You have 50min. Answer each non-graph question neatly on the line provided.

Name: _____

1. (5 points) Express the interval $[-6, \infty)$ in terms of inequalities.

1. _____

2. (5 points) Simplify $\frac{5^{-1}}{5^2}$ completely, and eliminate negative exponents.

2. _____

3. (5 points) Perform the operations $(3 + \frac{1}{4})(1 - \frac{4}{5})$ and simplify completely as one fraction.

3. _____

4. (5 points) Simplify $z + 1 - 4z(2 - z)$ completely. Your final answer should not contain parenthesis.

4. _____

5. (5 points) Evaluate $27^{-\frac{4}{3}}$.

5. _____

6. (5 points) Perform the multiplication $\frac{x^2-25}{x^2-x-6} \div \frac{x+5}{x+2}$ and simplify.

6. _____

7. (5 points) Simplify $(-3z^2)^3(2z^3)$ completely, and eliminate negative exponents.

7. _____

8. (5 points) Factor $x^2 + 12x + 36$ completely.

8. _____

9. (5 points) Rationalize the denominator $\frac{1}{1+\sqrt{2}}$ and simplify.

9. _____

10. (5 points) Evaluate and simplify $\sqrt{75} - \sqrt{48}$ completely.

10. _____

11. (5 points) Factor $x^3 + 4x^2 + x + 4$.

11. _____

12. (5 points) Multiply $(2x - 5)(x^2 - x + 1)$ and simplify completely. Your final answer should not contain parenthesis.

12. _____