

Deluxe Scientific Notebook

Notebook Identification: _____

Laboratory Technician/Scientist: _____

Date Begun: _____



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MAST Guidelines for Keeping a Scientific Notebook

1. You must maintain a table of contents. As you add relevant sections to your notebook, write down the section title and page number(s) into your table of contents so you can find it later.
2. When you attend discussions, talks, or seminars note the title, date, and speaker as the Section Heading. You might want to take your notes on a pad during the talk, and then add them to the notebook later. This gives you a chance to think about the notes as you add them to the notebook.
3. When you read source material, note the question you are attempting to answer, the author of the book/paper/article, the date of publication, the title, the publisher/magazine/journal. Again, you might want to take the notes on a pad as you read and then transfer them to your notebook later on.
4. When you make observations in the field or the laboratory, title the observation (for example, "Observing a thunderstorm video"), note the date, the time, any relevant local conditions (temperature, light level, etc.) that might influence the observation. Note how the data is being taken. Then record the data into your notebook as it is taken. You should sign each page as you record the time for each observation. This is to establish and maintain the integrity of your data.
5. When making a calculation you must first title it, note all relevant assumptions you are making, note all units and constants in use, and then record each step in the calculation and its results.
6. When setting up an experimental apparatus first record the title of the experimental set-up, the date, time, local conditions that could influence the experiment, list all of the materials used, then list each step in the set-up as you perform it. If something unexpected happens, record that, too. Sign each page as you perform the set-up. This is to establish and maintain the integrity of the data.
