

**Chapter 9 Practice Test****Find the sum or difference.**

1.  $(2x^2 + 3x + 5) + (-x^2 + 4x - 7)$

2.  $(5x^2 + 8x + 5) - (2x^2 - 3x + 2)$

3.  $(9x^2 + 8x + 4) + (8x^2 - 4x - 8)$

4.  $(14x^2 - 5x + 2) - (3x^2 - 8x - 4)$

**Find the product.**

5.  $(4x + 2)(6x^2)$

6.  $(x - 4)(x - 5)$

7.  $(4x - 5)(x + 2)$

8.  $(x - 3)(x^2 + x + 1)$

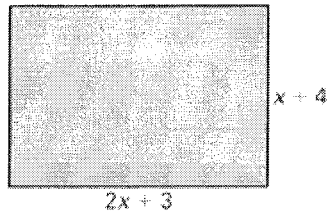
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9.  $(x + 5)(x - 5)$

10.  $(x - 8)^2$

11. Find an expression for the area of the figure.



**Solve the equation.**

12.  $(x + 5)(x - 1) = 0$

13.  $(2x + 1)^2 = 0$

**Factor the expression.**

14.  $x^2 + 11x + 30$

15.  $x^2 - 3x - 40$

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ID: A

16.  $x^2 - 9x + 14$

17.  $x^2 + 2x - 35$

18.  $5x^2 + 16x + 3$

19.  $12x^2 + 14x + 4$

20.  $x^2 - 16$

21.  $x^2 - 12x + 36$

22.  $x^2 + 10x + 25$

23.  $3x^3 + 9x^2 + 2x$

24.  $x^3 - 3x^2 + 2x - 6$

25.  $x^3 - x^2 + 5x - 5$

Name: \_\_\_\_\_

ID: A

**Solve.**

26.  $x^2 - 2x - 8 = 0$

27.  $x^2 + 9x + 20 = 0$

28.  $x^2 + 4x - 12 = 0$

29.  $x^2 - 11x + 30 = 0$

30.  $4x^2 + 5x + 1 = 0$

31.  $4x^2 + 10x + 6 = 0$

32.  $x^2 - 49 = 0$

33.  $x^2 - 8x + 16 = 0$

\_\_\_\_\_ 34. Which expression is NOT a polynomial?

a.  $\frac{x+5}{x-1} - \frac{5}{x}$

c.  $\frac{1}{2}x^5 + \frac{x+4}{3}$

b.  $\frac{x-5}{2} - \frac{x}{2}$

d.  $5x^4 - x^3 + 3x + 2$

35. Write the polynomial so that the exponents decrease from left to right.  $-4x^2 - 3x - 3x^4 - 2$

36. Find the degree of the polynomial  $-8x^2 + x - 2$ .

37. Classify the expression  $9 + 3d^3$  by the number of its terms and state its degree.

**Tell whether the expression is a polynomial. Write Yes or No.**

38.  $4x^6 - x^3 + 5$

39.  $\frac{1}{2} - \frac{x}{3}$

**Chapter 9 Practice Test  
Answer Section**

1. ANS:

$$x^2 + 7x - 2$$

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2. ANS:

$$3x^2 + 11x + 3$$

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3. ANS:

$$17x^2 + 4x - 4$$

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4. ANS:

$$11x^2 + 3x + 6$$

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5. ANS:

$$24x^3 + 12x^2$$

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6. ANS:

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

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7. ANS:

$$4x^2 + 3x - 10$$

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8. ANS:

$$x^3 - 2x^2 - 2x - 3$$

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9. ANS:

$$x^2 - 25$$

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10. ANS:

$$x^2 - 16x + 64$$

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11. ANS:

$$2x^2 + 11x + 12$$

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12. ANS:  
 $x = -5$  and  $x = 1$

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13. ANS:

$$x = -\frac{1}{2}$$

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14. ANS:

$$(x + 6)(x + 5)$$

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15. ANS:

$$(x - 8)(x + 5)$$

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16. ANS:

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

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17. ANS:

$$(x + 7)(x - 5)$$

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18. ANS:

$$(5x + 1)(x + 3)$$

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19. ANS:

$$2(3x + 1)(x + 2)$$

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20. ANS:

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

BNK: Ch. 9 Test, Level B

21. ANS:

$$(x - 6)^2$$

BNK: Ch. 9 Test, Level B

22. ANS:

$$(x + 5)^2$$

BNK: Ch. 9 Test, Level B

23. ANS:

$$x(3x^2 + 9x + 2)$$

BNK: Ch. 9 Test, Level B

24. ANS:

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

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25. ANS:

$$(x^2 + 5)(x - 1)$$

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26. ANS:

$$x = -2 \text{ and } x = 4$$

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27. ANS:

$$x = -5 \text{ and } x = -4$$

BNK: Ch. 9 Test, Level B

28. ANS:

$$x = -6 \text{ and } x = 2$$

BNK: Ch. 9 Test, Level B

29. ANS:

$$x = 5 \text{ and } x = 6$$

BNK: Ch. 9 Test, Level B

30. ANS:

$$x = -\frac{1}{4} \text{ and } x = -1$$

BNK: Ch. 9 Test, Level B

31. ANS:

$$x = -\frac{3}{2} \text{ and } x = -1$$

BNK: Ch. 9 Test, Level B

32. ANS:

$$x = -7 \text{ and } x = 7$$

BNK: Ch. 9 Test, Level B

33. ANS:

$$x = 4$$

BNK: Ch. 9 Test, Level B

34. ANS: A BNK: 9.1 Add and Subtract Polynomials

35. ANS:  
 $-3x^4 - 4x^2 - 3x - 2$

BNK: 9.1 Add and Subtract Polynomials

36. ANS:  
2

BNK: 9.1 Add and Subtract Polynomials

37. ANS:  
binomial, 3

BNK: 9.1 Add and Subtract Polynomials

38. ANS:  
Yes

BNK: 9.1 Add and Subtract Polynomials

39. ANS:  
No

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