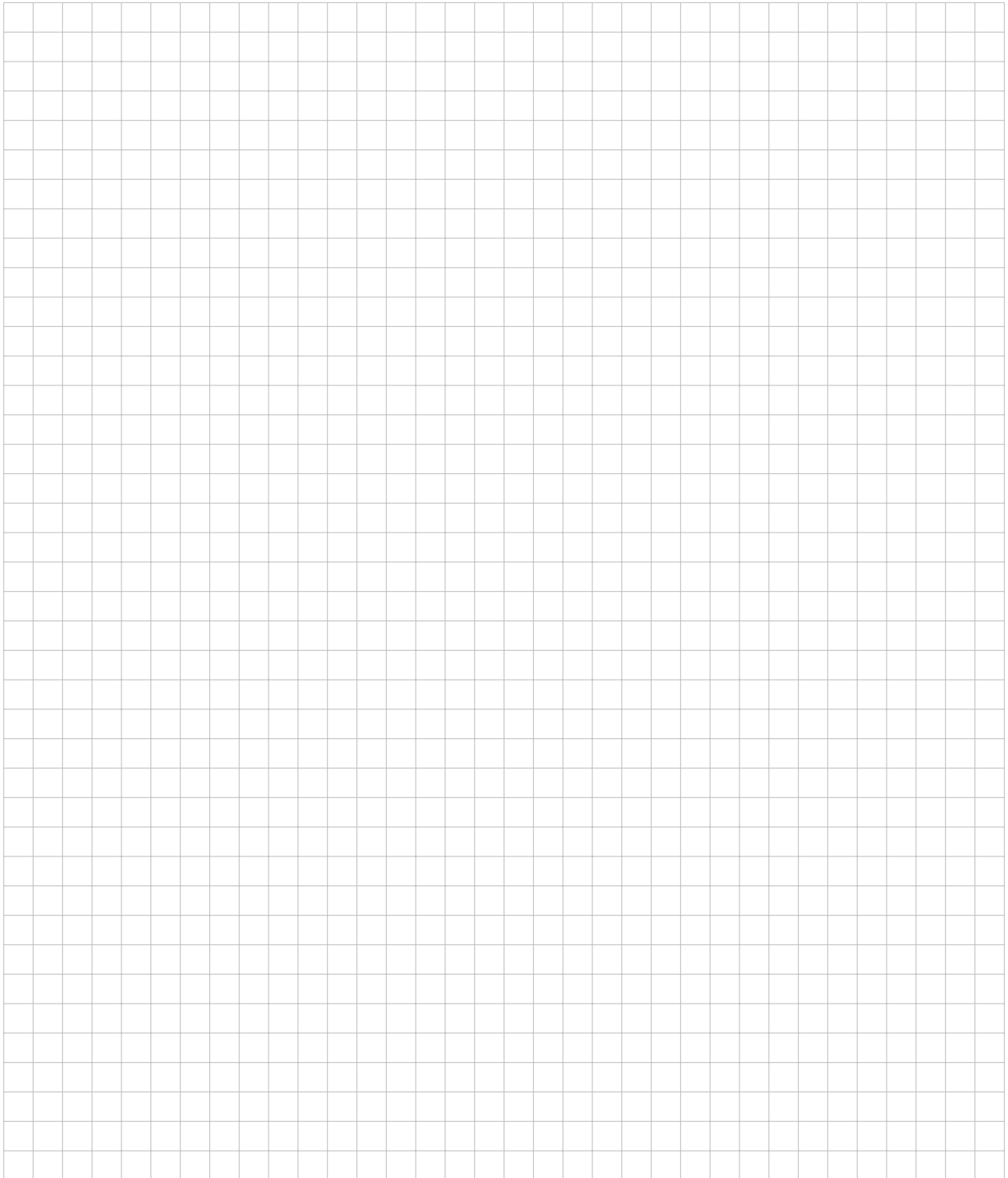


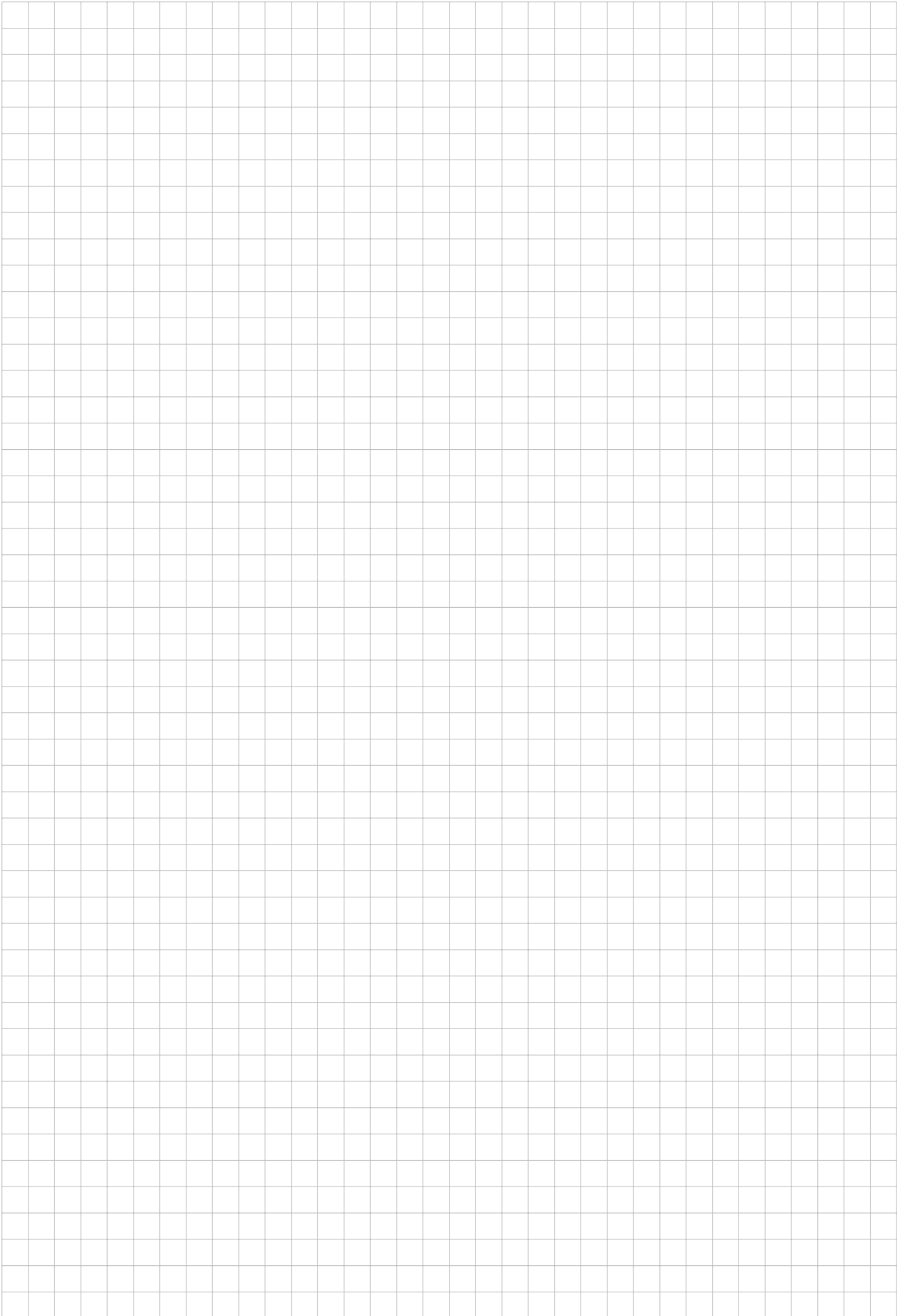
Задачи к вебинару 26.11.2025

Задание 1

Решите неравенство:

