

5 Chapter 5 Test, Form 2B

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1-6, solve each inequality.

1. $-13 > w + 12$

A $\{w \mid w < -25\}$

B $\{w \mid w > -25\}$

C $\{w \mid w > -1\}$

D $\{w \mid w < -1\}$

1. _____

$-13 > w + 12$
 $-12 \quad -12$
 $-25 > w = w < -25$

2. $x - \frac{1}{4} \leq -\frac{1}{2}$

F $\{x \mid x \leq -\frac{1}{4}\}$

G $\{x \mid x \leq -\frac{3}{4}\}$

H $\{x \mid x \geq -\frac{1}{4}\}$

J $\{x \mid x \geq -\frac{3}{4}\}$

2. _____

$x - \frac{1}{4} \leq -\frac{1}{2}$
 $+\frac{1}{4} \quad +\frac{1}{4}$
 $x \leq -\frac{1}{4}$

3. $\frac{m}{-5} < -3$

A $\{m \mid m > -15\}$

B $\{m \mid m < -15\}$

C $\{m \mid m < 15\}$

D $\{m \mid m > 15\}$

3. _____

$-\frac{m}{5} < -3 \cdot -5$
 $M > 15$ (switch sign when \times by negative)

4. $-1.1t \leq 4.62$

F $\{t \mid t \leq 5.72\}$

G $\{t \mid t \geq 5.72\}$

H $\{t \mid t \leq -4.2\}$

J $\{t \mid t \geq -4.2\}$

4. _____

$-1.1t \leq 4.62$
 $-1.1 \quad -1.1$
 $t \geq -4.2$ (switch sign \div by negative)

5. $5z - 4 > 2z + 8$

A $\{z \mid z > 4\}$

B $\{z \mid z < 1\}$

C $\{z \mid z < 4\}$

D $\{z \mid z > 1\}$

5. _____

$5z - 4 > 2z + 8$
 $-2z \quad -2z$
 $3z - 4 > 8$
 $+4 \quad +4$
 $\frac{3z}{3} > \frac{12}{3}$
 $z > 4$

6. $7 - 9r - (r + 12) \leq 25$

F $\{r \mid r \leq -3\}$

G $\{r \mid r \leq -0.6\}$

H $\{r \mid r \geq -3\}$

J $\{r \mid r \geq -0.6\}$

6. _____

$7 - 9r - (r + 12) \leq 25$
 $7 - 9r - r - 12 \leq 25$
 $-10r - 5 \leq 25$
 $+5 \quad +5$
 $\frac{-10r}{-10} \leq \frac{30}{-10}$
 $r \geq -3$

7. The sum of two consecutive integers is at most 7. What is the largest possible value for the lesser integer?

A 1

B 3

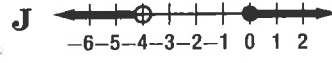
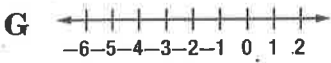
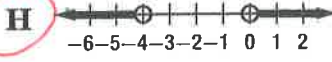
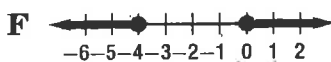
C 2

D 5

7. _____

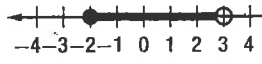
$(x) + (x + 1) \leq 7$
 $2x + 1 \leq 7$
 $-1 \quad -1$
 $\frac{2x}{2} \leq \frac{6}{2}$
 $x \leq 3$

8. Which of the following is the graph of the solution set of $x > 0$ or $x < -4$?



8. _____

9. Which compound inequality has the solution set shown in the graph?



A $-2 < y < 3$

C $y \geq -2$ or $y < 3$

B $-2 < y \leq 3$

D $-2 \leq y < 3$

9. _____

10. Which of the following is the solution set of $-3 < 2x + 7 \leq 13$?

F $\{x \mid -5 < x \leq 3\}$

H $\{x \mid x < -5\}$

G $\{x \mid x < 3$ or $x > -5\}$

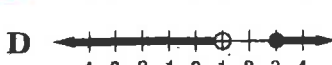
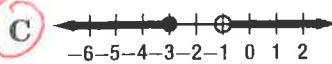
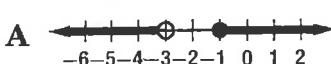
J $\{x \mid -5 \leq x < 3\}$

10. _____

$-3 < 2x + 7$ and $2x + 7 \leq 13$
 $-7 \quad -7$
 $\frac{-10 < 2x}{2} \quad \frac{6}{2}$
 $-5 < x$
 $x > -5$

11. Which of the following is the graph of the solution set of

$7a + 3 \leq a - 15$ or $5a - 3 < 8a$?