7. When calibrating an apparatus or instrument record the title of it, the date, the time, all relevant local conditions, list all of the materials used and how you intend to perform the calibration and why you chose the method being used. Then record each step as you perform it. Record all data you collect as you collect it. This is to establish and maintain the integrity of the data.
8. When analyzing data record the title of the experiment/observation the data was drawn from, the method of analysis and its justification, the results of the analysis, and your estimate of the error in your analysis.
9. When making a model (physical, mathematical, or on a computer) record the title of the model, all assumptions that you are using, the method of modeling and its justification, and then record each step in your model and its results.
10. When performing a derivation or proof record the title of the work, all assumptions being used, all definitions, all theorems, all conjectures, and then each step and its justification and results.
11. When entering a practice problem and its solution, be sure sure to name the problem (Problem Calculus - 1, for example), write the problem clearly, begin the solution process by explaining what you intend to do and why before you do it, then record each step in the solution along with full justifications for the methods you use, verify your answer, and then think about how the answer to the problem will influence the remainder of your work, can you think of applications for the answer? Can you think of other ways to answer the same

problem? Does this answer shed light on other problems you are working on? (More than one research project has been started in this way).

12. Always use ink, never pencil.

13. When you delete something, draw a single line through it; do not erase or scribble it out. Make sure to initial the deletion and date it.

Make sure to read these instructions and understand them, they will make your scientific notebook into a vital tool for your research.

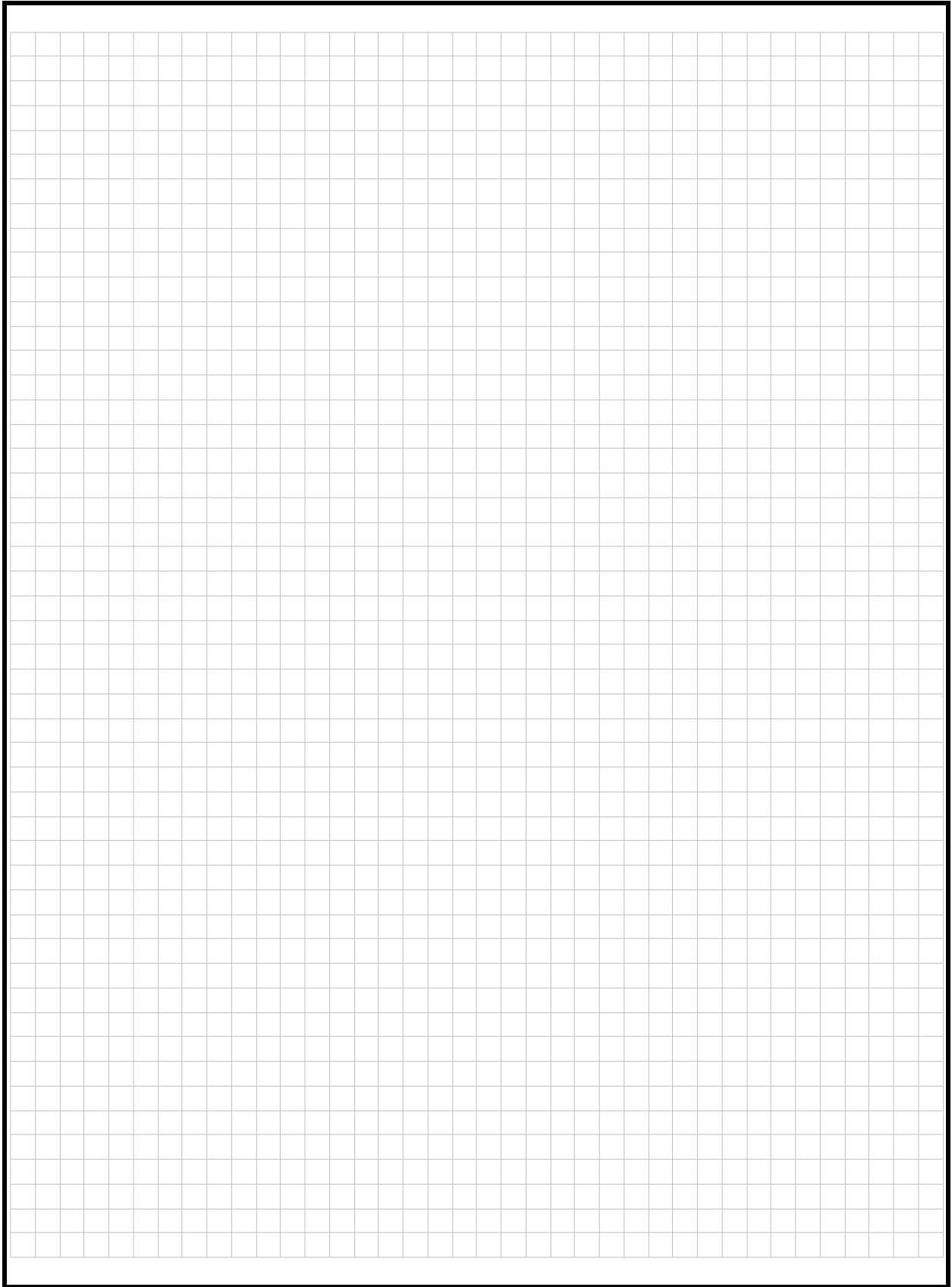
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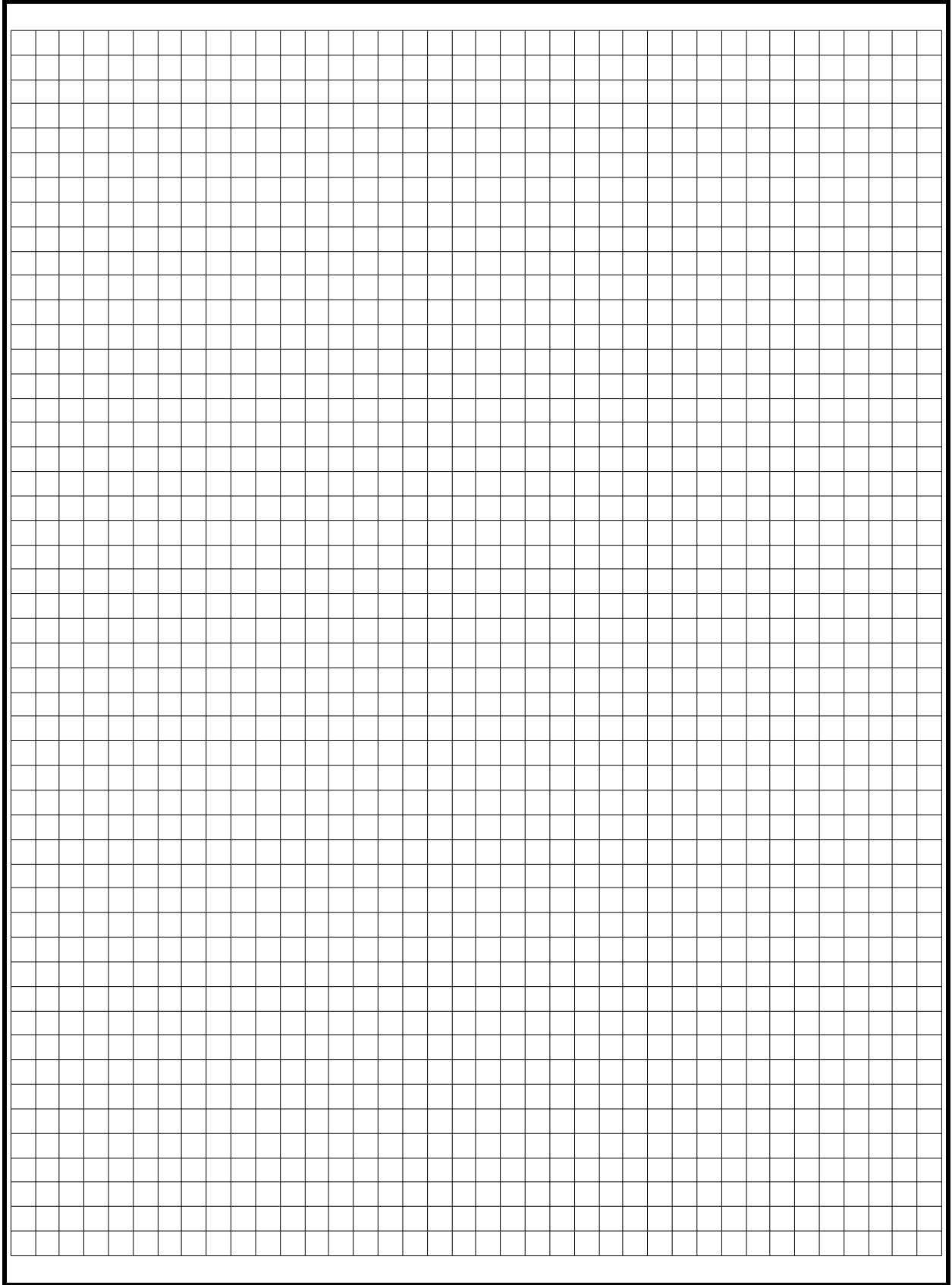
