

Section 3.1 Exercises Part C

Solve.

4.1

1. $5\left(\frac{3x+4}{5} + 2\right) = 65$

2. $3\left(\frac{-2x+8}{5} - 3\right) + 17 = 20$

3. $-17 - 7m = -18$

4. $\frac{3}{7}t + 1 = -11$

5. $9 = 3x + 17$

6. $\frac{5x+7}{4} = 13$

7. $8t + 3t + 14t - 17 = -17$

8. $7\left(\frac{5x+8}{2} + 9\right) - 3 = 18$

Solve for the specified variable.

9. $p = fx + bn$ for f

10. $F = \frac{xf - xz}{2}$ for f

11. $M = 5t - 3p$ for t

12. $LSA = \pi r l$ for r

13. $E = Q - \frac{T_1}{T_2}$ for Q

14. $\frac{3s - 4g}{7} = c$ for g

4.2

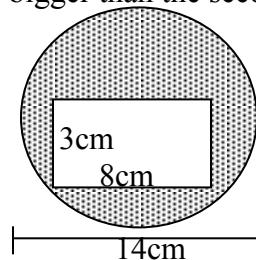
15. 48 is 9 more than 3 times a number. What is the number?

16. 18 less than 7 times a number is 80. What is the number?

17. Two numbers add to 151 and the second is 21 bigger than the first. What are the two numbers?

18. Two numbers add to 436 and the first is 134 bigger than the second. What are the two numbers?

19. Find the area of the shaded region:



20. I have created a triangular garden such that the largest side is 9 less than twice the smallest and the medium side is 7 larger than the smallest side. If the total perimeter of the garden is 82, what are the lengths of the three sides?

21. If a rectangle's length is 7 more than 4 times the width and the perimeter is 54, what are the dimensions of the rectangle?

22. If a cone has a volume of 338 cm^3 and a radius of 6 cm, how tall is it?

23. Find the missing variable for a parallelogram:

$$A = 64 \text{ in}^2$$

$$h =$$

$$b = 12.6 \text{ in}$$

Solve.

4.3

Example:

$x + 4 - 5x = 7x + 1$	Combine like terms
$-4x + 4 = 7x + 1$ $+4x \quad +4x$	Get all x's together by adding 4x to both sides
$4 = 11x + 1$ $-1 \quad -1$	Subtract 1 from both sides
$3 = 11x$	
$\frac{3}{11} = x$	Divide both sides by 11

24. $5p + 12 = 33 - p$

25. $7n + 18 = 5(n - 2)$

26. $5x - 10 = 5x + 7$

27. $x - 7 = 15x$

28. $2x - 4(x - 3) = -2x + 12$

29. $.07x = 13 - .12x$

30. $.7(3x - 2) = 3.5x + 1$

31. $.3x - 9 + 2x = 4x - 3$

32. $.4y = 78 + .4y$

33. $7(x - 5) - 3x = 4x - 35$

34. $9x - 4(x - 3) = 15x$

35. $2x - 3x + 7x = 9x + 8x$

Answers:

1. $x = 17$

2. $x = -6$

3. $m = \frac{1}{7}$

4. $t = -28$

5. $x = -\frac{8}{3}$

6. $x = 9$

7. $t = 0$

8. $x = -4$

9. $f = \frac{p - bn}{x}$

10. $f = \frac{2F + xz}{x}$

11. $t = \frac{M + 3p}{5}$

12. $r = \frac{LSA}{\pi d}$

13. $Q = E + \frac{T_1}{T_2}$

14. $g = \frac{7c - 3s}{-4}$ or $\frac{3s - 7c}{4}$

15. $x = 13$

16. $x = 14$

17. 65, 86

18. 151, 285

19. 129.9 cm^2

20. 21, 28, 33

21. $w = 4, l = 23$

22. $h = 8.97 \text{ cm}$

23. $h = 5.08 \text{ in}$

24. $p = \frac{7}{2}$ or 3.5

25. $n = -14$

26. no solution

27. $x = -\frac{1}{2}$

28. All real numbers

29. 68.42

30. $x = -\frac{12}{7}$ or -1.71

31. $x = -3.53$

32. No solution

33. All numbers

34. $x = \frac{6}{5}$ or 1.2

35. $x = 0$

36. In class