Answers for Lesson 10-6, pp. 498–499 Exercises

1. In a permutation, the order matters. In a combination, order does not matter.
2. yes; permutation
3. no; combination
4. no; combination
5. 5
6. 126
7. 36 ways
8. 10 groups
9. 4
10. 6
11. 4
12. 6
13. 15
14. 10
15. 10
16. 35
17. 3
18. 84
19. 120 groups
20. 8,008 groups
21. permutation
22. combination
23. 45 games
24. a. 15 groups

    b. 15 groups
25. The number of combinations is equal to the number of permutations divided by $r!$. The number of permutations is greater.
26. No; Sanjay found the number of permutations instead of combinations. The order of the sweaters does not matter.
27. $\frac{1}{2{,}184}$
28. B
29. H
30. 1.53×10^5
31. 4.5×10
32. 5.32×10^7
33. 8.693×10^3