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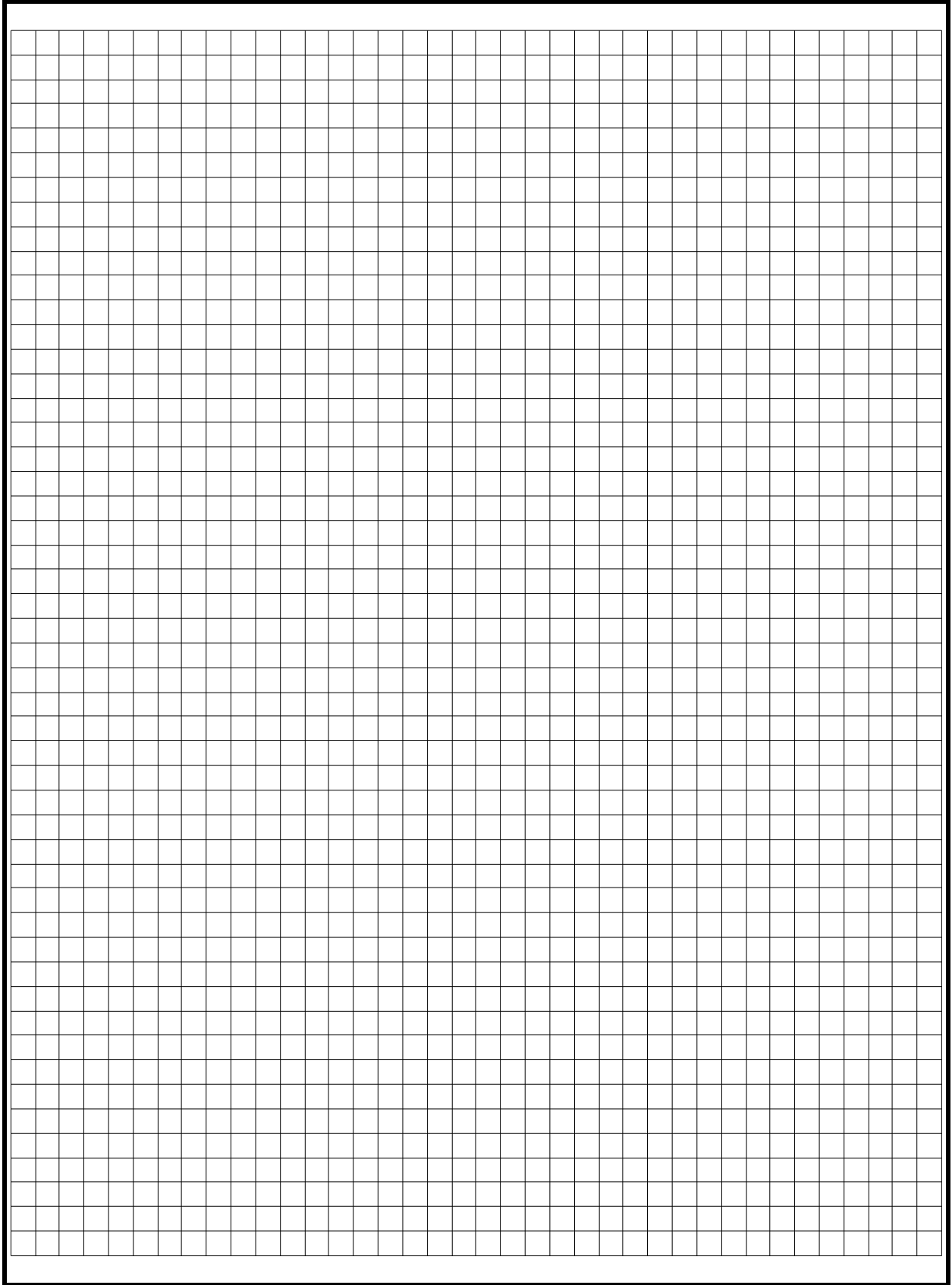
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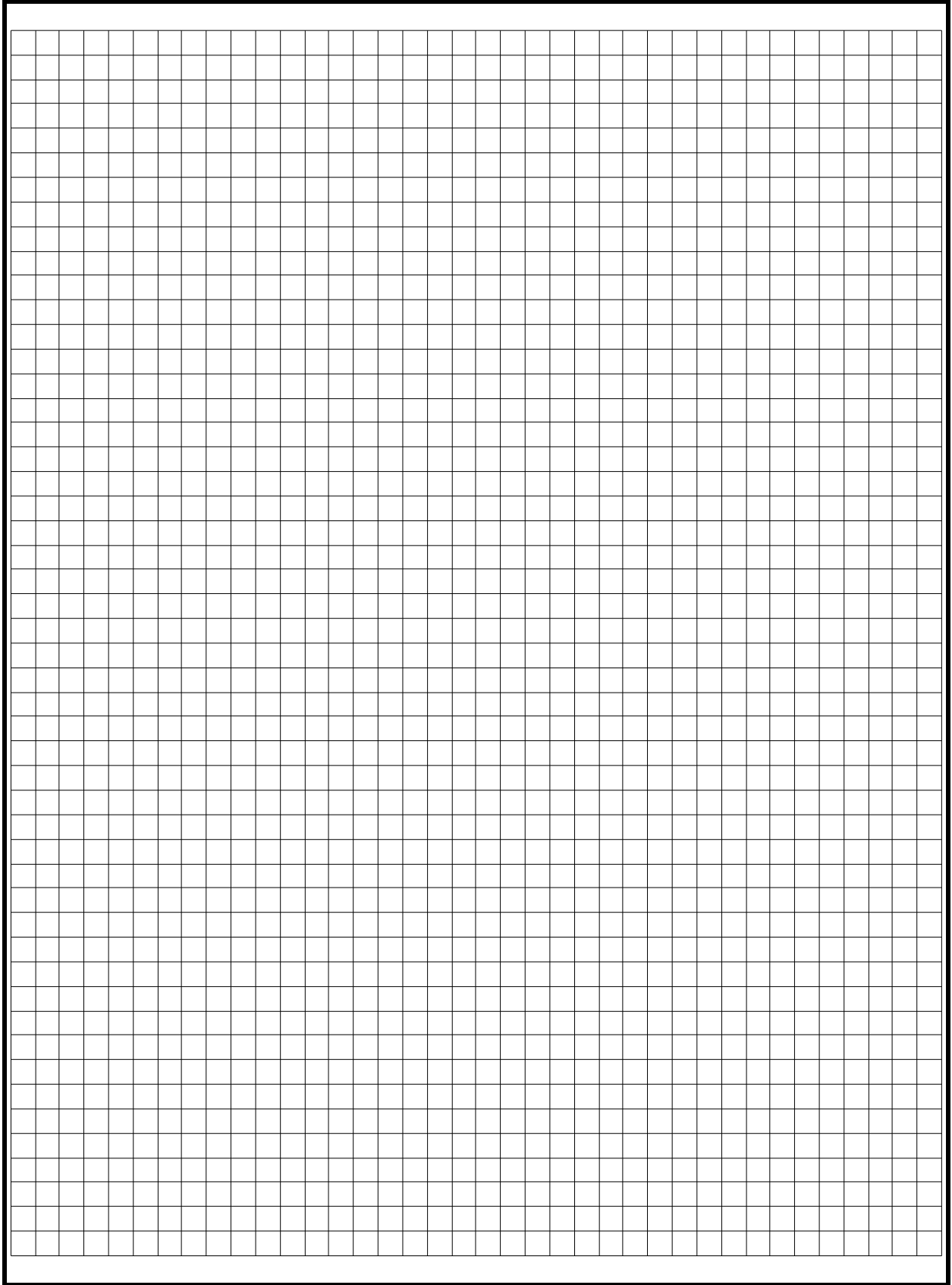
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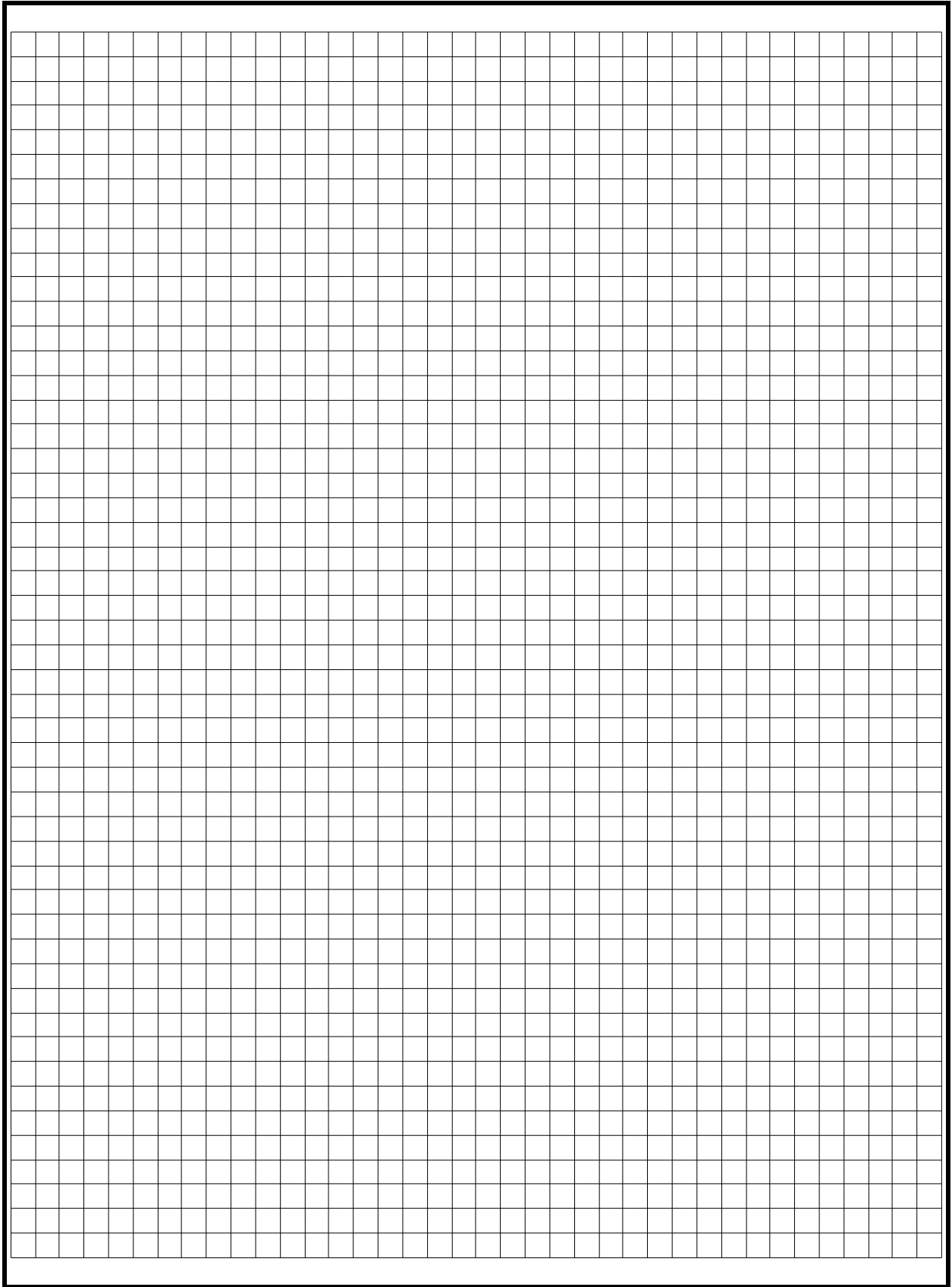


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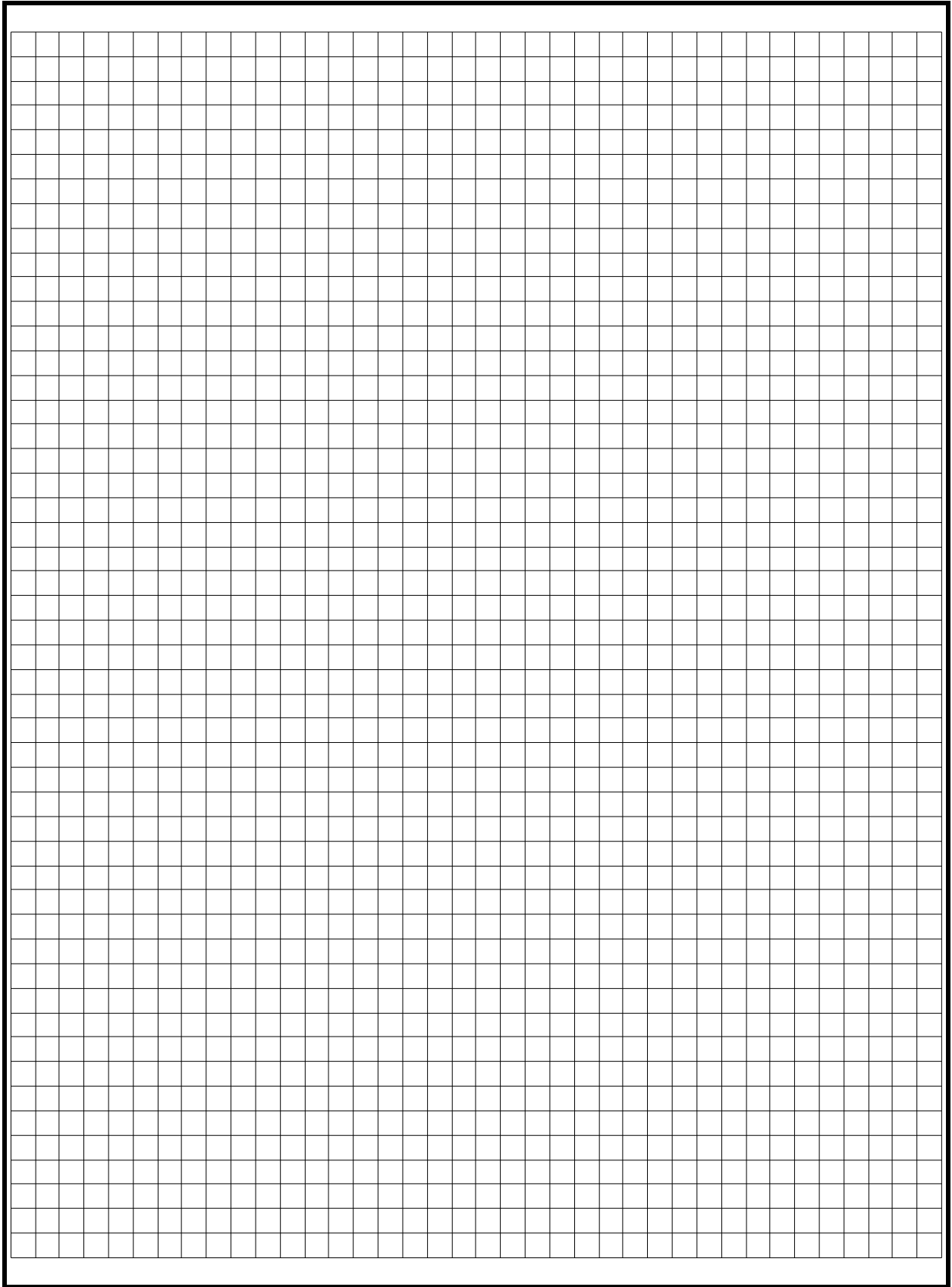


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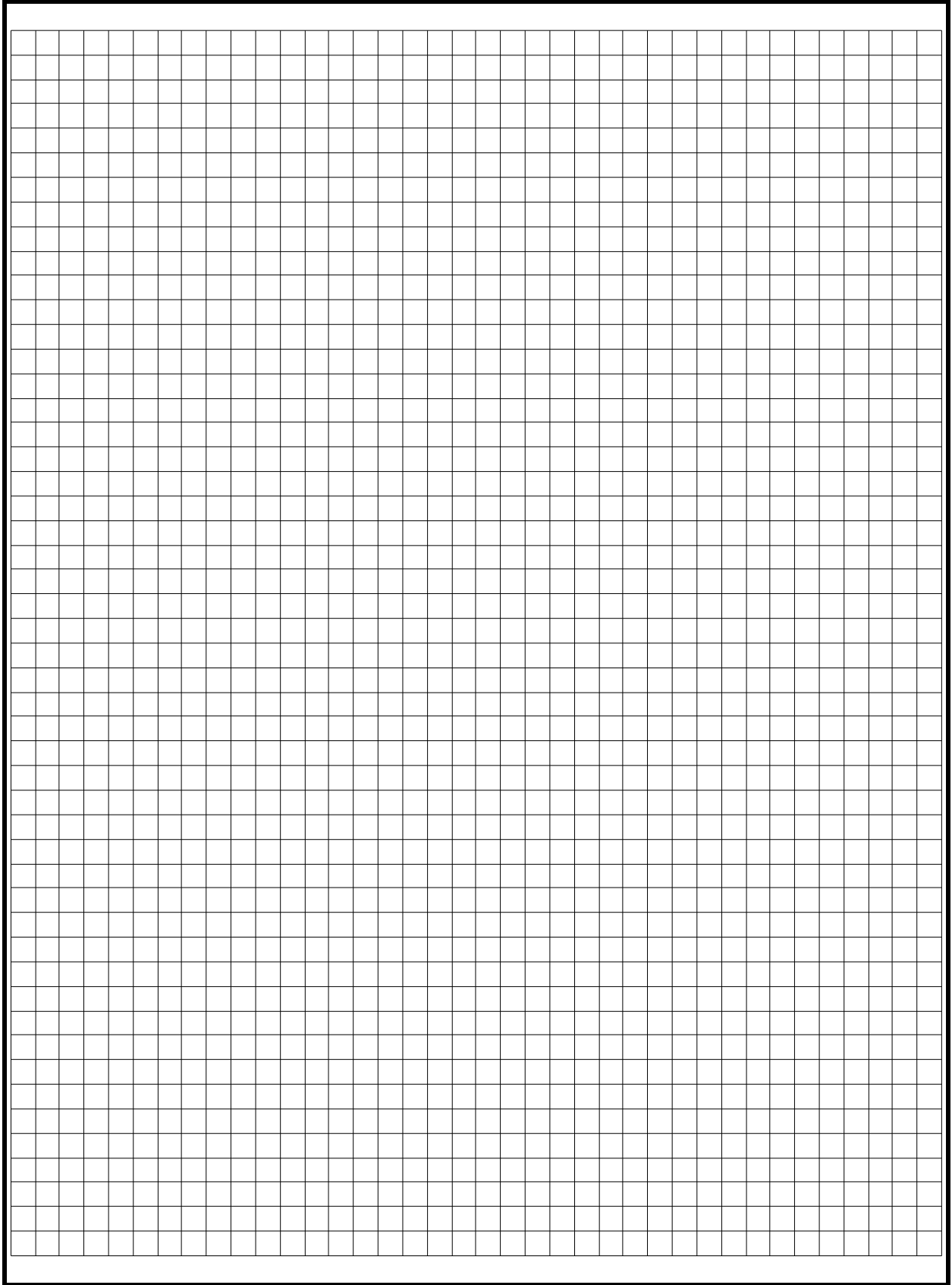
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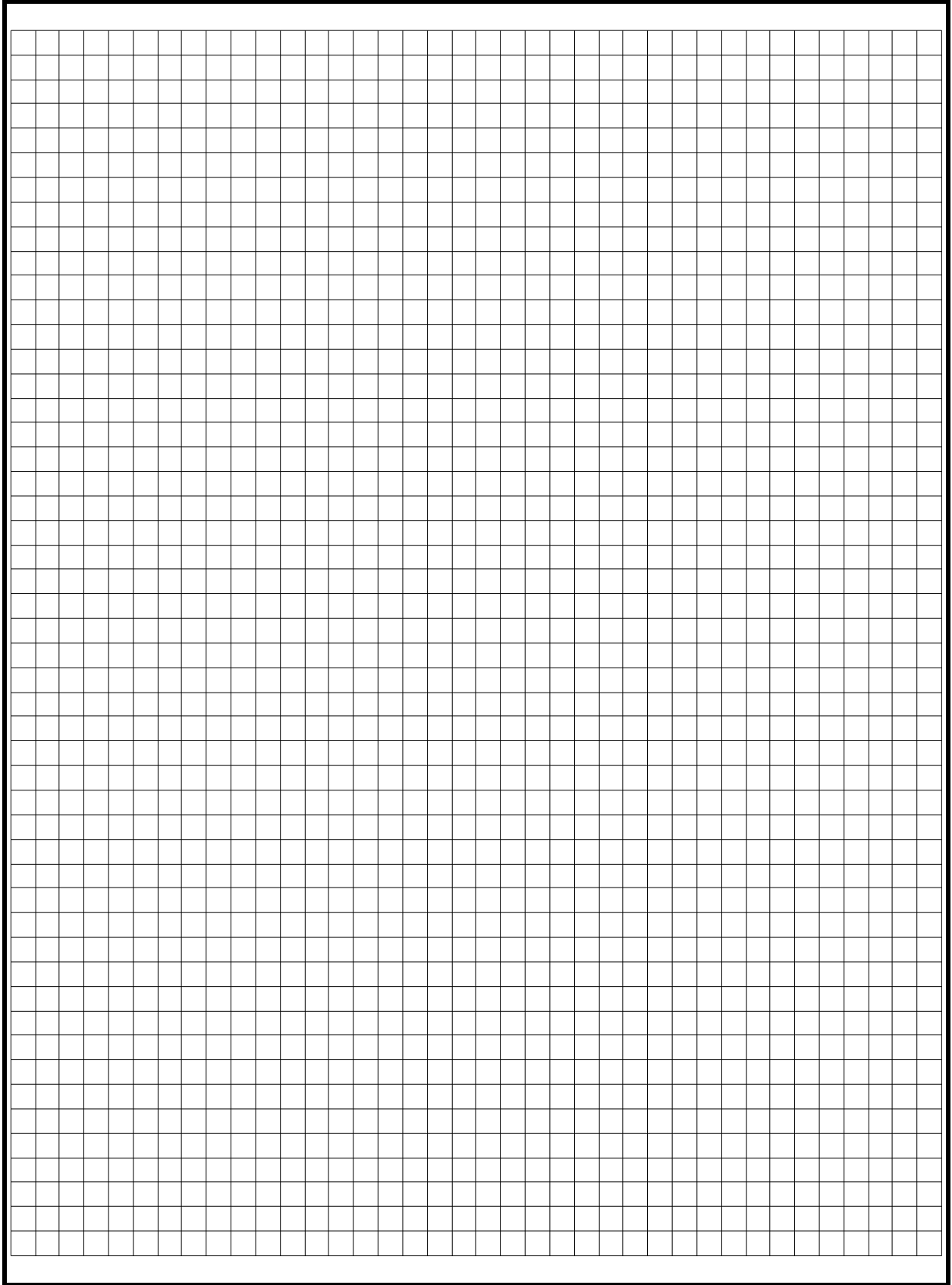
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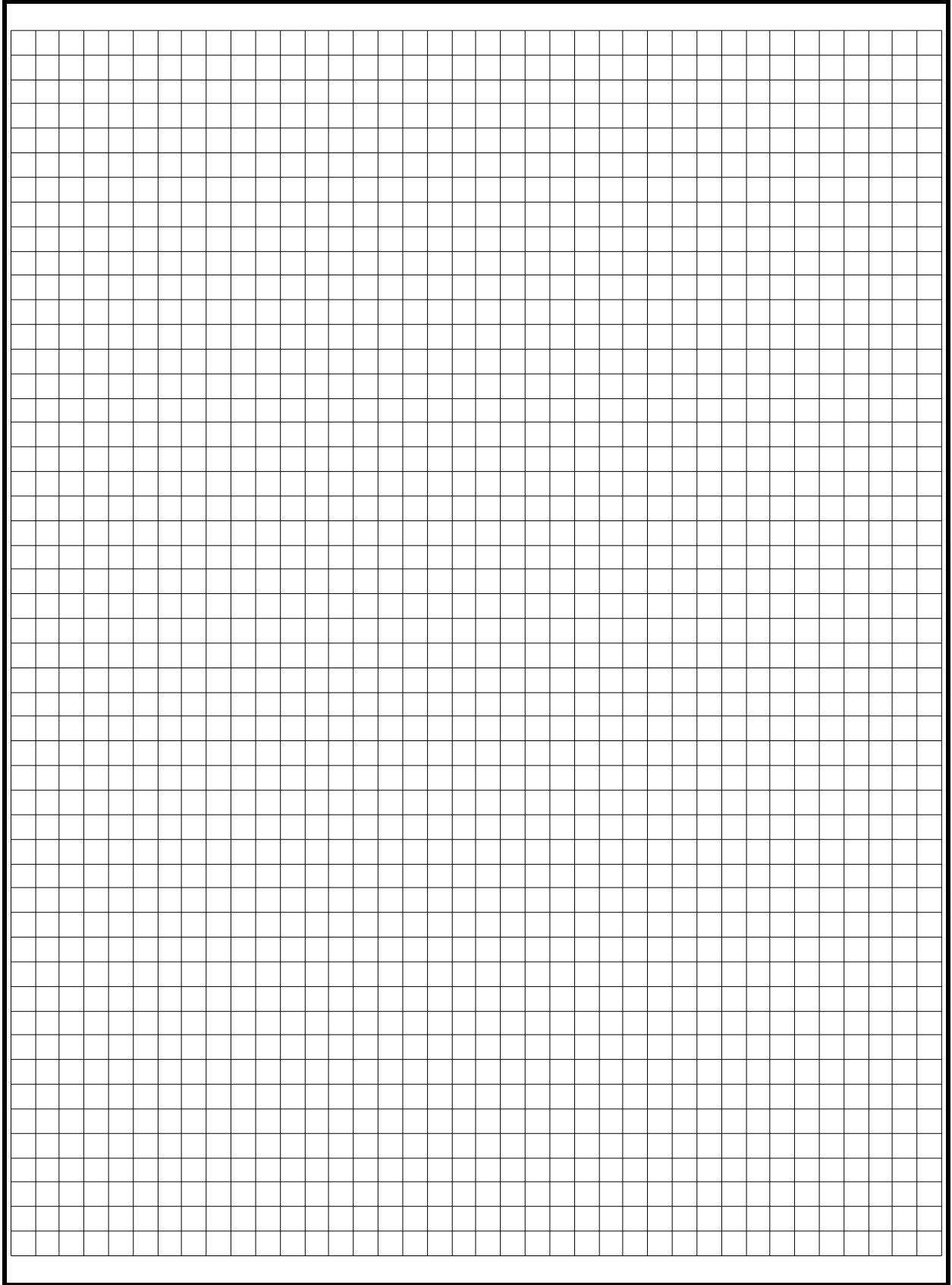
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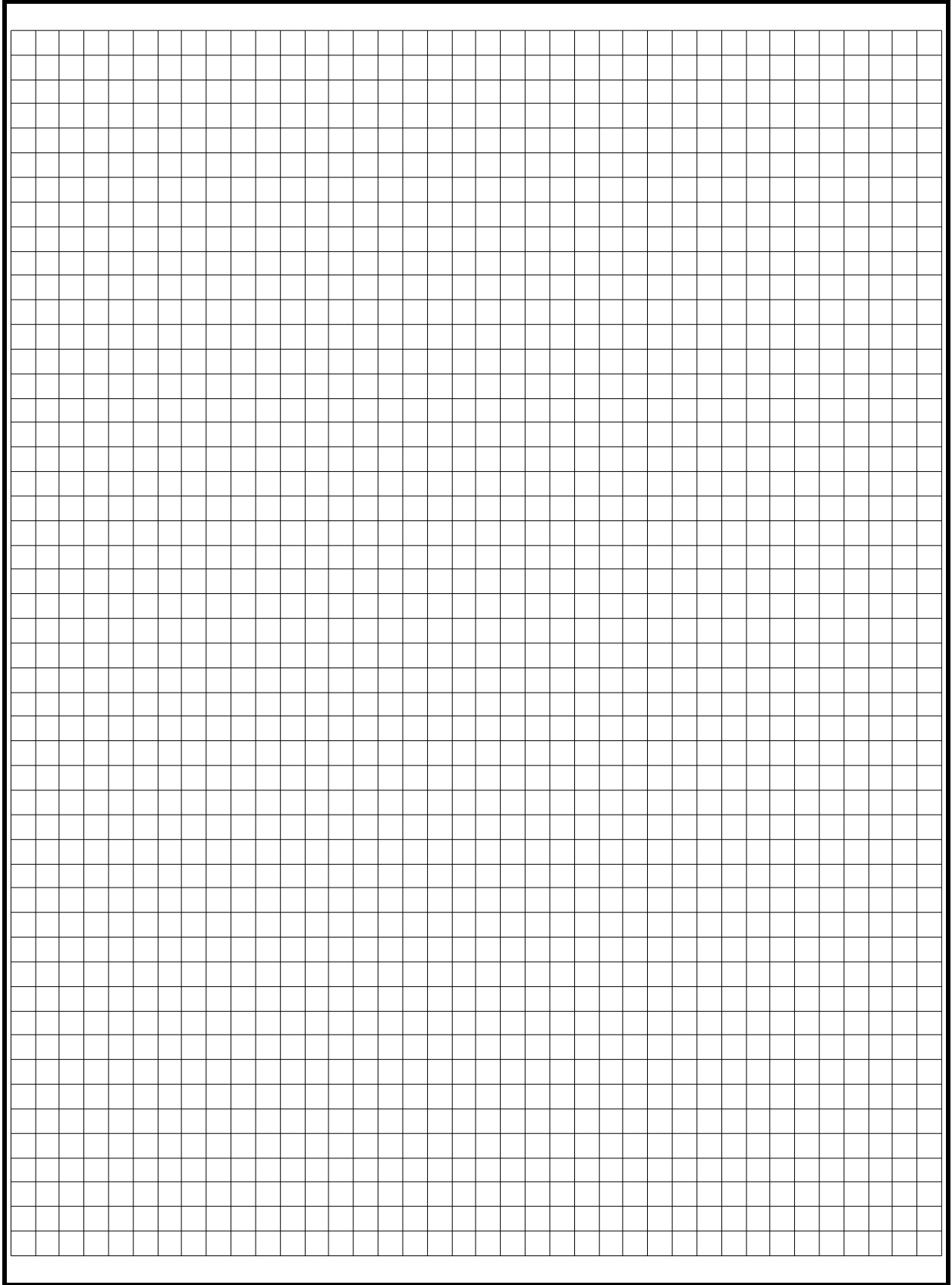
