

# Math 1513 - College Algebra

## Discussion Board Week 4 - Due 2017.02.05

---

Solve the following inequalities. Express your answer in interval notation.

1.  $2 \leq \left| \frac{1}{2}x - 2 \right| < 3$

2.  $2 \leq \left| -\frac{1}{2}x - 3 \right| < 6$

3.  $0 \leq \left| -\frac{3}{2}x + 6 \right| < 1$

4.  $10 > \left| \frac{1}{7}x - 7 \right| \geq 1$

5.  $8 > \left| -\frac{5}{7}x + 2 \right| \geq 7$

6.  $1 > |3x - 7| \geq \frac{1}{2}$

7.  $1 > \left| -3x - \frac{7}{2} \right| \geq \frac{1}{2}$

8.  $10 \leq \left| -3x - \frac{7}{2} \right| \leq 21$

9.  $12 \leq \left| 5x - \frac{7}{12} \right| < 13$

10.  $2 < \left| 5x + \frac{7}{12} \right| < 3$

11.  $1 < |3x - 2| \leq 2$

12.  $3 \leq |5x + 6| < 10$

13.  $1 < \left| \frac{x}{3} - 1 \right| \leq 3$

14.  $2 < \left| \frac{1}{2} - x \right| \leq 4$

15.  $2 < \left| \frac{x}{3} + 1 \right| < 5$

16.  $2 < \left| 1 - \frac{x}{3} \right| \leq 3$

17.  $8 > \left| \frac{3}{7} - x \right| > 5$

18.  $2 \leq |14x + 12| \leq 30$

19.  $1 < |13x + 7| \leq 3$

20.  $8 > \left| \frac{5}{7}x + 12 \right| \geq 3$

21.  $8 \geq \left| \frac{3}{7}x - 1 \right| \geq 1$

22.  $12 < \left| -5x + \frac{7}{12} \right| \leq 13$

23.  $1 \leq |-3x - 24| \leq 6$

24.  $1 \leq \left| -\frac{3}{5}x - 24 \right| \leq 9$

25.  $2 \leq \left| -\frac{3}{2}x + 6 \right| < 4$