

Chapter

1

Test A

Solve the equation. Justify each step.

1. $x + \frac{1}{2} = \frac{3}{4}$

2. $\frac{z}{4} = 12$

Solve the equation. Determine whether the equation has *one solution*, *no solution*, or *infinitely many solutions*.

3. $5n = -20$

4. $g + 5 = 17$

5. $13 + 3p + 10 = 23 + 3p$

6. $7 + 4y = 39$

7. $3 = t + 11.5 - t$

8. $4x + 8 + 6x - 5 = 33$

9. $5(2c + 7) - 3c = 7(c + 5)$

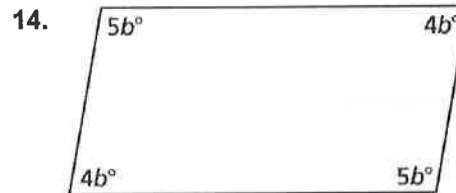
10. $\frac{3}{2}b + 6 + \frac{1}{2}b = 15 + 2b$

Describe the values of c for which the equation has no solution.

11. $2x - 6 = 2x - c$

12. $|x + 8| = c$

Find the value of the variable. Then find the angle measures of the polygon.

Sum of angle measures: 180° Sum of angle measures: 360°

Solve the equation.

15. $7n + 3 = 2n + 23$

16. $\frac{1}{2}(6x + 4) = 5(2x - 8)$

17. $\frac{3}{2}(d + 12) = \frac{1}{2}(2d - 6)$

18. $|b - 12| = 15$

19. $|2r + 5| = 3r$

20. $|2k + 6| = |k|$

Answers

1. $x = 1/4$

subtract

2. $z = 48$

multiply

3. $n = -4, one$

4. $g = 12, one$

5. infinite

6. $y = 8, one$

7. $t = 8.5, one$

8. $x = 3, one$

9. $c = 5, one$

10. $b = 9/2, one$

11. all except 6

12. $c < 0$

13. $x = 15, 75^\circ, 15^\circ, 90^\circ$

14. $b = 20$

 $100^\circ, 80^\circ, 100^\circ, 80^\circ$

15. $n = 4$

16. $x = 6$

17. $d = -42$

18. $b = 27, -3$

19. $r = 5$

20. $k = -2, -6$

Chapter 1 **Test A** (continued)

Solve the literal equation for y .

21. $5x + y = 2$

22. $2x + 5y = 3y + 8$

23. The formula for the volume of a cylinder is $V = \pi r^2 h$.

a. Solve the formula for the height h .

b. A cylinder has a volume of 628 cubic inches and a radius of 10 inches. What is the height of the cylinder rounded to the nearest inch?

24. The measures of two angles of a triangle are each four times the measure of the third angle. What is the measure of the third angle?

25. At a book fair, a tote bag costs \$5 and books cost \$3.50 each. You spend a total of \$19 before taxes. How many books did you buy in addition to the tote bag?

26. For a school play, the maximum age for a youth ticket is 18 years old. The minimum age is 10 years old. Write an absolute value equation for which the two solutions are the minimum and maximum ages for a youth ticket.

27. Your business needs to print brochures. You call two different print shops about prices. Each print shop charges a set-up fee for preparing the brochure and a price per brochure.

a. The total cost is the same for each company. How many brochures is your business printing?

b. You decide to increase the number of brochures. From which company should you order?

	Brochure set-up fee	Price per brochure
Company A	\$50	\$1.50
Company B	\$75	\$1.00

Answers

21. $y = 2 - 5x$

22. $y = 4 - x$

23. a. $h = \frac{V}{\pi r^2}$

b. 2 in

24. 20°

25. 4 books

26. $|x - 14| = 4$

27. a. 50

b. B