

Practice C

For use with pages 174–179

Solve for the indicated variable.

- 1.
- Area of a Rhombus*

Solve for d_1 : $A = \frac{1}{2}d_1d_2$

- 3.
- Surface Area of a Right Prism*

Solve for B : $S = 2B + Ph$

- 5.
- Volume of a Cylinder*

Solve for h : $V = \pi r^2h$

- 2.
- Volume of a Rectangular Prism*

Solve for w : $V = lwh$

- 4.
- Surface Area of a Regular Pyramid*

Solve for P : $S = B + \frac{1}{2}Pl$

- 6.
- Surface Area of a Right Cone*

Solve for l : $S = \pi r^2 + \pi rl$

Rewrite the equation so that y is a function of x .

7. $-4x + y = 9$

8. $6y - 6x = 15$

9. $-3y + 18x = 12$

10. $-10x = -5y - 65$

11. $1.5y = 18 - 6x$

12. $-19x + 9y = 8x - 9$

13. $3 - \frac{3}{4}y = 6x$

14. $\frac{1}{2}y - 7 = 3x - 2$

15. $2x + 3y + 8 = -10$

16. $-3x + 7y - 7 = -12 - 8y$

17. $6x + 6y = 14 - 4x$

18. $8x + 2(y + 13) = 10$

19. $6x - \frac{2}{3}(9 - 15y) = 4x + 8 - 4y$

20. $4(x - 2y) = -20(x + 2y)$

21. $-\frac{1}{4}(y + 5) + 8x = 3x$

Rewrite the equation so that x is a function of y . Then use the result to find x when $y = -2, -1, 0$, and 1 .

22. $3y - x = -6$

23. $2x - y = 4$

24. $6x - 4y = -6$

25. $2x + 4y - 8 = 0$

26. $-10y - 2(x + 9) = 2$

27. $-3(3x - y) = 4 + 3x$

Airplane Travel In Exercises 28 and 29, use the formula $d = rt$, where d is the distance traveled at a rate of r for time t .

28. Solve the equation for
- t
- .

29. Determine how long (in hours and minutes) it will take an airplane to travel 3500 miles if it flies 300 miles per hour, 400 miles per hour, and 625 miles per hour.

Savings Account In Exercises 30 and 31, use the formula $I = Prt$, where I is the simple interest on an investment of P dollars at an interest rate r for t years.

30. Solve the equation for
- P
- .

31. Find the principal,
- P
- , invested at an interest rate 6.5% for two years that earned \$193.18 in interest.

Discounts In Exercises 32 and 33, use the relationship among the sale price S , the list price L , and the discount rate r .

32. Solve for
- r
- in the formula
- $S = L - rL$
- .

33. Use the new formula to find the discount rate as a decimal and as a percent.

a. Sale price: \$59.40

b. Sale price: \$80

c. Sale price: \$40.74

List price: \$132

List price: \$120

List price: \$67.90