$$\log_2^2(x^4) - 4\log_{0,25}(x^2) \geq 12.$$

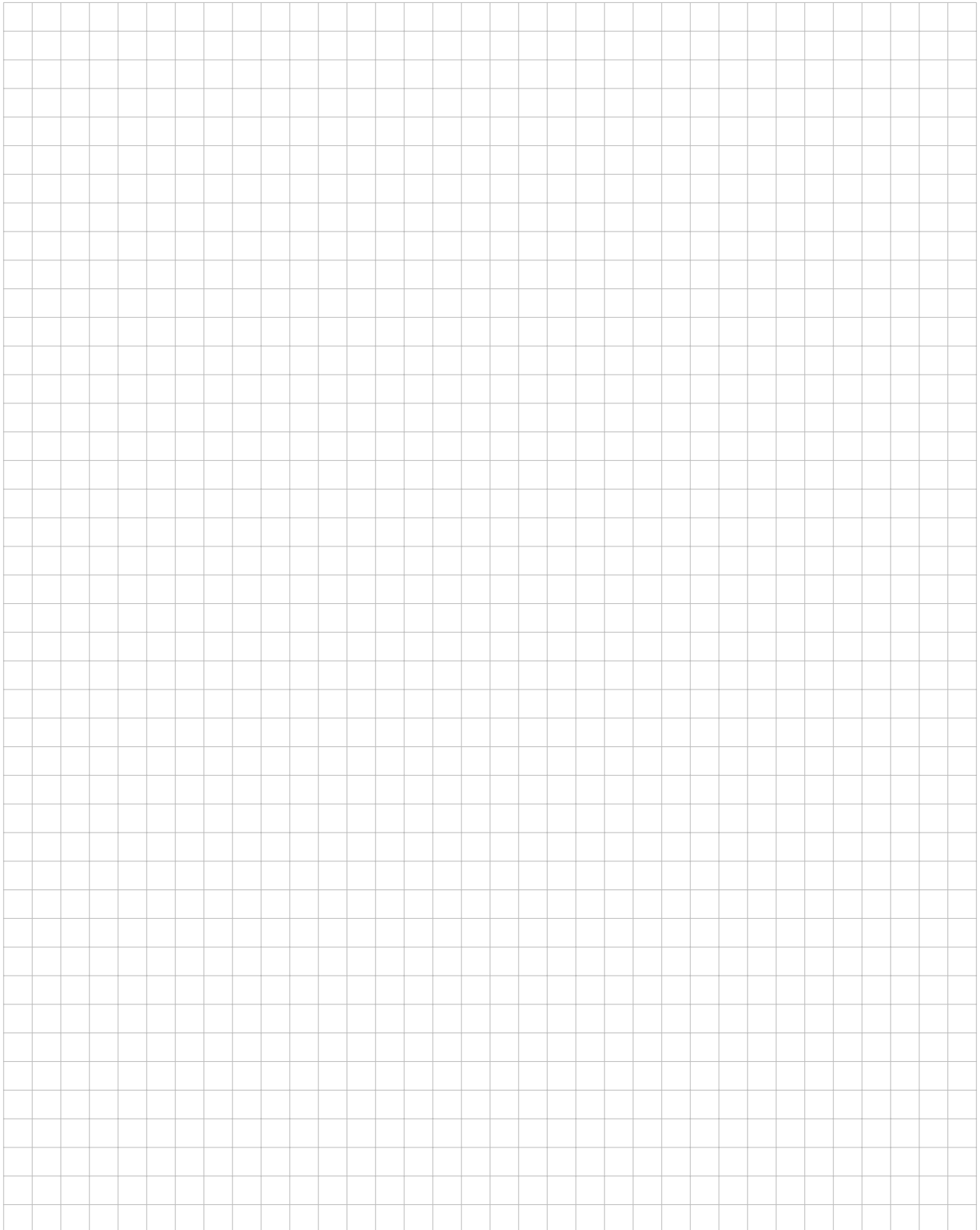


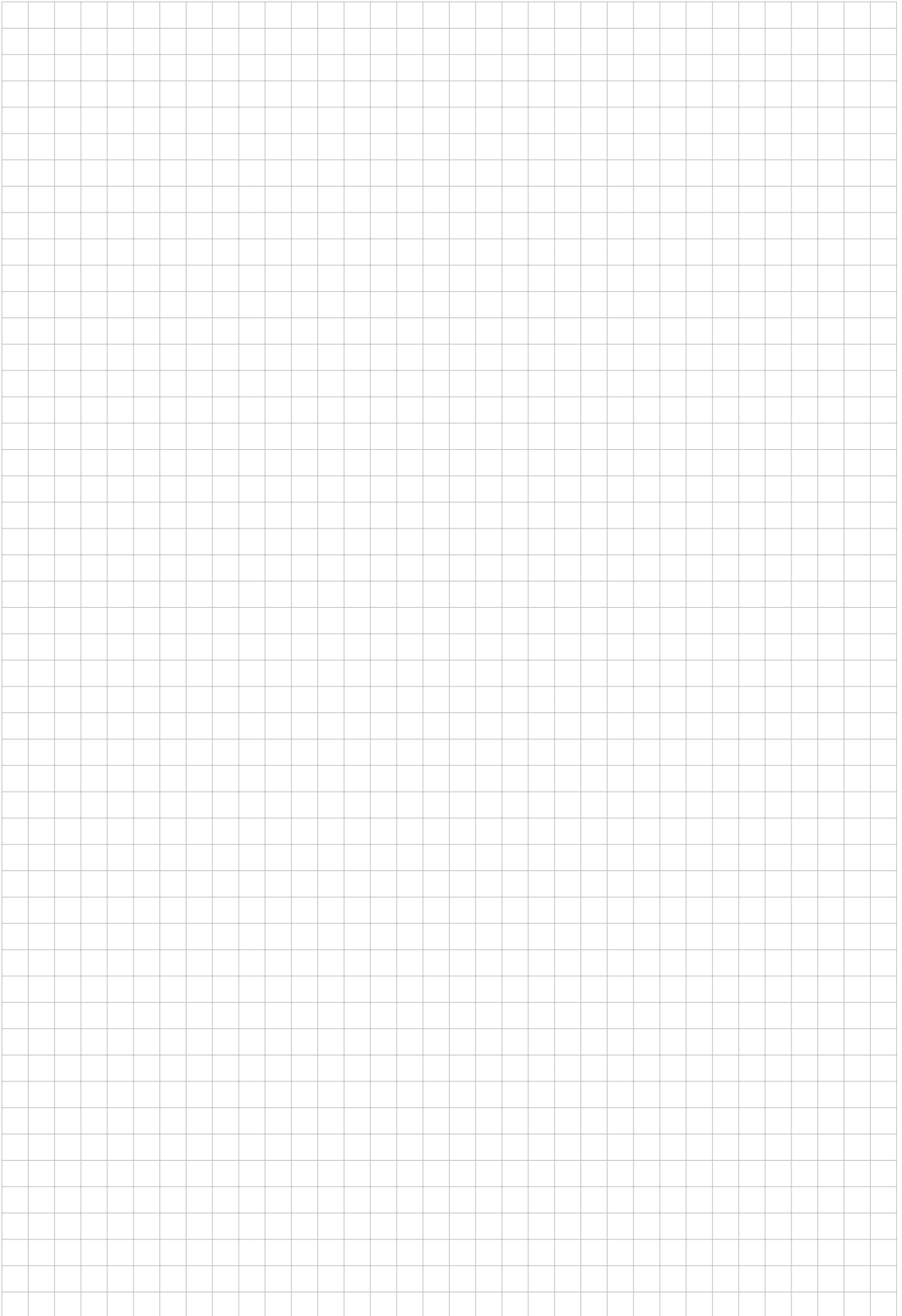


Задание 2

Решите неравенство:

$$25 \cdot 4^{\frac{1}{2} - \frac{2}{x}} - 133 \cdot 10^{-\frac{2}{x}} + 4 \cdot 5^{1 - \frac{4}{x}} \leq 0.$$

