

6.3 Paper Practice

Solving Compound Inequalities

Solve each compound inequality. Then graph the solution set.

1. $z + 3 \leq 5$ and $z - 1 > -5$

2. $y - 4 > 1$ or $y + 2 \leq -1$

3. $x + 5 < 6$ or $x - 4 > 2$

4. $w + 9 \geq 7$ and $w + 4 \leq 4$

5. $-1 < 2v + 1 < 13$

6. $2 - 3u > 17$ or $5u + 6 \geq 21$

7. $-4 + 3t \leq 6t + 5 < 5t + 8$

8. $-p + 12 > 10$ or $6p - 3 > 21$

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9. $r + 6 \leq 13$ and $r - 2 > -3$

10. $-11 - 2q \geq -21$ or $4q + 1 > 29$

11. $-9 \leq 5p + 1 \leq 21$

12. $3n - 4 < 4n + 1 \leq 6 - n$

Example 2

13. **SALARY** The average salary for an entry-level mechanical engineer position in Texas ranges from \$63,000 to \$73,500 a year.

a. Write a compound inequality to represent the possible monthly salary m of an entry-level mechanical engineer in Texas.

b. Solve the inequality.

c. Graph the inequality.