Name _____ Date _____

Chapter 1 Test Review – Lessons 1.1/1.2

Solve the equation. Check your solution, if possible.

1. $y + 8 = -11$

$-8 \quad -8$

$y = -19$

2. $3.2 = -0.4n$

$-0.4 \quad -0.4$

$n = -8$

3. $4 + y = 9.5$

$-4 \quad -4$

$y = 5.5$

4. $\frac{7x}{7} = \frac{35}{7}$

$x = 5$

5. $\frac{4}{-0.8} = \frac{-0.8n}{-0.8}$

$n = -5$

6. $6 = \frac{w}{8}$ $\cdot 8$

$w = 48$

7. $\frac{-4.3g}{-4.3} = \frac{25.8}{-4.3}$

$g = -6$

8. $\frac{10}{9} \cdot \frac{3}{2} = \frac{9}{10}k \cdot \frac{10}{9}$

$\frac{30}{18} = \frac{15}{9} = \frac{5}{3}$

$k = \frac{5}{3}$ or $1\frac{2}{3}$

9. $\frac{-7.8x}{-7.8} = \frac{-1.56}{-7.8}$

$x = .2$

Error Analysis: Describe and correct the error in solving the equation.

10. ✗

$-1.5 + k = 8.2$

$k = 8.2 + (-1.5)$

$k = 6.7$

- You need to add both sides by 1.5

$-1.5 + k = 8.2$

$+1.5 \quad +1.5$

$k = 9.7$

11. ✗

$-2(7 - y) + 4 = -4$

$-14 - 2y + 4 = -4$

$-10 - 2y = -4$

$-2y = 6$

$y = -3$

Solve the equation. Check your solution, if possible.

12. $10x + 2 = 32$

$-2 \quad -2$

$\frac{10x}{10} = \frac{30}{10}$

$x = 3$

13. $19 + 4c = 17$

$-19 \quad -19$

$\frac{-4c}{-4} = \frac{-2}{-4}$

$c = \frac{1}{2}$

14. $1.1x + 1.2x + 5.4 = -10$

$2.3x + 5.4 = -10$

$-5.4 \quad -5.4$

$\frac{2.3x}{2.3} = \frac{-4.6}{2.3}$

$x = -2$

15. $\frac{2}{3}h + \frac{-1}{3}h + 11 = 8$

$\frac{1}{3}h + 11 = 8$

$-11 \quad -11$

$3 \cdot \frac{1}{3}h = -3 \cdot 3$

$h = -9$

16. $6(5 + -8v) + 12 = -54$

$30 + -48v + 12 = -54$

$42 + -48v = -54$

$-42 \quad -42$

$\frac{-48v}{-48} = \frac{-96}{-48}$

$v = 2$

17. $21(2 + \frac{-9}{7}x) + 12x = 44$

$42 + -27x + 12x = 44$

$42 + -9x = 44$

$-42 \quad -42$

$\frac{-9x}{-9} = \frac{2}{-9}$

$x = -\frac{2}{9}$

18. $5m + 1 = 4m + 5$

$-4m \quad -4m$

$1m + 1 = 5$

$-1 \quad -1$

$1m = 4$

19. $3(5p + -3) = 5(p + -1)$

$15p + -9 = 5p + -5$

$-5p \quad -5p$

$10p + -9 = -5$

$+9 \quad +9$

$\frac{10p}{10} = \frac{4}{10}$

$p = \frac{2}{5}$

20. $\frac{2}{5}n + \frac{1}{10} = \frac{1}{2}(n + 4)$

$\frac{2}{5}n + \frac{1}{10} = \frac{1}{2}n + 2$

$-\frac{2}{5}n \quad -\frac{2}{5}n$

$\frac{1}{10} = \frac{1}{10}n + 2$

$-2 \quad -2$

$-1\frac{9}{10} = \frac{1}{10}n$

$n = -19$

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

20.

Sum of angle measures: 180°

$40 + 3x + x = 180$

$40 + 4x = 180$

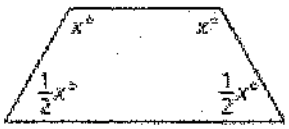
$-40 \quad -40$

$\frac{4x}{4} = \frac{140}{4}$

$x = 35$

$40, 3(35) = 105, 35$

21.



Sum of angle measures: 360°

$x + x + \frac{1}{2}x + \frac{1}{2}x = 360$

$3x = 360$

$\frac{3x}{3} = \frac{360}{3}$

$x = 120$

$120, 120, 60, 60$

22.