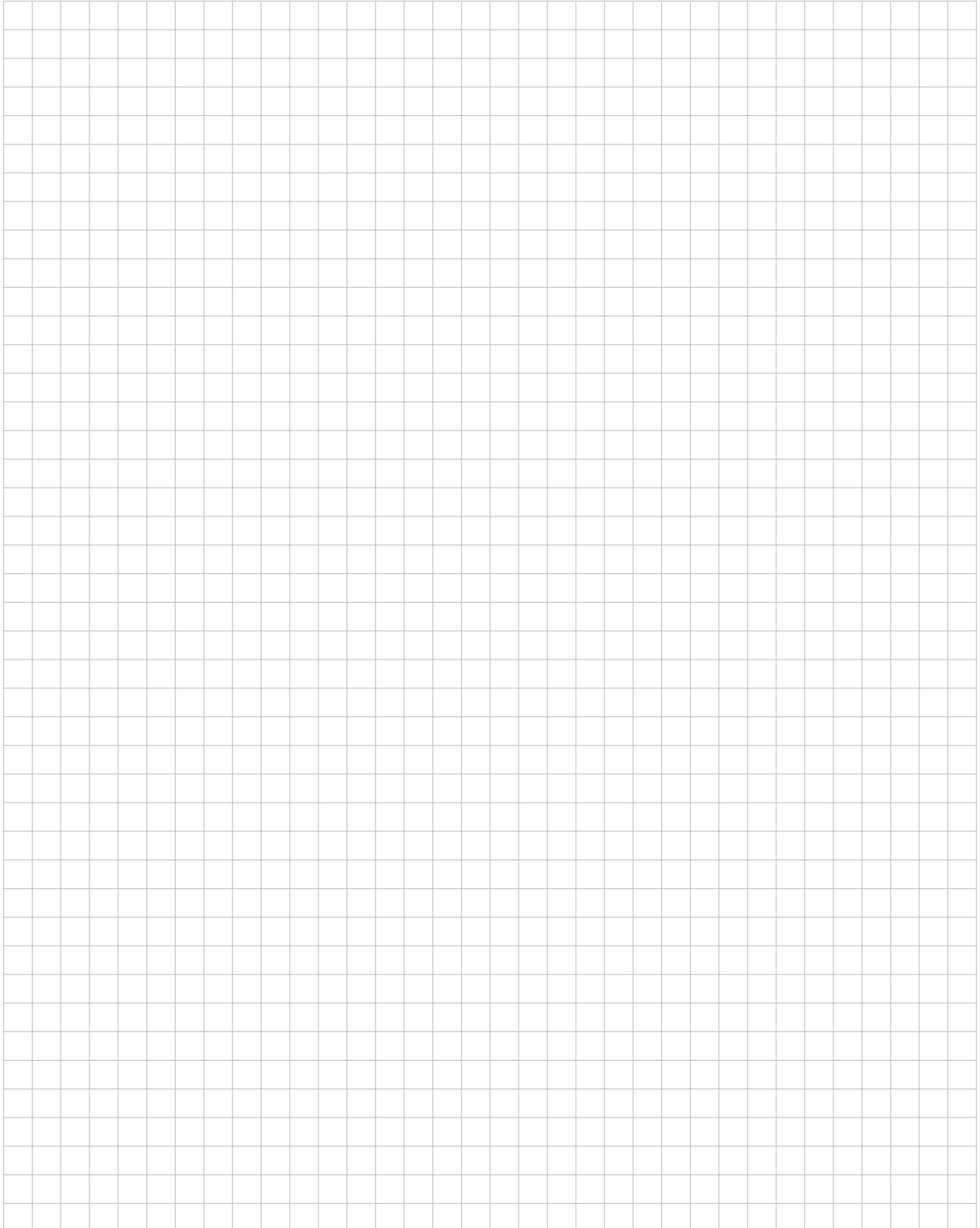


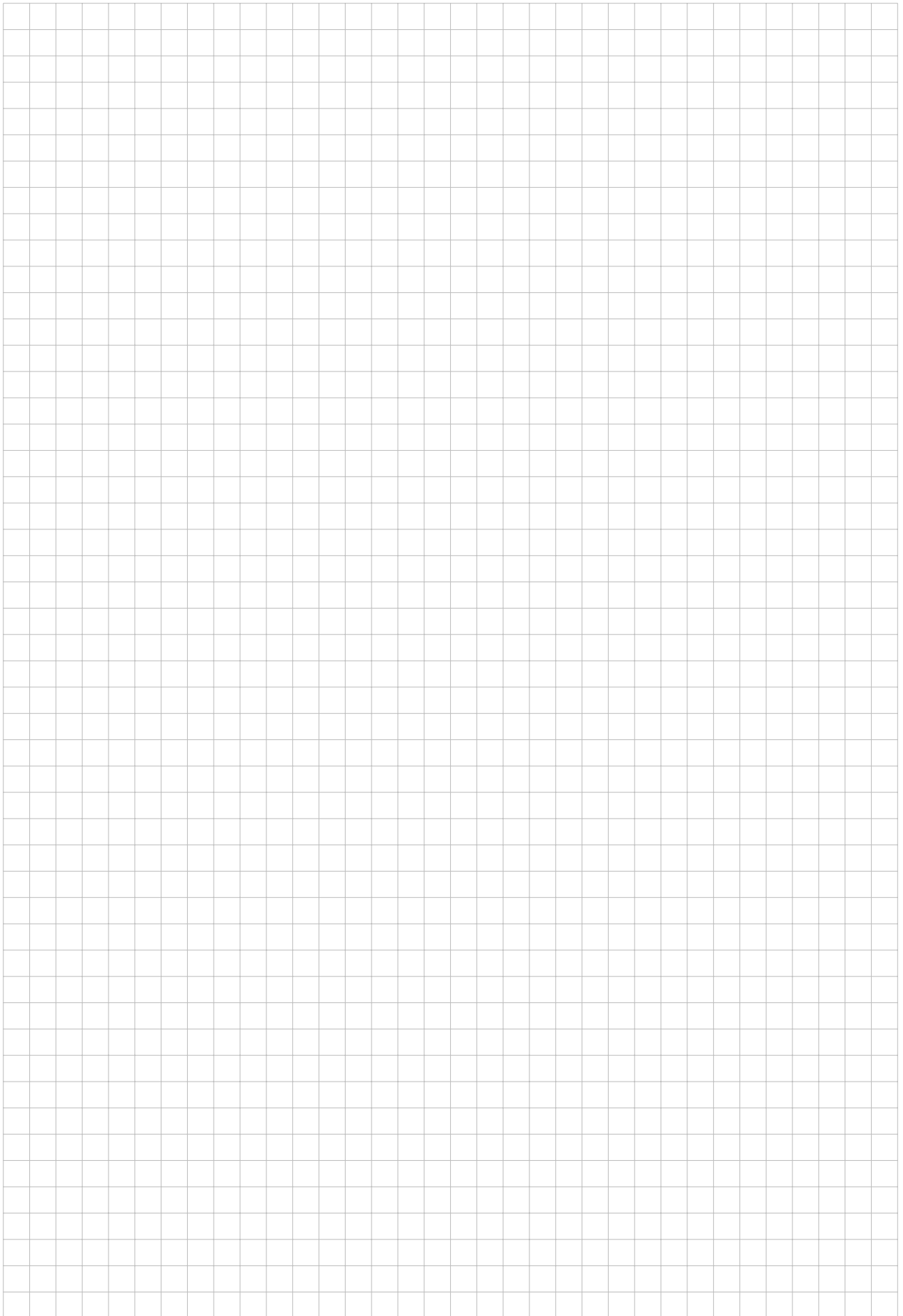


Задание 3

Решите неравенство:

