

Chapter 2
Form D

Choose the correct answer to each problem.

1. $2x + 4 = 10$
a. 3 b. 7 c. 6 d. 14
2. $6x - 4 + 2x = 7x - 4$
a. No Solution b. -8 c. 8 d. 0
3. $-9(x + 3) = -27 - 9x$
a. No Solution b. All real numbers c. 0 d. -2
4. $1 - (y + 2) = 4(y + 3)$
a. $-\frac{2}{5}$ b. $-\frac{4}{5}$ c. $-\frac{13}{5}$ d. $-\frac{9}{5}$
5. $\frac{4x}{5} - 2 = -\frac{7}{20} + \frac{x}{4}$
a. 3 b. -3 c. No solution d. $\frac{11}{7}$
6. $3z - 2(1 - z) = 3(z + 1) + 2z$
a. No solution b. All real numbers c. $-\frac{5}{4}$ d. $\frac{1}{2}$

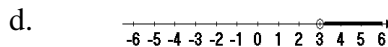
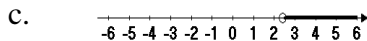
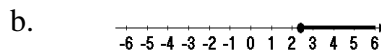
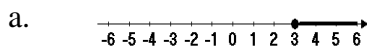
For problems 7 – 10, choose the correct expression of the solution set.

7. $2x + 6 \geq 4$
a. $\{x \mid x \geq -1\}$ b. $\{x \mid x \leq -1\}$ c. $\{x \mid x \geq -5\}$ d. $\{x \mid x \leq -5\}$
8. $14x - 24 < 8x + 20 + 6x - 2$
a. $\left\{x \mid x < \frac{7}{4}\right\}$ b. $\left\{x \mid x < -\frac{7}{4}\right\}$
c. $\{x \mid x \text{ is a real number}\}$ d. No solution

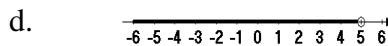
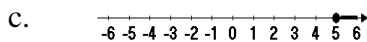
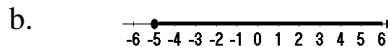
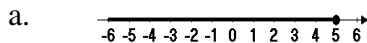
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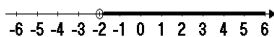
9. $5x + 2(1 - x) \geq 14 - x$



10. $10 - 2(x - 4) > -4(3 - x)$



11. Use set-builder notation to describe the following graph.



a. $\{x \mid x \geq -2\}$

b. $\{x \mid x \leq -2\}$

c. $\{x \mid x > -2\}$

d. $\{x \mid x < -2\}$

12. Solve $t = 2S + d$ for S .

a. $\frac{t+d}{2} = S$

b. $t - d - 2 = S$

c. $t - d + 2 = S$

d. $\frac{t-d}{2} = S$

13. Solve $A = \frac{1}{3}\pi r^2 h$ for h .

a. $\frac{3V}{\pi r^2} = h$

b. $3\pi r^2 V = h$

c. $\frac{1}{3}V - \pi r^2 = h$

d. $\frac{1}{3}V + \pi r^2 = h$

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14. What is 6% of 124?
a. 744 b. 7.44 c. 2066.7 d. 20.7
15. 90 is 12% of what number?
a. 1080 b. 10.8 c. 7.5 d. 750
16. Find the area of a circle with a diameter of 10 inches. Express the answer in terms of π .
a. $10\pi \text{ in}^2$ b. $20\pi \text{ in}^2$ c. $25\pi \text{ in}^2$ d. $5\pi \text{ in}^2$
17. The quotient of a number and 5 increased by 27 is 51. Find the number.
a. 24 b. 228 c. 120 d. $\frac{24}{5}$
18. A rectangle is three times as long as it is wide. If the perimeter is 104 feet, what are the length and the width?
a. Length 13 feet, width 39 feet b. Width 13 feet, length 39 feet
c. Length 26 feet, width 78 feet d. Width 26 feet, length 78 feet
19. After a 30% price reduction, a sofa sells for \$280. What was the original price of the sofa?
a. \$400 b. \$840 c. \$467.60 d. \$420
20. There are 4 major exams in an Introductory Algebra class and Jesse has scored a 97, 82, and 86 on the first 3 exams. What does Jesse need to receive on the last exam to make at least a 90 average?
a. At least a 90 b. At least a 92 c. At least a 95 d. At least a 96