe.
 - b. Write a polynomial that represents the area of the blanket including the fringe.
 - c. Find the perimeter and the area of the blanket including the fringe when the width of the fringe is 4 inches.



20. You are saving money to buy an electric guitar. You deposit \$1000 in an account that earns interest compounded annually. The expression $1000(1 + r)^2$ represents the balance after 2 years, where r is the annual interest rate in decimal form. (Section 7.3)
 - a. Write the polynomial in standard form that represents the balance of your account after 2 years.
 - b. The interest rate is 3%. What is the balance of your account after 2 years?
 - c. The guitar costs \$1100. Do you have enough money in your account after 3 years? Explain.

21. The front of a storage bunker can be modeled by $y = -\frac{5}{216}(x - 72)(x + 72)$, where x and y are measured in inches. The x -axis represents the ground. Find the width of the bunker at ground level. (Section 7.4)