$$\frac{\log_3^2(x - 1,5) - 1}{2^x - 3} \leq 0.$$

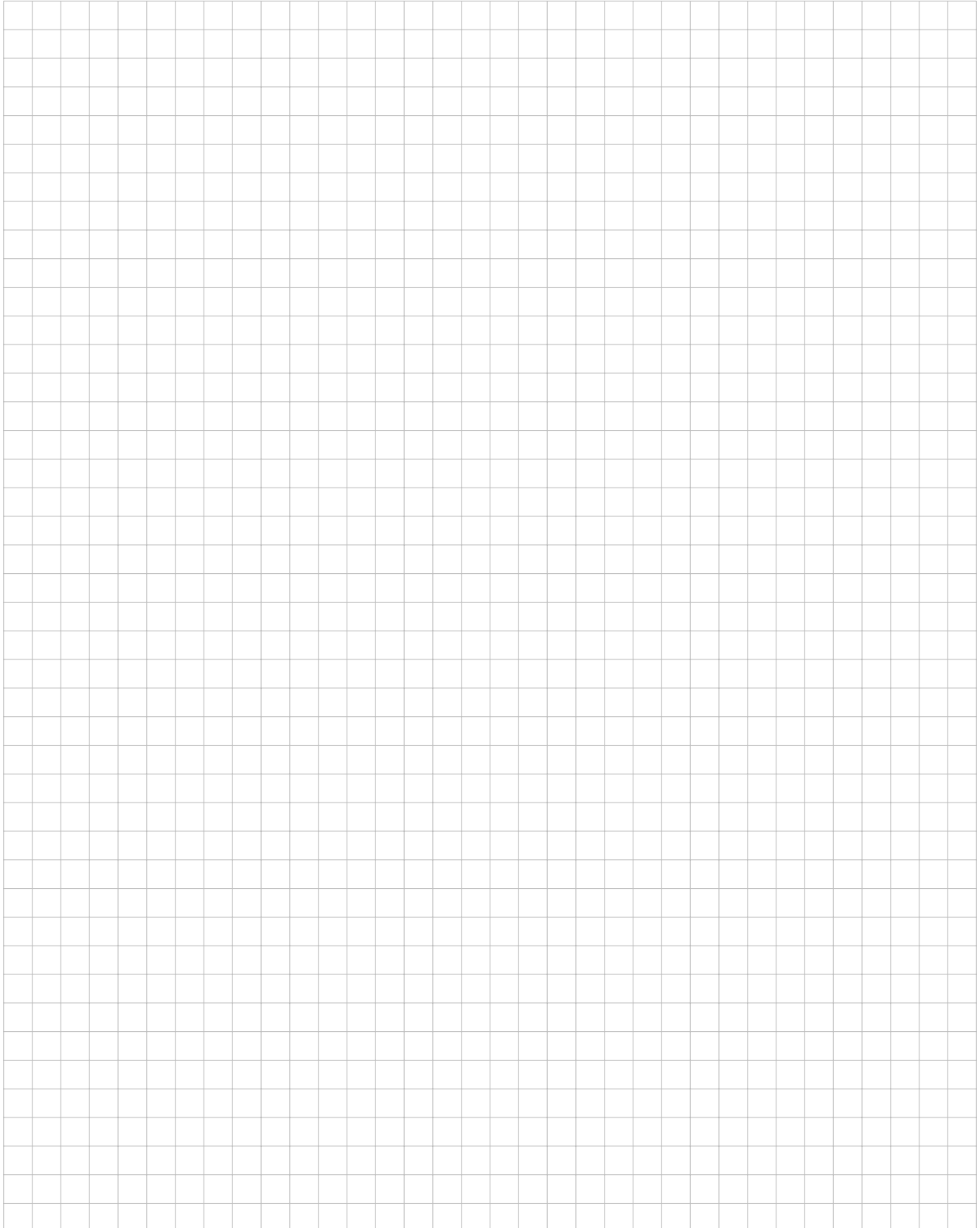


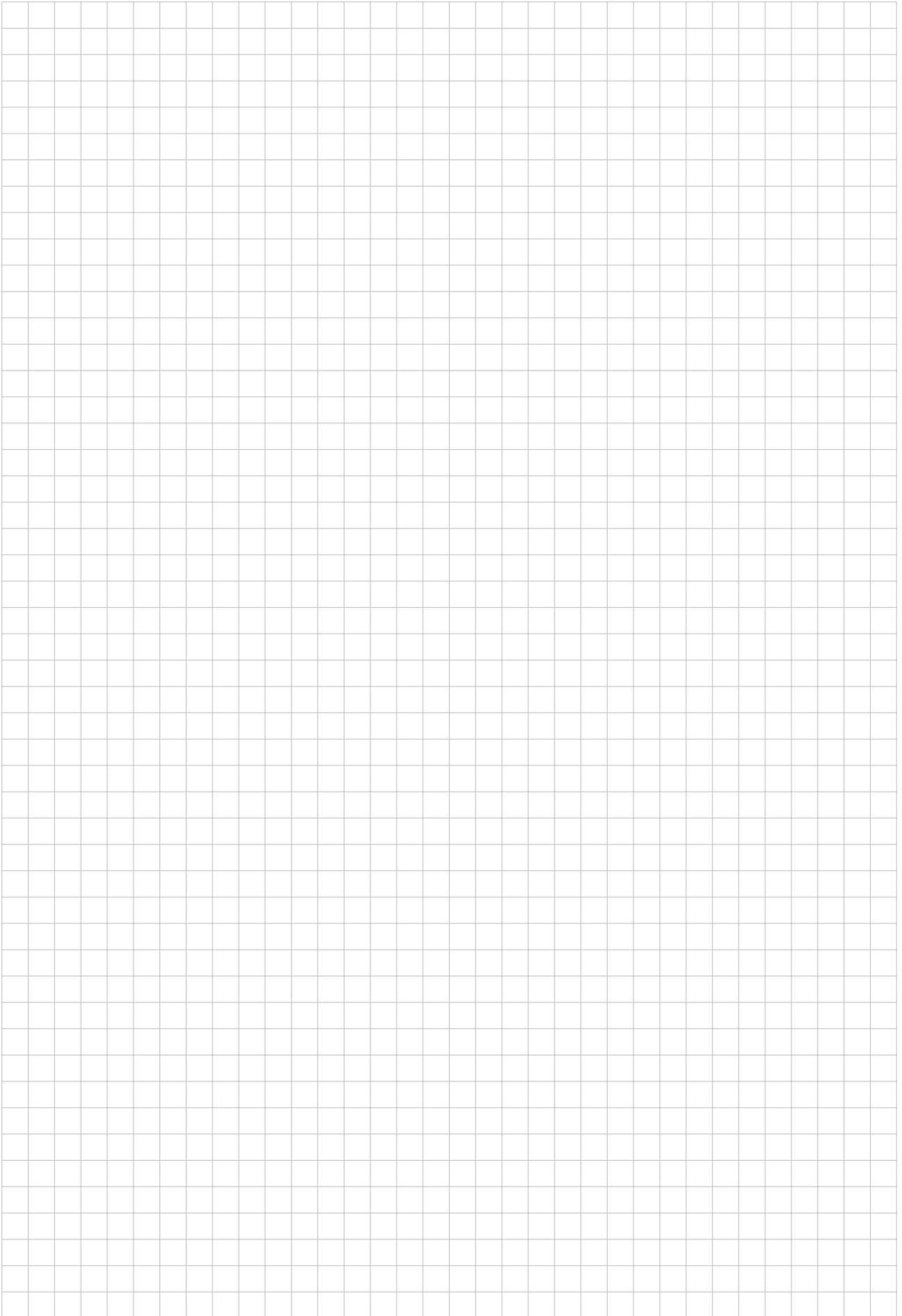


Задание 4

Решите неравенство:

$$\frac{\sqrt{x+4}(8-3^{2+x^2})}{4^{x-1}-3} \leq 0.$$

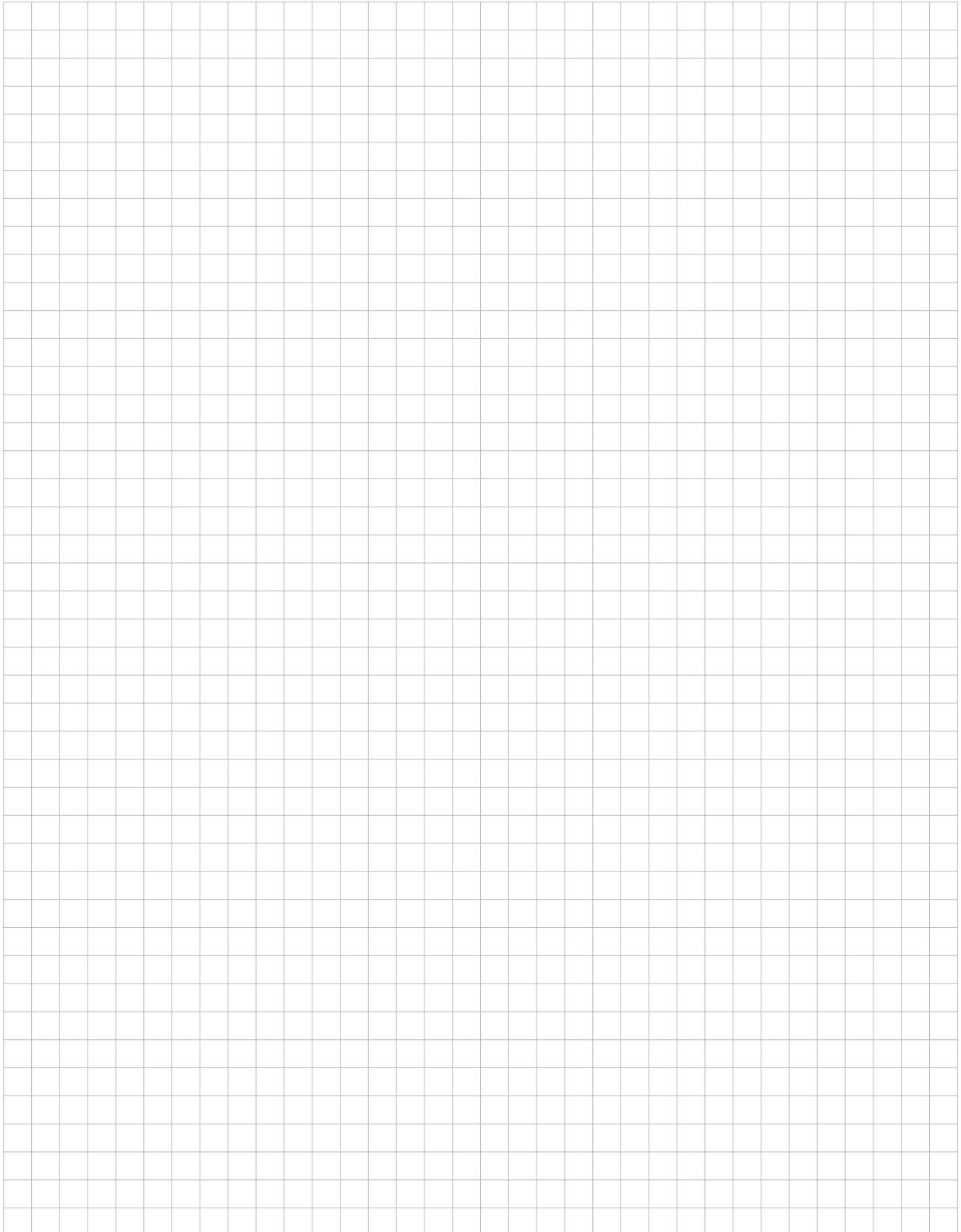


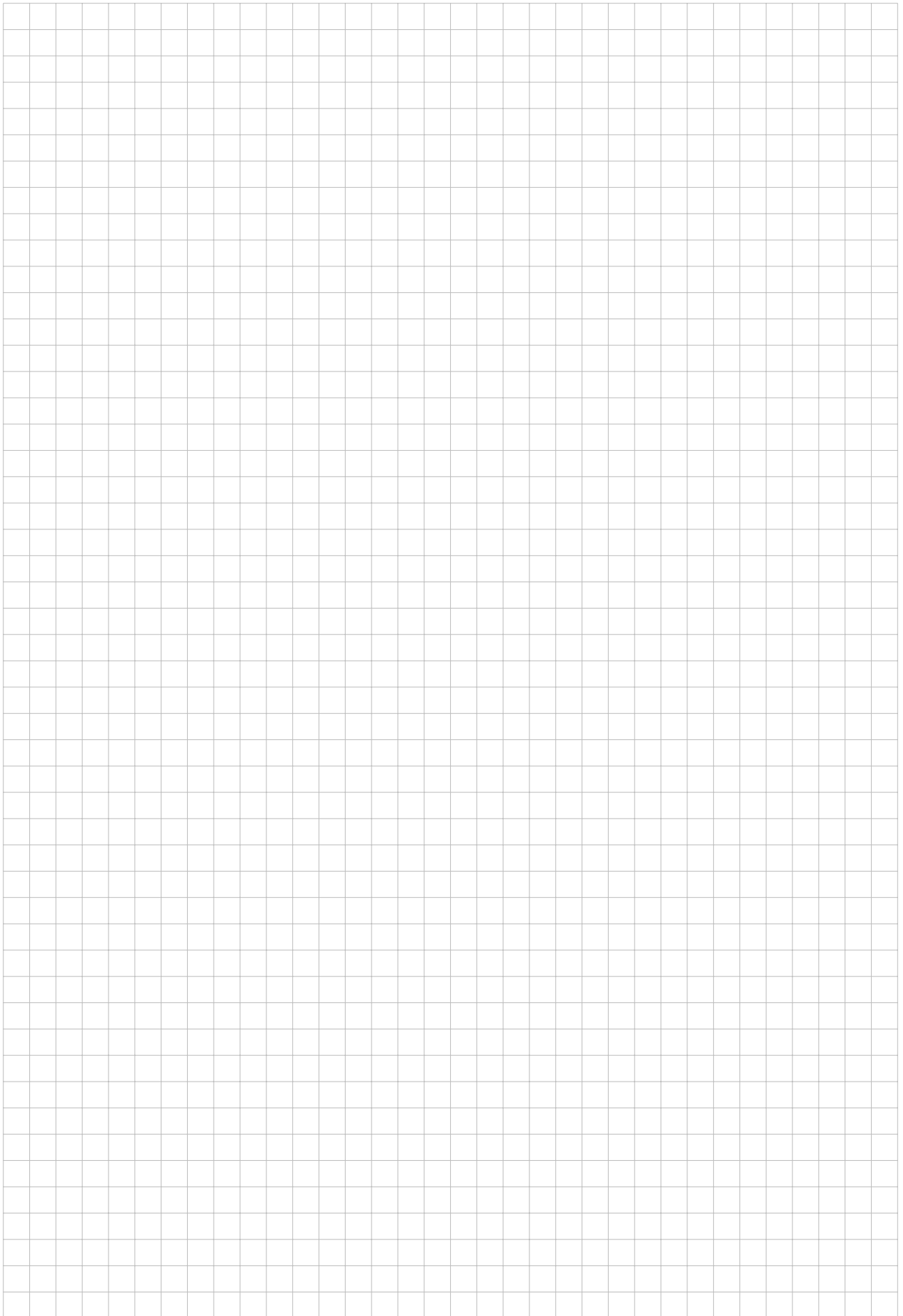


Задание 5

Решите неравенство:

