Algebra 1 Chapter 9 Review Spring 2015

For each polynomial give it's name based on
a) the degree b) the number of terms

1. $14x^3 + 7x$ 2. $19c$ 3. $12x^2 - 7x + 3$ 4. -3.7

5. State the degree of each a) $42c^6d^3$ b) $3x^4 - 7x^3 + 8x$

6. Write this polynomial in standard form.
$42c^2 - 8c^5 + 2 - 9c^4 - c$

Factor each using GCF.

7. $15A + 60$ 8. $72h^6 - 12h^4$

9. $24C^5 + 15C^3$ 10. $36A^5B^2 + 18A^4B^3 - 54AB^4$

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

11. $6k^3(5k^2 - 9k)$ 12. $3C^2D^5(4CD + 8C^3D^3)$ 13. $(M + 3)(9 + M)$

14. $(W - 7)(W - 4)$ 15. $(Q - 10)(Q + 2)$ 16. $(5E + 8)(2E - 5)$

17. $(N + 7)(N - 7)$ 18. $(8G + 5)(8G - 5)$

19. $(R - 6)(2R^2 + 4R + 3)$ 20. a) $(Y - 9)^2$ b) $(4c + 9)^2$

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

21. $12a^2 - 16a - 3$ 22. $3M^2 + 7M - 6$ 23. $10N^2 + 29N + 10$

24. $4Q^2 - 25Q + 6$ 25. $24X^3 + 28X^2 + 8X$ 26. $10C^4 + 19C^3 + 6C^2$

27. $4A^3 + 38A^2 + 84A$ 28. $w^2 - 14w + 48$ 29. $b^2 + 7b - 60$

30. $9c^2 - 25$ 31. $5m^3 - 180m$ 32. $d^2 + 16d + 64$

33. $2R^3 - 16R^2 + 32R$ 34. $g^2 + 2gh - 15h^2$

35. $5k^3 - 10k^2 + 6k - 12$ 36. $6m^5 - 4m^3 + 21m^2 - 14$

37. $2g^3 + 5g^2 - 32g - 80$

ANSWERS Algebra 1 Chapter 9 Review Spring 2015

1. $14x^3 + 7x$ a) cubic b) binomial

2. $19c$ a) linear b) monomial

3. $12x^2 - 7x + 3$ a) quadratic b) trinomial

4. -3.7 a) constant b) monomial

5. a) $42c^6d^3$ degree=9 b) $3x^4 - 7x^3 + 8x$ degree=4

6. Standard Form: $-8c^5 - 9c^4 + 42c^2 - c + 2$

7. $15(A + 4)$ 8. $12h^4(6h^2 - 1)$

9. $3C^3(8C^2 + 5)$ 10. $18AB^2(2A^4 + BA^3 - 3B^2)$

11. $30k^5 - 54k^4$ 12. $12C^3D^6 + 24C^5D^8$ 13. $M^2 + 12M + 27$

14. $W^2 - 11W + 28$ 15. $Q^2 - 8Q - 20$ 16. $10E^2 - 9E - 40$

17. $N^2 - 49$ 18. $64G^2 - 25$ 19. $2R^3 - 8R^2 - 21R - 18$

20. a) $Y^2 - 18Y + 81$ b) $16c^2 + 72c + 81$

21. $(6a + 1)(2a - 3)$ 22. $(M + 3)(3M - 2)$

23. $(2N + 5)(5N + 2)$ 24. $(4Q - 1)(Q - 6)$ 25. $4X(3X + 2)(2X + 1)$

26. $C^2(2C + 3)(5C + 2)$ 27. $2A(A + 6)(2A + 7)$ 28. $(w - 6)(w - 8)$

29. $(b + 12)(b - 5)$ 30. $(3c + 5)(3c - 5)$ 31. $5m(m - 6)(m + 6)$

32. $(d + 8)^2$ 33. $2R(R - 4)^2$ 34. $(g + 5h)(g - 3h)$

35. $(k - 2)(5k^2 + 6)$ 36. $(3m^2 - 2)(2m^3 + 7)$

37. $(2g + 5)(g + 4)(g - 4)$