8.2 Section Exercises

Finding *t*-Values

Find each specified t-value.

1. Find the value of $t_{0.05}$ for a *t*-distribution with 15 degrees of freedom.
2. Find the value of $t_{0.01}$ for a *t*-distribution with 8 degrees of freedom.
3. Find the value of $t_{0.005}$ for a *t*-distribution with 26 degrees of freedom.
4. Find the value of $t_{0.10}$ for a *t*-distribution with 20 degrees of freedom.
5. Find the value of $t_{0.01}$ for a *t*-distribution with 29 degrees of freedom.
6. Find the value of $t_{0.025}$ for a *t*-distribution with 6 degrees of freedom.
7. Find the value of *t* for a *t*-distribution with 9 degrees of freedom such that the area to the right of *t* equals 0.05.
8. Find the value of *t* for a *t*-distribution with 11 degrees of freedom such that the area to the right of *t* equals 0.025.
9. Find the value of *t* for a *t*-distribution with 5 degrees of freedom such that the area to the right of *t* equals 0.01.
10. Find the value of *t* for a *t*-distribution with 14 degrees of freedom such that the area to the right of *t* equals 0.005.
11. Find the value of *t* for a *t*-distribution with 10 degrees of freedom such that the area to the left of *t* equals 0.05.
12. Find the value of *t* for a *t*-distribution with 3 degrees of freedom such that the area to the left of *t* equals 0.10.
13. Find the value of *t* for a *t*-distribution with 12 degrees of freedom such that the area to the left of *t* equals 0.005.
14. Find the value of *t* for a *t*-distribution with 27 degrees of freedom such that the area to the left of *t* equals 0.025.
15. Find the value of *t* for a *t*-distribution with 13 degrees of freedom such that the area to the left of $-t$ plus the area to the right of *t* equals 0.01.
16. Find the value of *t* for a *t*-distribution with 23 degrees of freedom such that the area to the left of $-t$ plus the area to the right of *t* equals 0.20.
17. Find the value of *t* for a *t*-distribution with 12 degrees of freedom such that the area to the left of $-t$ plus the area to the right of *t* equals 0.02.
18. Find the value of *t* for a *t*-distribution with 18 degrees of freedom such that the area to the left of $-t$ plus the area to the right of *t* equals 0.05.
19. Find the value of *t* for a *t*-distribution with 18 degrees of freedom such that the area between $-t$ and *t* equals 95%.
20. Find the value of *t* for a *t*-distribution with 4 degrees of freedom such that the area between $-t$ and *t* equals 98%.
21. Find the value of *t* for a *t*-distribution with 25 degrees of freedom such that the area between $-t$ and *t* equals 90%.
22. Find the value of *t* for a *t*-distribution with 22 degrees of freedom such that the area between $-t$ and *t* equals 95%.
23. Find the critical *t*-value for a 90% confidence interval using a *t*-distribution with 25 degrees of freedom.

24. Find the critical t-value for a 99% confidence interval using a t-distribution with 18 degrees of freedom.

25. Compare and contrast Exercises 21 and 23.

26. Compare and contrast Exercise 15 and Example 8.2.5.

27. In the paragraph after Figure 8.2.2 in this section, we mention that the last row of the t-distribution table has some familiar numbers in it. Why should these numbers be familiar?