

Algebra 1 Chapter 9 Review Spring 2016

1 to 4: For each polynomial give it's name based on

a) the degree b) the number of terms

1. $3w - 9$ 2. 148 3. $6x^3$ 4. $-8c^2 + 2c - 15$

5. State the degree of each a) $9g^5 + 6g^3 - 11g$ b) $-10w^4x^2$

6. Write this polynomial in standard form.

$$15k^3 - 8 + k - 7k^5 + 13k^2$$

Factor each using GCF.

7. $14H^3 - 23H$

8. $42c^5 + 6c^2$

9. $48m^6 - 32m^4$

10. $48c^6d^3g^2 + 96c^5d^7g - 56c^4d^8g^5$

Expand each. For polynomials with one variable write the answer in standard form.

11. $7m^4(5m^3 - 3m)$

12. $4h^2j^3k(8h^3j - 9j^4k^5)$

13. $(g + 7)(g + 6)$

14. $(n - 8)(n - 5)$

15. $(w + 6)(w - 11)$

16. $(4a + 7)(2a - 3)$

17. $(2c^3 + 5)(4c - 3)$

18. $(R + 20)(R - 2)$

19. $(3P^2 - 4Q)(3P^2 + 4Q)$

20. $(y - 8)(3y^2 - 4y + 2)$

21. $(b + 5)^2$

22. $(6v - 7)^2$

Factor each completely. Always look to factor out with GCF first, **if possible**.

22. $12a^2 - 16a - 3$

23. $3M^2 + 7M - 6$

24. $10N^2 + 29N + 10$

25. $4Q^2 - 25Q + 6$

26. $24X^3 + 28X^2 + 8X$

27. $10C^4 + 19C^3 + 6C^2$

28. $4A^3 + 38A^2 + 84A$

29. $w^2 - 14w + 48$

30. $b^2 + 7b - 60$

31. $9c^2 - 25$

32. $5m^3 - 180m$

33. $d^2 + 16d + 64$

34. $2R^3 - 16R^2 + 32R$

35. $g^2 + 2gh - 15h^2$

36. $100Q^6 - 81w^4$

37. $k^2 - 289$

38. $c^2 - 8c - 33$

39. $4d^2 - 20d + 25$

40. $12c^3 - 147c$

41. $6w^2 - wx - 12x^2$

42. $5k^3 - 10k^2 + 6k - 12$

43. $6m^5 - 4m^3 + 21m^2 - 14$

44. $2g^3 + 5g^2 - 32g - 80$

ANSWERS**Algebra 1 Chapter 9 Review****Spring 2016**

1. a) Linear b) binomial 2. a) Constant b) Monomial
3. a) Cubic b) Monomial 4. a) Quadratic b) Trinomial
5. a) degree = 5 b) degree = 6

6. $-7k^5 + 15k^3 + 13k^2 + k - 8$

Factor each using GCF.

7. $H(14H^2 - 23)$

8. $6c^2(7c^3 + 1)$

9. $16m^4(3m^2 - 2)$

10. $8c^4d^3g(12cd^4 + 6c^2g - 7d^5g^4)$

Expand each. For polynomials with one variable write the answer in standard form.

11. $35m^7 - 21m^5$

12. $32h^5j^4k - 36h^2j^7k^6$

13. $g^2 + 13g + 42$

14. $n^2 - 13n + 40$

15. $w^2 - 5w - 66$

16. $8a^2 + 2a - 21$

17. $8c^4 - 6c^3 + 20c - 15$

18. $R^2 + 18R - 40$

19. $9P^4 - 16Q^2$

20. $3y^3 - 28y^2 + 34y - 16$

21. $b^2 + 10b + 25$

22. $36v^2 - 84v + 49$

Factor each completely. Always look to factor out with GCF first, **if possible**.

22. $(6a + 1)(2a - 3)$

23. $(M + 3)(3M - 2)$

24. $(2N + 5)(5N + 2)$

25. $(4Q - 1)(Q - 6)$

26. $4X(3X + 2)(2X + 1)$

27. $C^2(2C + 3)(5C + 2)$

28. $2A(A + 6)(2A + 7)$

29. $(w - 6)(w - 8)$

30. $(b + 12)(b - 5)$

31. $(3c - 5)(3c + 5)$

32. $55m(m - 6)(m + 6)$

33. $(d + 8)^2$

34. $2R(R - 4)^2$

35. $(g - 3h)(g + 5h)$

36. $(10Q^3 - 9w^2)(10Q^3 + 9w^2)$

37. $(k - 17)(k + 17)$

38. $(c + 3)(c - 11)$

39. $(2d - 5)^2$

40. $3c(2c - 7)(2c + 7)$

41. $(2w - 3x)(3w + 4x)$

42. $(k - 2)(5k^2 + 6)$

43. $(3m^2 - 2)(2m^3 + 7)$

44. $(2g + 5)(g + 4)(g - 4)$