$$x^2 \log_{64} (3 - 2x) \geq \log_2 (4x^2 - 12x + 9).$$

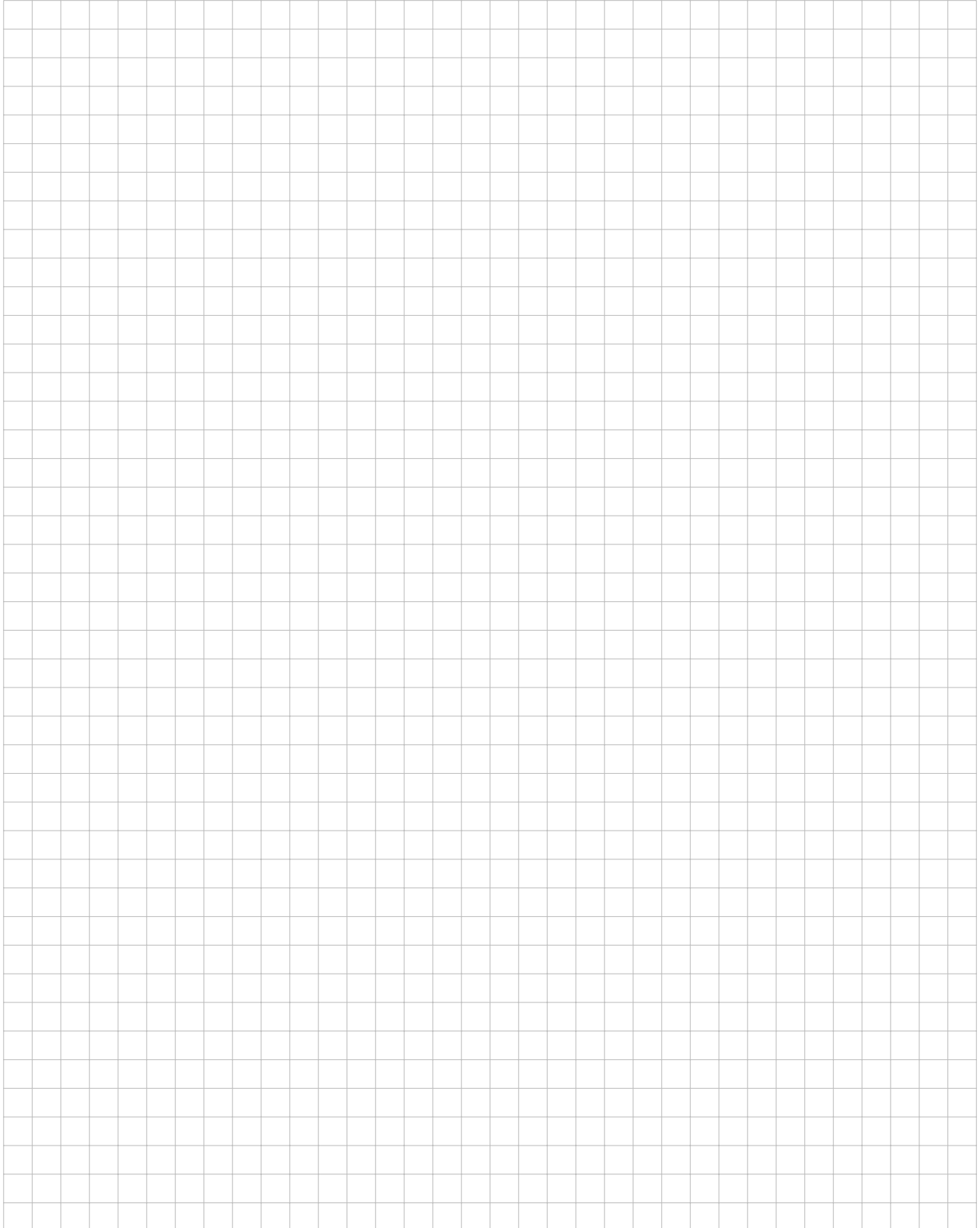


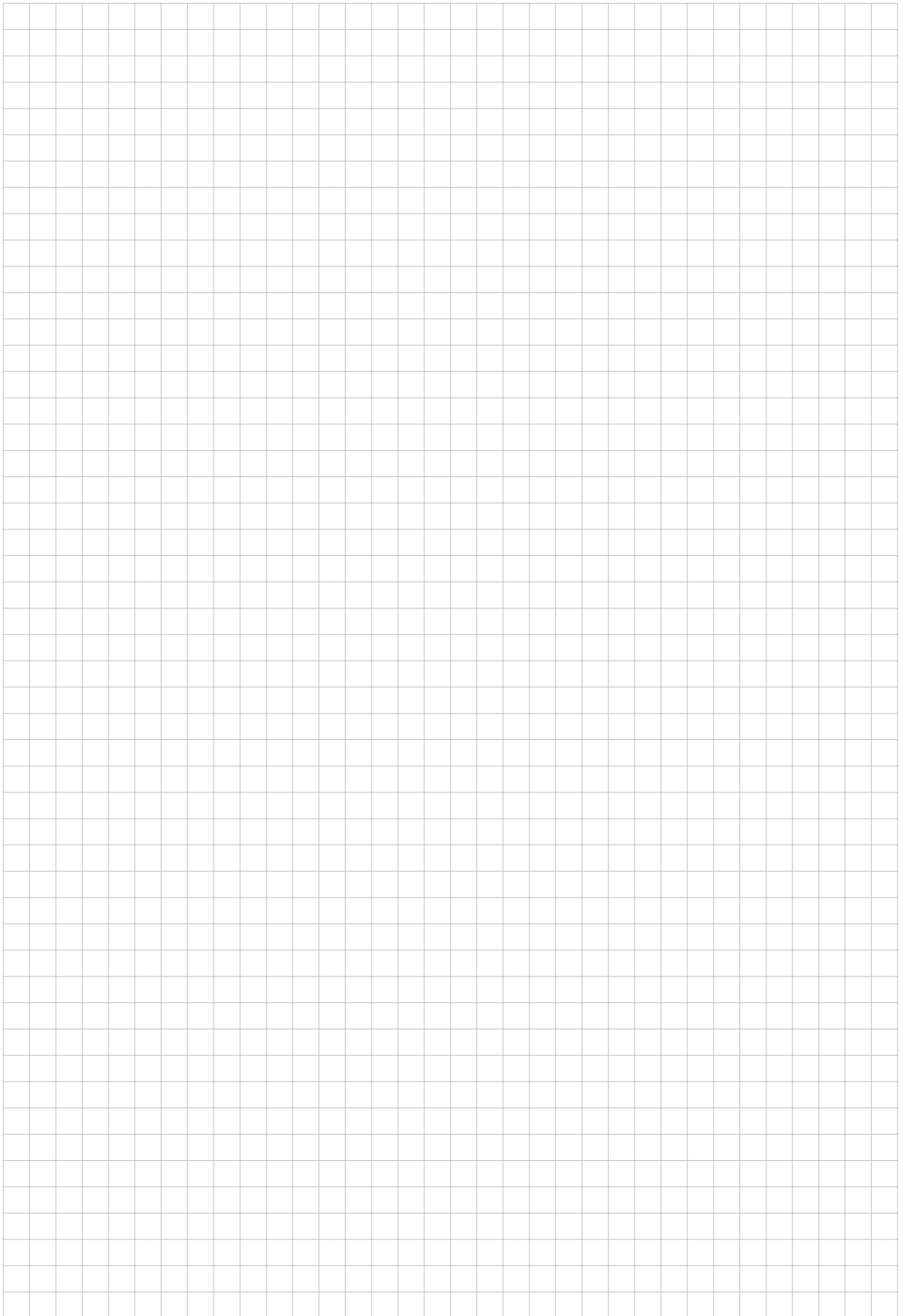


Задание 6

Решите неравенство:

$$(2 \cdot 0,5^{x+2} - 0,5 \cdot 2^{x+2})(2 \log_{0,5}^2(x+2) - 0,5 \log_2(x+2)) \leq 0.$$