Sum of angle measures: 540°

$x + x + x - 45 + x - 45 + x - 45 = 540$

$-135 + 5x = 540$

$+135 \quad +135$

$\frac{5x}{5} = \frac{675}{5}$

$x = 135$

$135, 135, 90, 90, 90$

23. BASKETBALL. Your basketball team wins a game by 13 points. The opposing team scores 72 points. Explain how to find your team's score.

72+13=85. Your team scored 85 points.

23. CYCLING. You are biking at a speed of 18 miles per hour. You are 3 miles behind your friend, who is biking at a speed of 12 miles per hour. Write and solve an equation to find the amount of time it takes for you to catch up to your friend.

$18h = 12h + 3$

$\frac{6h}{6} = \frac{3}{6}$

$h = \frac{1}{2}$

24. JOBS. Your profit for mowing lawns this week is \$24. You are paid \$8 per hour and you paid \$40 for gas for the lawn mower. How many hours did you work this week?

$8h - 40 = 24$

$+40 \quad +40$

$\frac{8h}{8} = \frac{64}{8}$

$h = 8$ hours.

25. MOVIES. One movie club charges a \$100 membership fee and \$10 for each movie. Another club charges no membership fee but movies cost \$15 each. Write and solve and equation to find the number of movies you need to buy for the cost of each movie club to be the same.

Movie Club: $100 + 10m$

$100 + 10m = 15m$

$-10m \quad -10m$

$\frac{100}{5} = \frac{5m}{5}$

$m = 20$ movies

Other Movie Club: $15m$

When are the movies equal?

26. MUSIC. It costs \$100 to be a member of a music club. A member of the club pays \$20 per music lesson. A nonmember pay \$30 per music lesson. How many music lessons must a member and a nonmember take so the cost for each is the same? When are they equal to?

Member: $100 + 20m$

$100 + 20m = 30m$

$-20m \quad -20m$

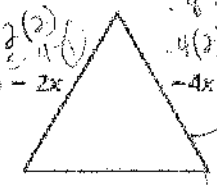
$\frac{100}{10} = \frac{10m}{10}$

$m = 10$ lessons

Nonmember: $30m$

A polygon is *regular* if each of its sides has the same length. Find the perimeter of the regular polygon.

26.



$5 - 2x = -4x + 9$

$+4x \quad +4x$

$5 + 2x = 9$

$-5 \quad -5$

$\frac{2x}{2} = \frac{4}{2}$

$x = 2$

Each side equals 1

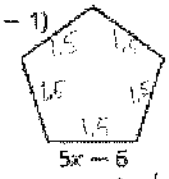
Perimeter: 3

All sides are equal so...

$5 - 2x = -4x + 9$

solve for x to find the measure of each side

27.



$3(x-1) = 5x - 6$

$3x + 3 = 5x - 6$

$-3x \quad -3x$

$3 = 2x - 6$

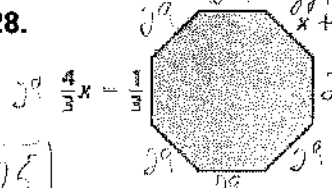
$+6 \quad +6$

$\frac{9}{2} = \frac{2x}{2}$

$x = 1.5$

Perimeter: 7.5

28.



$\frac{4}{3}x - \frac{1}{2} = x + 7$

$-x \quad -x$

$-\frac{3}{3}x$

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

$+\frac{1}{2} \quad +\frac{1}{2}$

$\frac{1}{3}x = 7\frac{1}{2}$

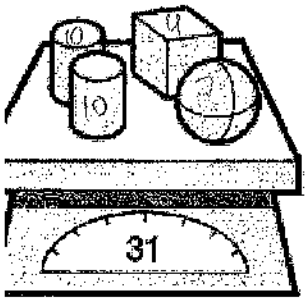
$x = 22\frac{1}{2}$

Perimeter:

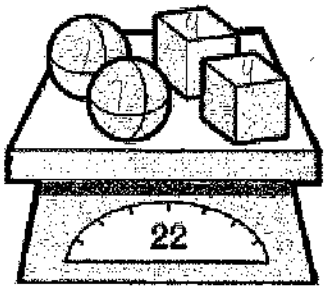
$x = 4$

232

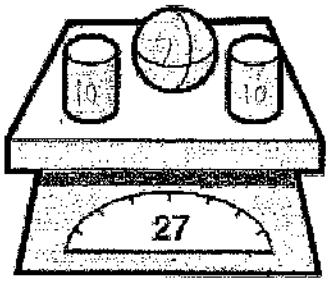
29.



A



B



C

Find the weight of each block.

cylinder = 10 pounds

sphere = 7 pounds

cube = 4 pounds