Question: Solve the inequality: $(|x^2 - 81|) / (x^2 - 36x) < 0$. Please put your answer in \boxed{}

Correct Answer: (0,9) ∪ (9,36)

Round 1

Mistral-8x7B: Factored $|x^2 - 81| = |(x - 9)(x + 9)|$ and $x^2 - 36x = x(x - 36)$, …, the answer is **\boxed{(-∞, -9) ∪ (-9, 0) ∪ (9, 36)}**

Llama-3.1-8B: Case 1: $x^2 - 81 \geq 0 \rightarrow x \leq -9$ or $x \geq 9$; Case 2: $x^2 - 81 < 0 \rightarrow -9 < x < 9$, …, **\boxed{(0,9)}**

Gemma-2-27B: Found roots: $x = \pm 9$ (numerator), $x = 0$ and 36 (denominator), …, the answer is **\boxed{(0.9)}**

Round 2

Mistral-8x7B: Re-analyzed sign of $|x^2 - 81|$: positive outside (-9, 9), …., the answer is **\boxed{(-∞, -9) ∪ (-9, 0) ∪ (9, 36)}**

Llama-3.1-8B: When numerator is positive and denominator negative. $|x^2 - 81| > 0$ when $x < -9$ or $x > 9$, Denominator < 0, .. , **\boxed{(0,9)}** is the answer

Gemma-2-27B: Analyzed sign of numerator: negative when $-9 < x < 9$, …, **\boxed{(-∞, -9) ∪ (-9, 0) ∪ (0, 36) ∪ (36, ∞)}**