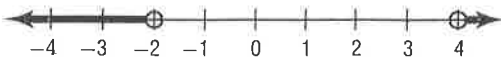


11. _____

$7a + 3 \leq a - 15$
 $-a \quad -a$
 $6a + 3 \leq -15$
 $-3 \quad -3$
 $\frac{6a}{6} \leq \frac{-18}{6}$
 $a \leq -3$

$5a - 3 < 8a$
 $-5a \quad -5a$
 $-\frac{3}{5} < \frac{3a}{5}$
 $-\frac{1}{5} < a$
 $a > -1$

12. Which inequality corresponds to the graph shown?



F $|x - 3| > 1$

G $|x - 3| < 1$

H $|x - 1| > 3$

J $|x - 1| < 3$

12. _____

$|x-1| > 3$
 $x-1 > 3$ or $x-1 < -3$
 $+1 +1$ $+1 +1$
 $x > 4$ $x < -2$

13. Which of the following is the solution set of $\{4 - 7x\} \geq 3$?

A $\{x \mid x < \frac{1}{7} \text{ or } x > 1\}$

B $\{x \mid x \text{ is a real number.}\}$

C $\{x \mid x \leq \frac{1}{7} \text{ or } x \geq 1\}$

D $\{x \mid 1 \leq x \leq 7\}$

13. _____

$4-7x \geq 3$ or $4-7x \leq -3$
 $-4 -4$ $-4 -4$
 $-7x \geq -1$ $-7x \leq -7$
 $-7 -7$ $-7 -7$
 $x \leq \frac{1}{7}$ $x \geq 1$

14. Katrina's weight is within 8 pounds of her ideal weight of 120 pounds.

What is her range of weight?

F $x \geq 112$ or $x \geq 128$

G $x \leq 112$ or $x \leq 128$

H $112 \geq x \geq 128$

J $112 \leq x \leq 128$

14. _____

$|x-120| \leq 8$
 $x-120 \leq 8$ and $x-120 \geq -8$
 $x \leq 128$ $x \geq 112$

15. Which ordered pair is part of the solution set of the inequality $5 - y \leq -3x$?

A (2, -1)

B (-2, -1)

C (-3, -5)

D (3, -5)

15. _____

$5 - (-1) \leq -3(-2)$
 $6 \leq 6$

16. Which inequality is graphed?

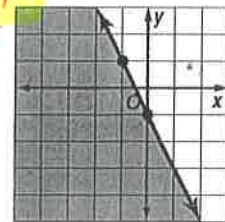
F $y \leq 2x - 1$

G $y \geq 2x - 1$

H $y \leq -2x + 1$

J $y \geq -2x + 1$

16. _____



17. Alicia has at most \$196 to buy a new baseball glove and a new baseball bat. Which inequality represents this situation?

A $y \leq 196 - x$

B $y \leq 196 + x$

C $196 \leq y + x$

D $y - x \geq 196$

17. _____

NOT ON TEST

18. Determine which of the ordered pairs are a part of the solution set of $y + 3 < 2x - 1$.

F (0, 0)

G (2, 0)

H (0, -4)

J (2, -2)

18. _____

$-2 + 3 < 2(2) - 1$
 $1 < 3$

19. Which inequality has a solution set of $\{x \mid x > 4 \text{ and } x < 8\}$?

A $|\frac{1}{2}x - 3| < 1$

$\frac{1}{2}x - 3 < 1$ and $\frac{1}{2}x - 3 > -1$

C $|\frac{1}{2}x - 1| < 3$

B $|\frac{1}{2}x - 3| > 1$

$\frac{1}{2}x < 4$ and $\frac{1}{2}x > 2$

D $|\frac{1}{2}x - 1| > 3$

19. _____

20. Beng and Shim have less than \$30 for candle-making supplies. The molds cost \$6 each and the wax is \$2 per pound. Which point represents a reasonable number of molds and pounds of wax they could buy?

F (3, 4)

G (4, 4)

H (5, 1)

J (3, 6)

20. _____

NOT ON TEST

$6x + 2y \leq 30$
 $6(3) + 2(4) \leq 30$
 $18 + 8 \leq 30$
 $26 \leq 30$