

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

Name: _____

1. (5 points) Express the inequality $x \leq -1$ in interval notation.

1. _____

2. (5 points) Simplify $(-2z^2)^3(4z^6)$ completely.

2. _____

3. (5 points) Perform the operations $2 + \frac{3}{10} - \frac{2}{15}$ and simplify completely as one fraction.

3. _____

4. (5 points) Simplify $5(x^2 - 3x + 5) - 4(x^2 - 2x + 1)$ completely.

4. _____

5. (5 points) Evaluate $(\frac{25}{36})^{-\frac{1}{2}}$.

5. _____

6. (5 points) Perform the multiplication $\frac{x^2-25}{x^2-16} \cdot \frac{2x+8}{x-5}$ and simplify.

6. _____

7. (5 points) Evaluate $\frac{3^{10}3^0}{3^7}$ and simplify completely.

7. _____

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

8. _____

9. (5 points) Perform the addition $\frac{1}{x+1} + \frac{3}{x}$ and simplify as one fraction.

9. _____

10. (5 points) Evaluate and simplify $\sqrt[3]{9}\sqrt[3]{24}$ completely.

10. _____

11. (5 points) Factor $49a^2 - 16$.

11. _____

12. (5 points) Multiply $(1 - 3a)^2$ and simplify completely. Your final answer should not contain parenthesis.

12. _____