

Extra Practice: Skills and Word Problems

● **Lessons 2-1 to 2-3** Simplify each expression.

1. $22 + (-33)$

2. $45 + (-54)$

3. $-\frac{4}{3} - \frac{4}{5}$

4. $\frac{4}{13} - \frac{4}{13}$

5. $|12 - 21|$

6. $|12| - |-21|$

7. $-(-(11 - 22))$

8. $|\frac{2}{3} + \frac{4}{5}|$

9. $(-2)(44)$

10. $(-3)^2$

11. -3^2

12. $(\frac{3}{2})(-\frac{22}{33})$

13. $\frac{3^2}{2^3}$

14. $\frac{-5^2}{(-5)^2}$

15. $81 \div (-9)$

16. $\frac{4^2}{5^2}$

17. $\frac{2 \cdot 3 + 4}{2(3 + 4)}$

18. $1 + \frac{1}{2 + \frac{1}{3}}$

19. $(\frac{5}{7})^2$

20. $\frac{2}{3} \div \frac{4}{9}$

21. $\begin{bmatrix} -3 & 0 \\ 11 & -5 \end{bmatrix} + \begin{bmatrix} -4 & 6 \\ -8 & 13 \end{bmatrix}$

22. $\begin{bmatrix} 6 & 12 \\ -9 & 7 \end{bmatrix} - \begin{bmatrix} 8 & -6 \\ 15 & 0 \end{bmatrix}$

23. $\begin{bmatrix} 4.2 & 0.6 \\ 1.7 & 9.5 \end{bmatrix} + \begin{bmatrix} 5.8 & -3.5 \\ 0.2 & 4.9 \end{bmatrix}$

● **Lessons 2-4 and 2-5** Simplify each expression.

24. $-4(a + 3)$

25. $-12(\frac{4}{3}x - 1)$

26. $5 + 6(m + 1)$

27. $\frac{4}{9}(18 - 9t)$

28. $1 + 3 + 5 + 7$

29. $1 - 3 + 5 - 7$

30. $-3(7w) + 7(3w)$

31. $2(1 - d) - (2d + 1)$

32. $6c + 2(4c - 3)$

33. $5(2 - j) + (2j - 3)$

34. $\frac{1}{3}(12 - 6r)$

35. $6(\frac{1}{2} - \frac{2}{3}y)$

● **Lesson 2-6** The results of rolling a number cube 54 times are shown below. Use the results to find each probability.

6	3	4	5	1	1	5	5	3	6	3	2	1	3	3	3	2	1
2	3	6	3	3	4	5	1	2	2	6	3	3	6	5	4	5	3
2	5	1	4	5	2	6	2	5	2	1	2	5	3	2	4	6	3

36. $P(3)$

37. $P(4)$

38. $P(\text{not } 5)$

39. $P(7)$

40. $P(\text{even number})$

41. $P(\text{not } 1)$

42. $P(1)$

43. $P(\text{odd number})$

● **Lesson 2-7** You roll a blue number cube and a red number cube. Find each probability.

44. $P(\text{blue } 3 \text{ and red } 2)$

45. $P(\text{blue odd and red } 6)$

46. $P(\text{blue } 5 \text{ and red less than } 4)$

47. $P(\text{same number})$

48. $P(\text{both numbers less than three})$

49. $P(\text{both numbers greater than } 5)$

You have 3 green marbles, 5 red marbles, and 1 yellow marble in a bag. You pick two marbles from the bag. You pick the second one without replacing the first one. Find each probability.

50. $P(\text{red then green})$

51. $P(\text{yellow then red})$

52. $P(\text{two greens})$