

8. (1) 250,000 pda., (2) 62,500 pda., (3) 187,500 pda.
 9. (1) 147,000 pda., (2) 48,562½ pda., (3) 84,000 pda., (4) 63,000 pda.
 10. (1) 42,000 pda., (2) 3600 pda., (3) 24,000 pda.
 11. (1) 24,000 kgm., (2) 6000 kgm., (3) 10,500 kgm.
 12. 182,000 kgm.
 13. On each vertical face 187.5 pda.; on upper face 156.25 pda.; on lower face 218.75 pda.
 14. (1) 212,500 pda., (2) 137,500 pda., (3) 87,500 pda.
 15. 27 kgm.
 16. 1600 pda.
 17. 31.25 pda.
 18. 100 ft.
 19. 8 m.
 20. 288 ft.
 21. Upper side 2½ in. below surface.
 22. 7.25 ft.
 23. 15 in.; top, 4.88 pda.; vertical side, 5.37 pda.; bottom, 5.859 pda.
 24. 2:1.
 25. (1) 2.4 gm., (2) 0.64 gm., (3) 0.48 gm.
 26. 2:1.
 27. 4:13.
 28. (1) 3080 kgm., (2) 8800 kgm.
 29. (1) 11,160 gm., (2) 92,342½ gm.
 30. (1) 9000 pda., (2) 2500 pda., (3) 3000 pda.
 31. (1) 905½ gm., (2) 1005½ gm., (3) 301½ gm.
 32. 193.526 gm.
 33. (1) 1848 kgm., (2) 792 kgm., (3) 1760 kgm.
 34. 817½ kgm.
 35. 8.
 36. 18 in.
 37. 400 gm.
 38. (1) 416 kgm., (2) 1104 kgm., (3) 276 kgm., (4) 319.8 kgm., (5) 96.2 kgm.
 39. 16:39.
 40. (1) 14 in., (2) 64 in.
 41. 2√2 in. from the surface of the liquid.

EXERCISE XXXIV Page 197.

1. 10 in.
 2. 68 cm.; 170 cm.; 255 cm.
 3. 2.427 ft.
 4. 13.619.
 5. 11:7.
 6. 15 cm.
 7. 14.96 cu. in.
 8. $\frac{4}{3}$ of height of one arm.
 9. Water 6.047 in.; alcohol 5.953 in.
 10. 4½ in.
 11. At the bottom of the vertical tube containing the oil.

EXERCISE XXXV. Page 201.

1. (1) 62.5 pda., (2) 237.5 pda.
 2. 4.96 pda.
 3. 2.5 kgm.
 4. 5 gm.
 5. 295 pda.
 6. 7 kgm.
 7. 6.5 kgm.; 19,993.5 kgm.
 8. 968.75 pda.
 9. 16 kgm.
 10. $n + 108$ pm.
 11. 14,000 kgm.
 12. 100 pda.