

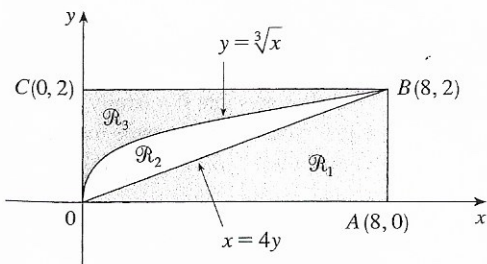
Assignment # 7.2 d

1-18 □ Find the volume of the solid obtained by rotating the region bounded by the given curves about the specified line. Sketch the region, the solid, and a typical disk or "washer."

Resources / Module 7 / Volumes / Problems and Tests

1. $y = x^2$, $x = 1$, $y = 0$; about the x -axis
2. $x + 2y = 2$, $x = 0$, $y = 0$; about the x -axis
3. $y = 1/x$, $x = 1$, $x = 2$, $y = 0$; about the x -axis
4. $y = \sqrt{x-1}$, $x = 2$, $x = 5$, $y = 0$; about the x -axis
5. $y = x^2$, $0 \leq x \leq 2$, $y = 4$, $x = 0$; about the y -axis
6. $x = y - y^2$, $x = 0$; about the y -axis
7. $y = x^2$, $y^2 = x$; about the x -axis
8. $y = \sec x$, $y = 1$, $x = -1$, $x = 1$; about the x -axis
9. $y^2 = x$, $x = 2y$; about the y -axis
10. $y = x^{2/3}$, $x = 1$, $y = 0$; about the y -axis
11. $y = x$, $y = \sqrt{x}$; about $y = 1$
12. $y = x^2$, $y = 4$; about $y = 4$
13. $y = x^4$, $y = 1$; about $y = 2$
14. $y = 1/x^2$, $y = 0$, $x = 1$, $x = 3$; about $y = -1$
15. $x = y^2$, $x = 1$; about $x = 1$
16. $y = x$, $y = \sqrt{x}$; about $x = 2$
17. $y = x^2$, $x = y^2$; about $x = -1$
18. $y = x$, $y = 0$, $x = 2$, $x = 4$; about $x = 1$

19-30 □ Refer to the figure and find the volume generated by rotating the given region about the given line.



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|--------------------------------|--------------------------------|
| 19. \mathcal{R}_1 about OA | 20. \mathcal{R}_1 about OC |
| 21. \mathcal{R}_1 about AB | 22. \mathcal{R}_1 about BC |
| 23. \mathcal{R}_2 about OA | 24. \mathcal{R}_2 about OC |
| 25. \mathcal{R}_2 about BC | 26. \mathcal{R}_2 about AB |
| 27. \mathcal{R}_3 about OA | 28. \mathcal{R}_3 about OC |