Alg1 Review Ch 9, 10-5 Spring 2014

Name each polynomial by a) It's Degree b) The number of terms.

1. $-9e^3 + 4e - 7$ 2. $-3a + 11$ 3. 4 4. $k^2 - 98$

5. State the degree of each polynomial. a) $9c^2 + 7c^3 - 4c + 13$ b) $5x^4y^7$

6. Expand each. a) $7w^2(8w^3 + 4w^2 - 9)$ b) $10c^4d^2(2cd^5 + 11c^9d^3)$

Expand each. Write your answer in Standard Form.

7. $(w + 3)(w + 4)$ 8. $(r - 7)(r - 5)$ 9. $(m + 8)(m - 4)$

10. $(9x + 2)(3x - 5)$ 11. $(h + 7)(h - 7)$ 12. $(4e - 5)(4e + 5)$

13. $(y + 6)(4y^2 - 7y + 3)$ 14. $(b - 4)^2$

Factor each using GCF.

15. $8w + 40$ 16. $3r^4 - 12r^3$ 17. $24c^7 + 18c^2$

18. $16k^8j^4 - 24k^6j^5 + 32k^3j^7$

Factor each completely. Always look for GCF first.

19. $4n^2 - 8n - 21$ 20. $3y^2 + 15y - 72$ 21. $c^2 - 13c + 36$

22. $h^2 + 12h + 36$ 23. $v^2 - 64$ 24. $49g^2 - 16$

25. $10c^4 + 50c^3 + 60c^2$

Solve by factoring. Always look for GCF first.

26. $2x^2 + 10x = 0$ 27. $x^2 + 8x = 20$ 28. $6x^2 + 17x - 14 = 0$

29. $x^2 + 12x + 36 = 0$ 30. $5x^2 - 55x + 90 = 0$

31. $24x^3 - 20x^2 - 16x = 0$ 32. $x^2 - 144 = 0$ 33. $36x^2 - 49 = 0$

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1. Cubic Trinomial 2. Linear Binomial 3. Constant Monomial 4. Quadratic Binomial

5. a) Degree = 3 b) Degree = 11 6. a) $56w^5 + 28w^4 - 63w^2$ b) $20c^5d^7 + 110c^{13}d^5$

7. $w^2 + 7w + 12$ 8. $r^2 - 12r + 35$ 9. $m^2 + 4m - 32$ 10. $27x^2 - 39x - 10$

11. $h^2 - 49$ 12. $16e^{2\times1} - 25$ 13. $4y^3 + 17y^2 - 39y + 18$ 14. $b^2 - 8b + 16$

15. $8(w + 5)$ 16. $3r^3(r - 4)$ 17. $6c^2(4c^5 + 3)$ 18. $8k^3j^4(2k^5 - 3jk^3 + 4j^3)$

19. $(2n + 3)(2n - 7)$ 20. $3(y + 8)(y - 3)$ 21. $(c - 4)(c - 9)$

22. $(h + 6)^2$ 23. $(v - 8)(v + 8)$ 24. $(7g - 4)(7g + 4)$ 25. $10c^2(c + 3)(c + 2)$

26. $y = 2x^2 + 10x = 2x(x + 5) = 0$ Sol are: -5 and 0

27. $y = x^2 + 8x - 20 = (x + 10)(x - 2) = 0$ Sol are: -10 and 2

28. $y = 6x^2 + 17x - 14 = (2x + 7)(3x - 2) = 0$ Sol are: $-\frac{7}{2}$ and $\frac{2}{3}$

29. $y = x^2 + 12x + 36 = (x + 6)(x + 6) = (x + 6)^2 = 0$ Sol is: -6

30. $y = 5x^2 - 55x + 90 = 5(x - 2)(x - 9)$ Sol are: 2 and 9

31. $24x^3 - 20x^2 - 16x = 4x(2x + 1)(3x - 4) = 0$ Sol are: $-\frac{1}{2}, 0, \frac{4}{3}$

32. $x^2 - 144 = (x + 12)(x - 12) = 0$ Sol are: ± 12

33. $36x^2 - 49 = (6x - 7)(6x + 7) = 0$, Sol are: $\pm\frac{7}{6}$