The Weekly Rigor

10 Problems in Solving First-Degree Inequalities

PROBLEMS

Solve each inequality and express the solution set using interval notation.

1. $3x - 4 < 12 - x$.

2. $4x + 6 \leq 2x + 10$.

3. $5x + 4 - 2x > 10 + x$.

4. $18 - 3x \geq 5x + 2$.

5. $7x + 6 \leq 5x + 14$.

6. $6x + 4 < 9x + 4 - 3x$.

7. $3x - 2 < 12$.

8. $-2 - 4x > -2$.

9. $-2(3x + 2) \leq 18$.

10. $3(4x - 3) \leq -11$.

ANSWERS

1. $(-\infty, 4)$	2. $(-\infty, 2]$
3. $(3, \infty)$	4. $(-\infty, 2]$
5. $(-\infty, 4]$	6. $\emptyset$
7. $\left(-\infty, \frac{14}{3}\right)$	8. $(-\infty, 0)$
9. $[-\frac{11}{3}, \infty)$	10. $(-\infty, -\frac{1}{6}]$