1. (4 points) Solve, graph, then give your final answer in interval notation:
\[ \frac{3}{8}x + 1 > 0 \text{ OR } -2x \geq -4 \]

2. (4 points) Solve, graph, then give your final answer in set-builder notation:
\[ -2 < -x - 12 \text{ AND } -14 < 5(x - 3) + 6x \]

3. (3 points) Solve, graph your solution:
\[ -4 \geq 2x - 5 > -7 \]
4. (3 points) Solve: \[ 4|2x + 5| - 3 = 9 \]

5. (3 points) Solve: \[ |3x - 7| = |3x + 8| \]

6. Consider the function \( f(x) = |3x + 4|, \)
   
   (a) (3 points) Solve \( f(x) = 5 \), give answer in solution set.

   \( \) (a) 

   (b) (2 points) Solve \( f(x) \geq 5 \), give answer in interval notation.

   \( \) (b) 

   (c) (2 points) Solve \( f(x) < 5 \), give answer in set–builder notation.

   \( \) (c)
7. (4 points) Consider \( f(x) = 2x + 1 \), solve, graph, then give your final answer in interval notation:
\[ |f(x)| \leq 5 \]

8. (3 points) Find the domain for the function \( f(x) = \frac{x}{x^2 - 2x - 15} \), express your answer in interval notation.

9. (4 points) Solve \(|-2x + 1| < 7\), and express your answer in interval notation.
10. (2 points) Solve \(-2|4x| - 1 \leq 5\).

11. (3 points) Solve \(-3|2x - 5| - 4 \geq 2\).

12. (5 points) Graph and shade the solution to the system of linear inequalities:

\[
\begin{align*}
    f(x) &< \frac{3}{2}x + 5 \\
g(x) &< \frac{-3}{2}x + 5 \\
h(x) &\leq 2 \\
k(x) &\geq -4
\end{align*}
\]

13. Beginning Algebra Review Problems:

(a) (2 points) Simplify: \(\frac{x^2 - 16}{x^2 - 9x + 20} \div \frac{x^2 + 4x}{x^2 - 5x}\)

(b) (3 points) Solve: \(\frac{3}{x - 4} - \frac{2}{x + 5} = \frac{27}{x^2 + x - 20}\)