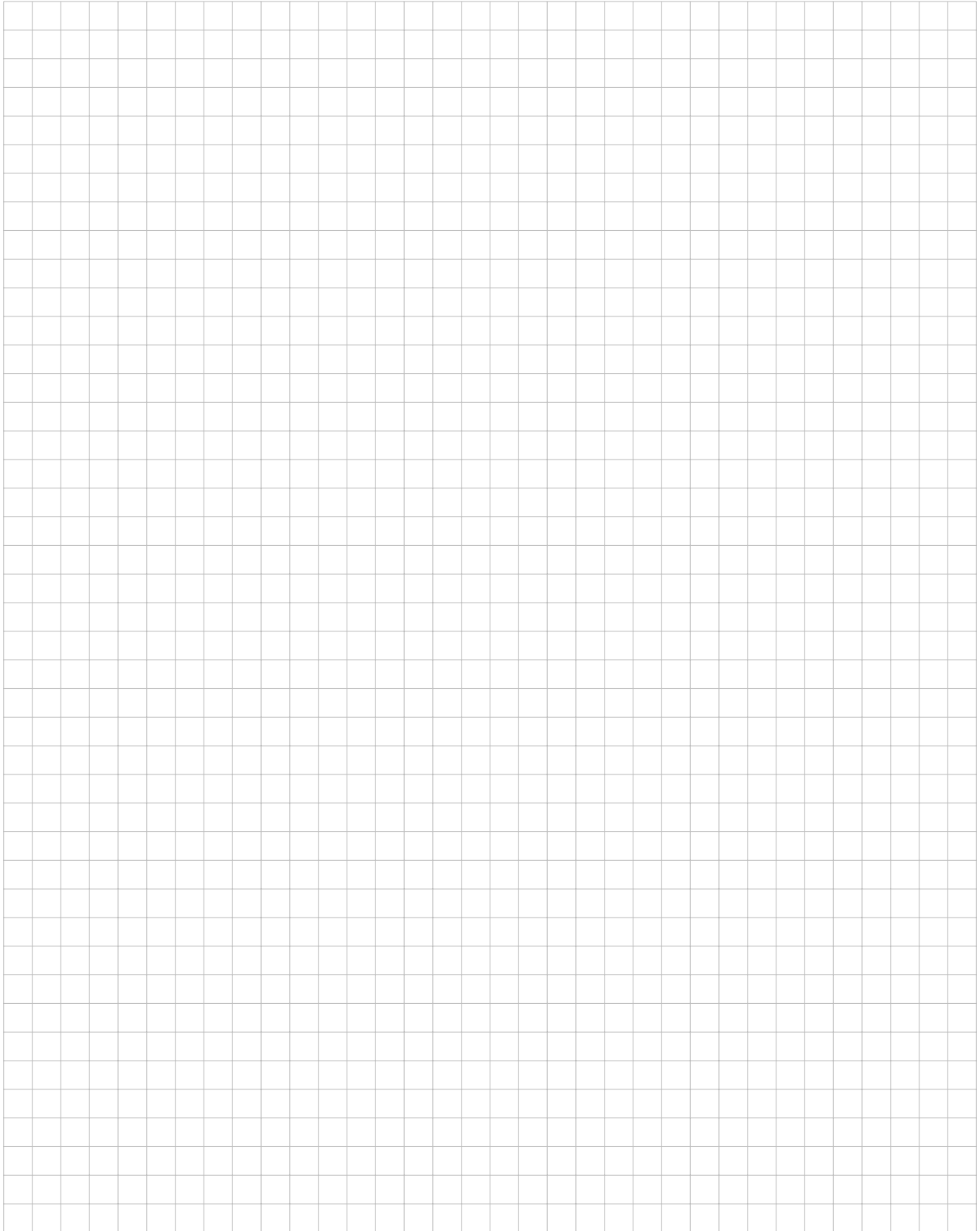


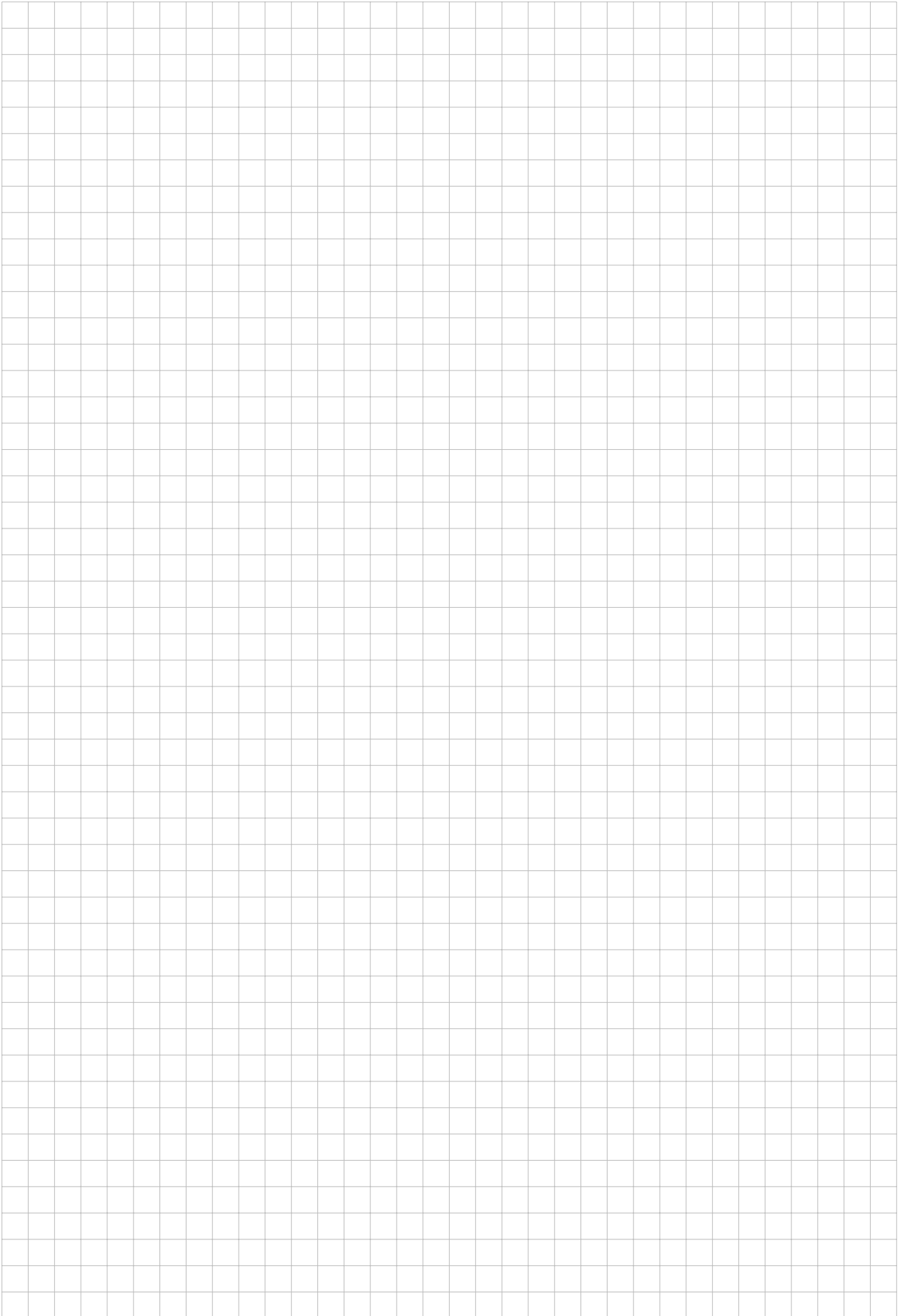


Задание 7

Решите неравенство:

$$8^{\lg(-x-1)} \leq (x^2 - 1)^{\lg 2}.$$





ОТВЕТЫ

1. $x \in (-\infty; -\sqrt[4]{8}] \cup \left[-\frac{1}{2}; \frac{1}{2}\right] \cup [\sqrt[4]{8}; +\infty) \setminus \{0\};$

2. $x \in (-\infty; -1] \cup [2; +\infty);$

3. $x \in (1,5; \log_2 3) \cup \left[\frac{11}{6}; 4,5\right];$

4. $x \in \{-4\} \cup (\log_4 12; +\infty);$

5. $x \in (-\infty; -2\sqrt{3}] \cup [1; 1,5);$

6. $x \in [\sqrt[4]{2} - 2; +\infty) \cup \{-1\};$

7. $x \in [-3; -1).$