

pg. 348 # 2-22 even +21

2. $x^2 - 2xy + y^2$

14. $(w+1)^5$

$$w^5 + 5w^4 + 10w^3 + 10w^2 + 5w + 1$$

21. a) 5 successes, 5 failures

$${}_{10}C_5 p^5 q^5$$

$${}_{10}C_5 (.5)^5 (.5)^5$$

$$= .246 \approx 25\%$$

b) 6 success, 4 fail

$${}_{10}C_6 p^6 q^4$$

$${}_{10}C_6 .5^6 .5^4$$

$$= .205 \approx 21\%$$

c) 7 successes, 3 failures

$${}_{10}C_7 (.5)^7 (.5)^3$$

$$= .117 \approx 12\%$$

Answers for Lesson 6-8, pp. 349-351 Exercises

1. $a^3 + 3a^2b + 3ab^2 + b^3$

2. $x^2 - 2xy + y^2$

3. $a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$

4. $x^5 - 5x^4y + 10x^3y^2 - 10x^2y^3 + 5xy^4 - y^5$

5. $a^6 - 6a^5b + 15a^4b^2 - 20a^3b^3 + 15a^2b^4 - 6ab^5 + b^6$

6. $x^7 - 7x^6y + 21x^5y^2 - 35x^4y^3 + 35x^3y^4 - 21x^2y^5 + 7xy^6 - y^7$

7. $x^8 + 8x^7y + 28x^6y^2 + 56x^5y^3 + 70x^4y^4 + 56x^3y^5 + 28x^2y^6 + 8xy^7 + y^8$

8. $d^9 + 9d^8e + 36d^7e^2 + 84d^6e^3 + 126d^5e^4 + 126d^4e^5 + 84d^3e^6 + 36d^2e^7 + 9de^8 + e^9$

9. $x^3 - 9x^2 + 27x - 27$

10. $a^4 + 12a^3b + 54a^2b^2 + 108ab^3 + 81b^4$

11. $x^6 - 12x^5 + 60x^4 - 160x^3 + 240x^2 - 192x + 64$

12. $x^8 - 32x^7 + 448x^6 - 3584x^5 + 17,920x^4 - 57,344x^3 + 114,688x^2 - 131,072x + 65,536$

13. $x^4 + 4x^3y + 6x^2y^2 + 4xy^3 + y^4$

14. $w^5 + 5w^4 + 10w^3 + 10w^2 + 5w + 1$

15. $s^2 - 2st + t^2$

16. $x^6 - 6x^5 + 15x^4 - 20x^3 + 15x^2 - 6x + 1$

17. $x^4 - 4x^3y + 6x^2y^2 - 4xy^3 + y^4$

18. $p^7 + 7p^6q + 21p^5q^2 + 35p^4q^3 + 35p^3q^4 + 21p^2q^5 + 7pq^6 + q^7$

19. $x^5 - 15x^4 + 90x^3 - 270x^2 + 405x - 243$

20. $64 - 48x + 12x^2 - x^3$

14

21. a. about 25%
 b. about 21%
 c. about 12%

22. about 66%

23. $x^7 + 7x^6y + 21x^5y^2 + 35x^4y^3 + 35x^3y^4 + 21x^2y^5 + 7xy^6 + y^7$

24. $x^8 - 40x^7y + 700x^6y^2 - 7000x^5y^3 + 43,750x^4y^4 - 175,000x^3y^5 + 437,500x^2y^6 - 625,000xy^7 + 390,625y^8$

25. $81x^4 - 108x^3y + 54x^2y^2 - 12xy^3 + y^4$

26. $x^5 - 20x^4y + 160x^3y^2 - 640x^2y^3 + 1280xy^4 - 1024y^5$

27. $117,649 - 201,684x + 144,060x^2 - 54,880x^3 + 11,760x^4 - 1344x^5 + 64x^6$

28. $8x^3 + 36x^2y + 54xy^2 + 27y^3$

29. $x^4 + 2x^2y^2 + y^4$

30. $x^6 - 6x^4y + 12x^2y^2 - 8y^3$

31. $x^6 + 6x^5 + 15x^4 + 20x^3 + 15x^2 + 6x + 1$

32. $x^6 - 6x^5 + 15x^4 - 20x^3 + 15x^2 - 6x + 1$

33. $x^5 + 10x^4 + 40x^3 + 80x^2 + 80x + 32$

34. $x^5 - 10x^4 + 40x^3 - 80x^2 + 80x - 32$

35. $16x^4 + 96x^3y + 216x^2y^2 + 216xy^3 + 81y^4$

36. $27x^3 + 135x^2y + 225xy^2 + 125y^3$

37. $64x^6 + 384x^5y + 960x^4y^2 + 1280x^3y^3 + 960x^2y^4 + 384xy^5 + 64y^6$

38. $81x^4 + 216x^3y + 216x^2y^2 + 96xy^3 + 16y^4$

39. $32x^5 + 80x^4y + 80x^3y^2 + 40x^2y^3 + 10xy^4 + y^5$