

Check Your Understanding

Example 1

p. 31

Find the solution set for each equation if the replacement set is {11, 12, 13, 14, 15}.

1. $n + 10 = 23$

2. $7 = \frac{c}{2}$

3. $29 = 3x - 7$

4. $(k - 8)12 = 84$

Example 2

p. 32

5. **MULTIPLE CHOICE** Solve $\frac{d+5}{10} = 2$.

A 10

B 15

C 20

D 25

Examples 3 and 4

pp. 32–33

Solve each equation.

6. $x = 4(6) + 3$

7. $14 - 82 = w$

8. $5 + 22a = 2 + 10 \div 2$

9. $(2 \cdot 5) + \frac{c^3}{3} = c^3 \div (1^5 + 2) + 10$

Example 5

p. 33

10. **RECYCLING** San Francisco has a recycling facility that accepts unused paint. Volunteers blend and mix the paint and give it away in 5-gallon buckets. Write and solve an equation to find the number of buckets of paint given away from the 30,000 gallons that are donated.

Practice and Problem Solving

 = Step-by-Step Solutions begin on page R12.

 Extra Practice begins on page 815.

Example 1

p. 31

Find the solution set of each equation if the replacement sets are y : {1, 3, 5, 7, 9} and z : {10, 12, 14, 16, 18}.

11. $z + 10 = 22$

12. $52 = 4z$

13. $\frac{15}{y} = 3$

14. $17 = 24 - y$

15. $2z - 5 = 27$

16. $4(y + 1) = 40$

17. $22 = \frac{60}{y} + 2$

18. $111 = z^2 + 11$

Examples 2–4

pp. 32–33

Solve each equation.

19. $a = 32 - 9(2)$

20. $w = 56 \div (2^2 + 3)$

21. $\frac{27 + 5}{16} = g$

22. $\frac{12 \cdot 5}{15 - 3} = y$

23. $r = \frac{9(6)}{(8 + 1)3}$

24. $a = \frac{4(14 - 1)}{3(6) - 5} + 7$

25. $(4 - 2^2 + 5)w = 25$

26. $7 + x - (3 + 32 \div 8) = 3$

27. $3^2 - 2 \cdot 3 + u = (3^3 - 3 \cdot 8)(2) + u$

28. $(3 \cdot 6 \div 2)v + 10 = 3^2v + 9$

29. $6k + (3 \cdot 10 - 8) = (2 \cdot 3)k + 22$

30. $(3 \cdot 5)t + (21 - 12) = 15t + 3^2$

31. $(2^4 - 3 \cdot 5)q + 13 = (2 \cdot 9 - 4^2)q + \left(\frac{3 \cdot 4}{12} - 1\right)$

32. $\frac{3 \cdot 22}{18 + 4}r - \left(\frac{4^2}{9 + 7} - 1\right) = r + \left(\frac{8 \cdot 9}{3} \div 3\right)$

33. **SCHOOL** A conference room can seat a maximum of 85 people. The principal and two counselors need to meet with the school's juniors to discuss college admissions. If each student must bring a parent with them, how many students can attend each meeting? Assume that each student has a unique set of parents.

34. **GEOMETRY** The perimeter of a regular octagon is 128 inches. Find the length of each side.