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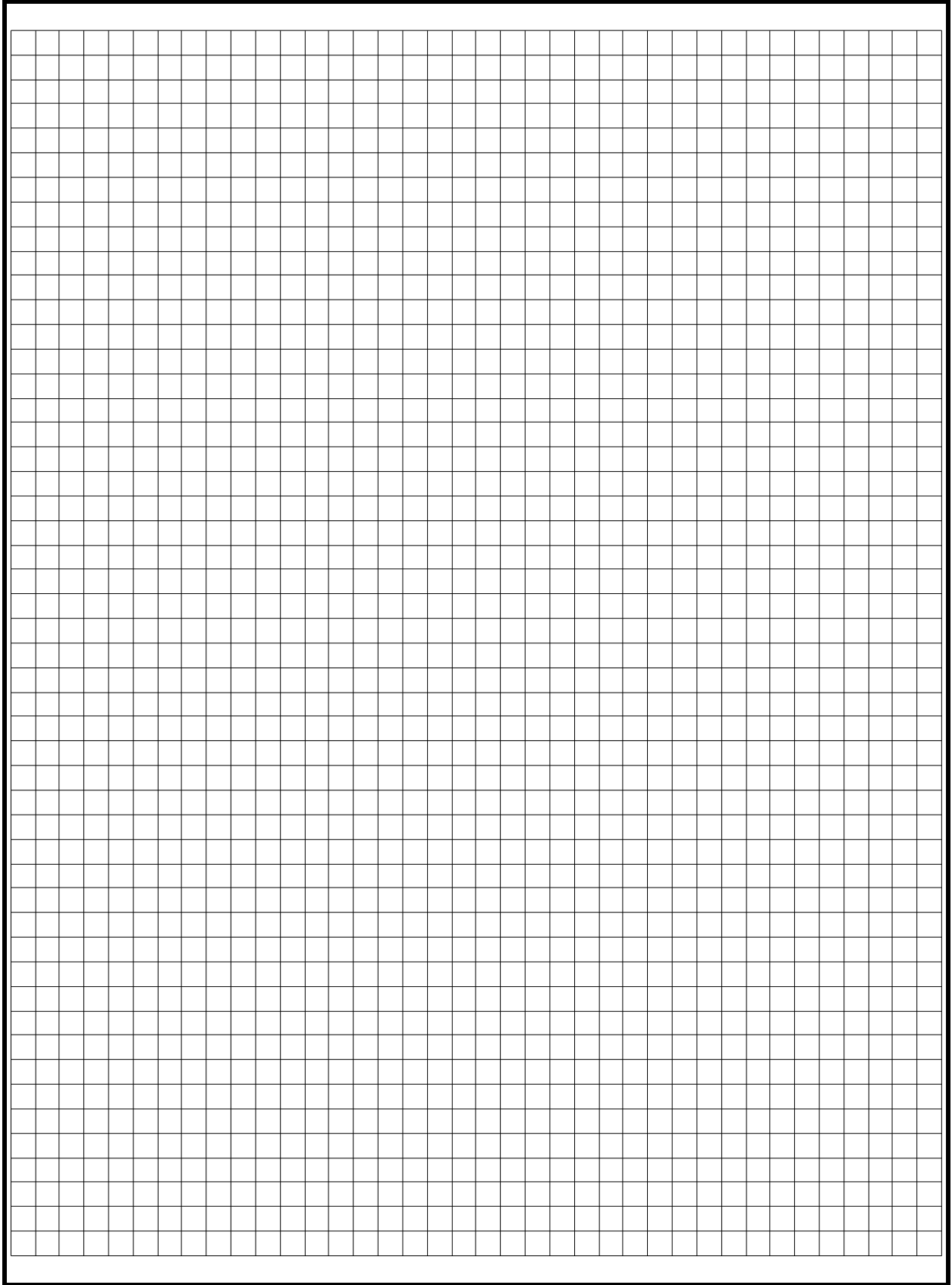
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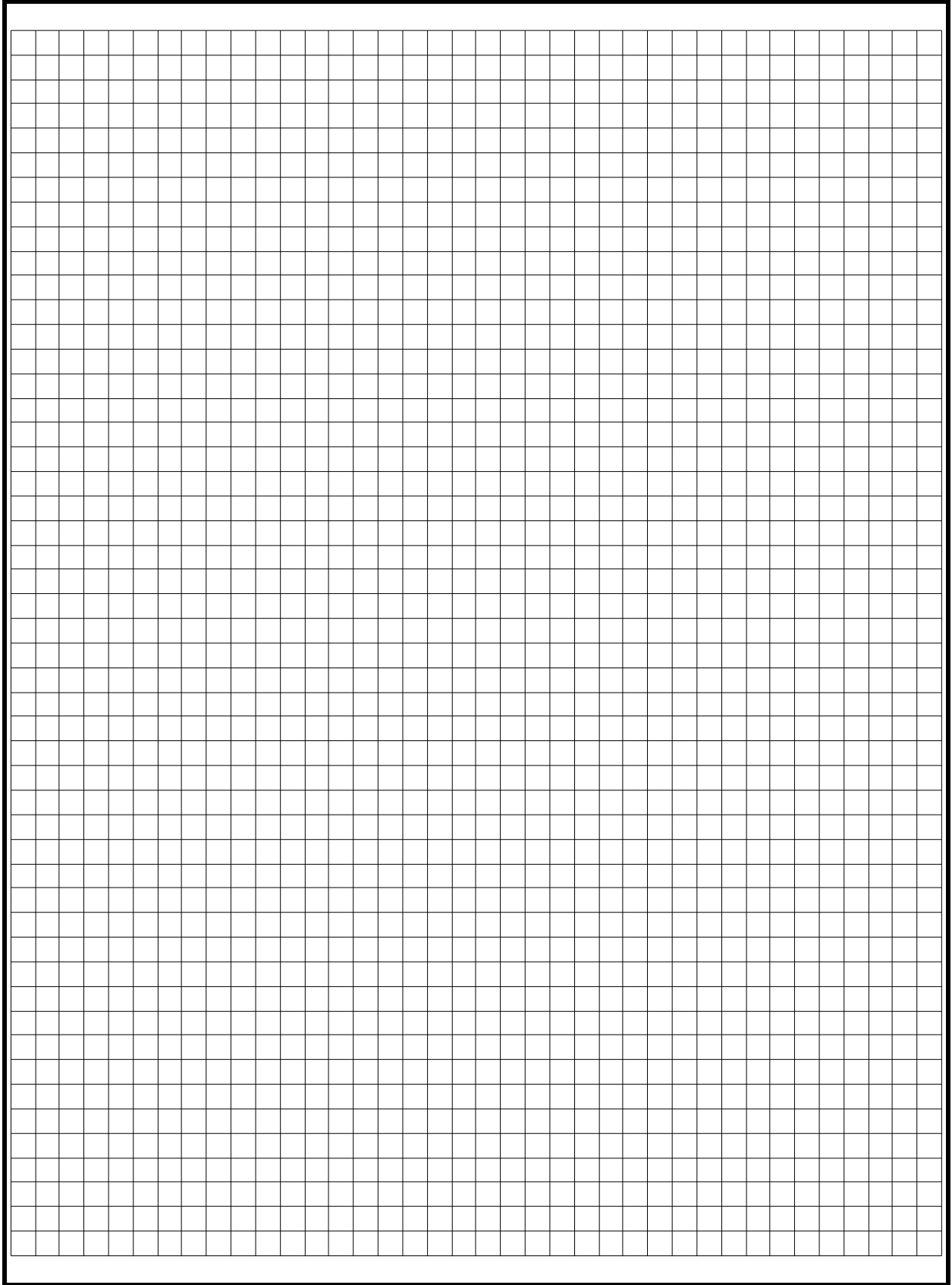
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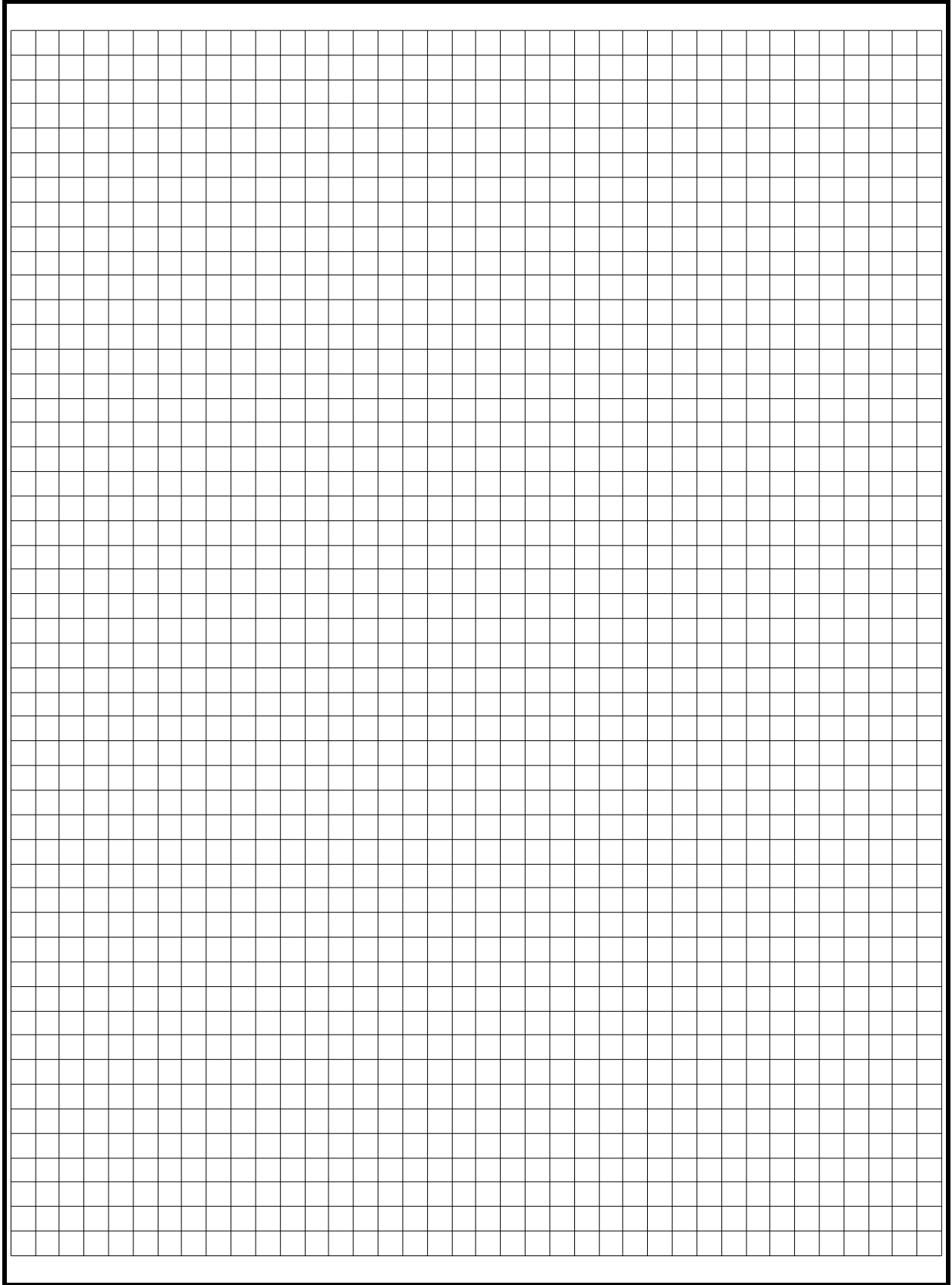
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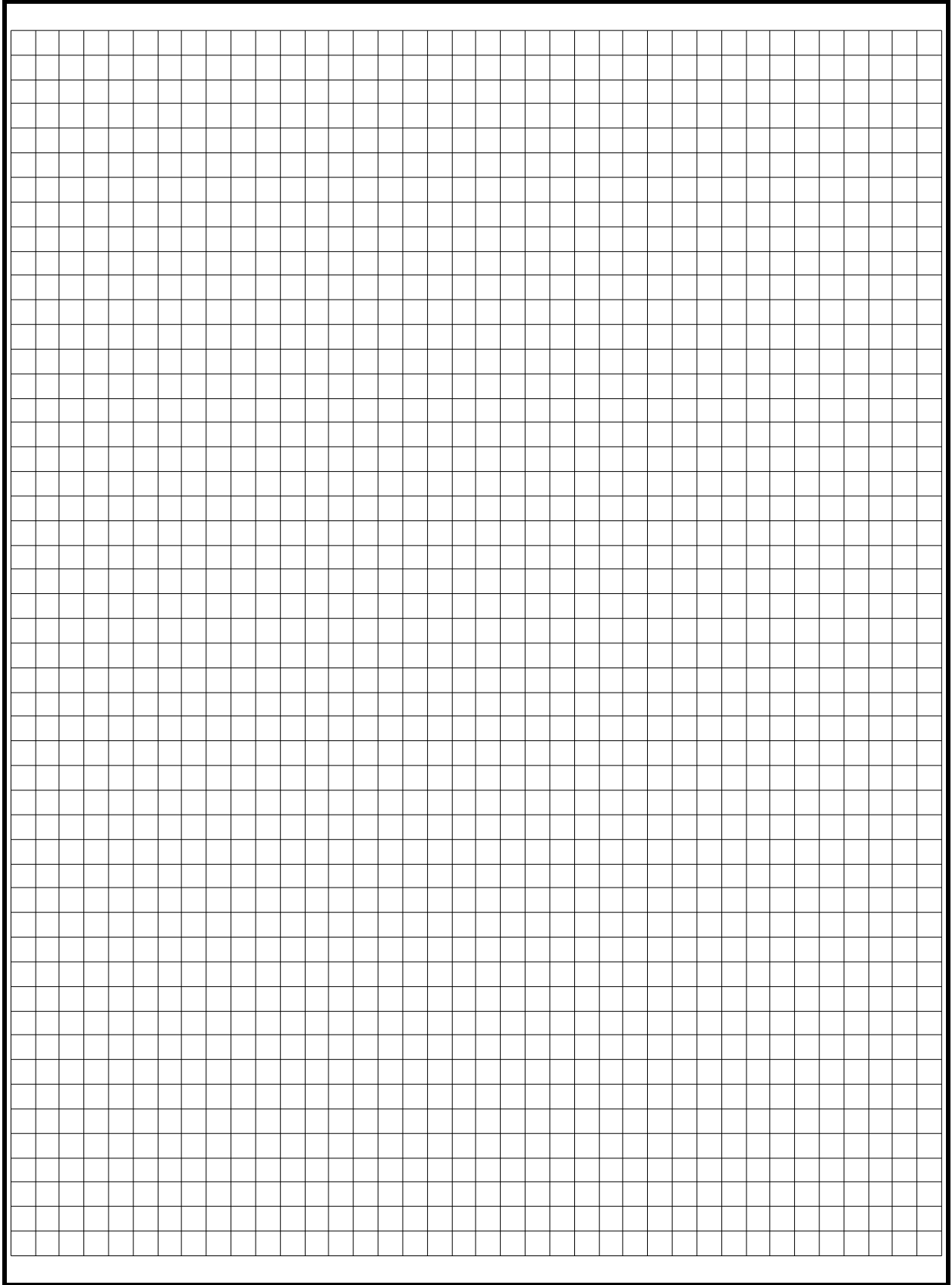
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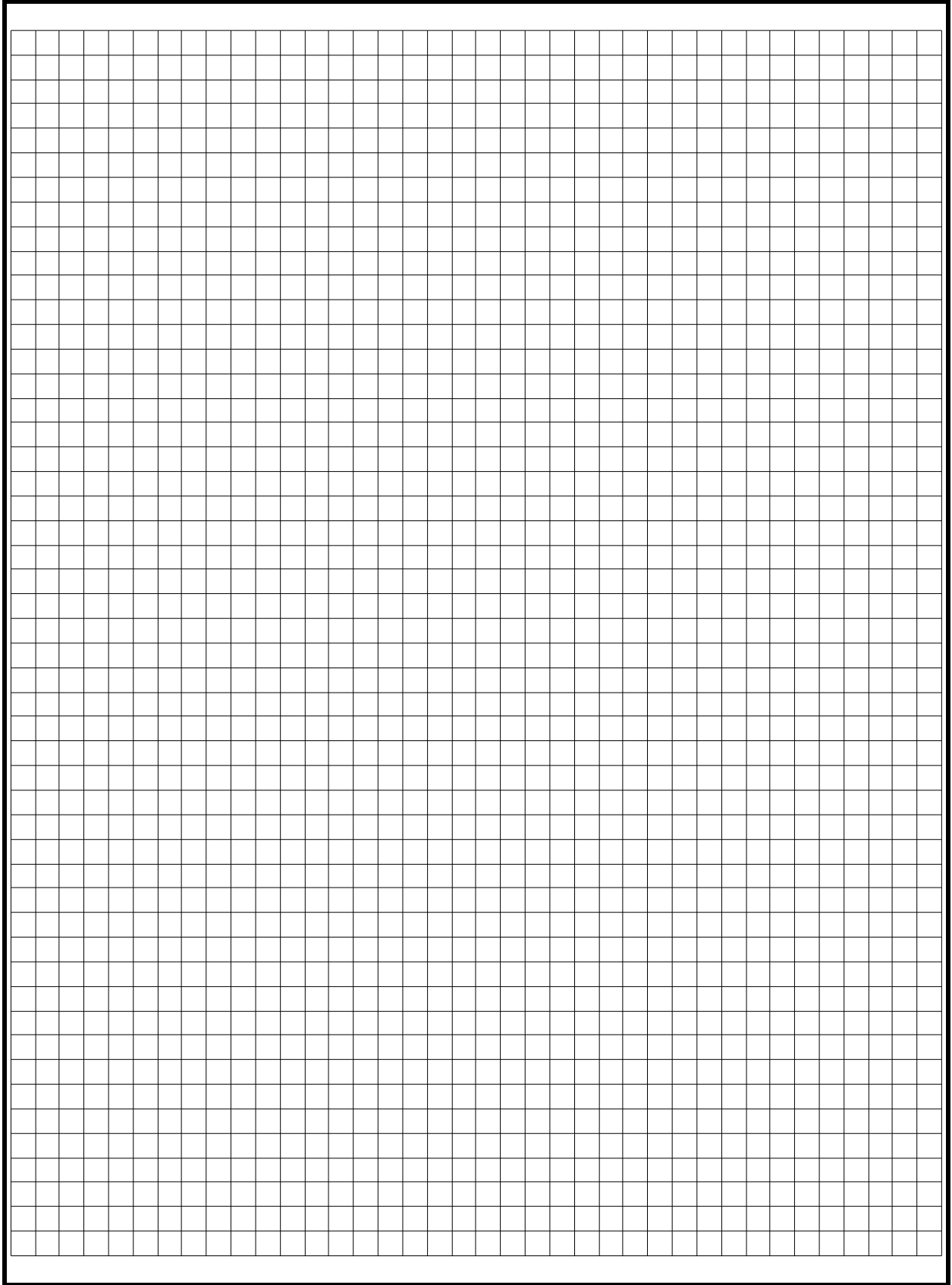
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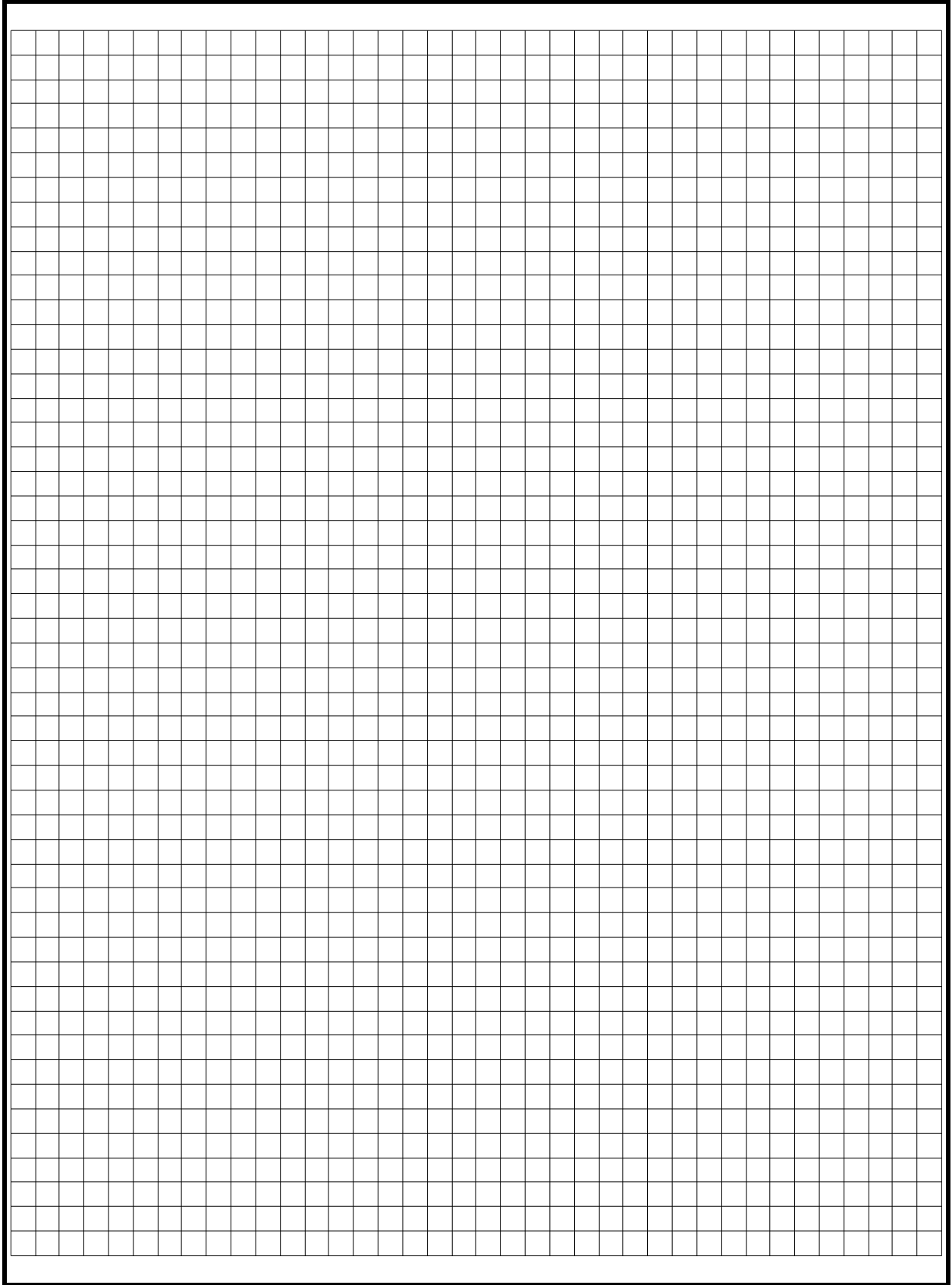
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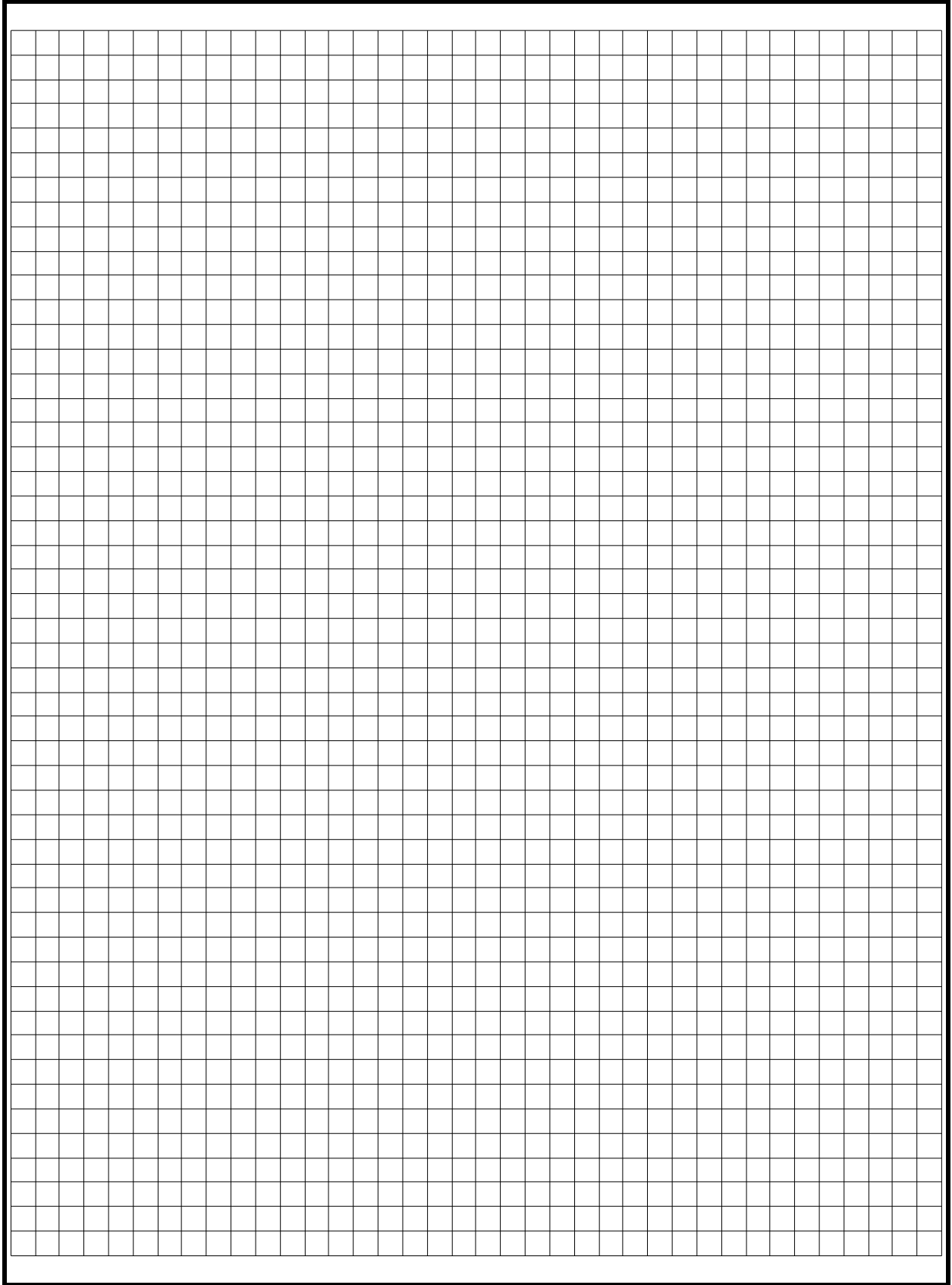
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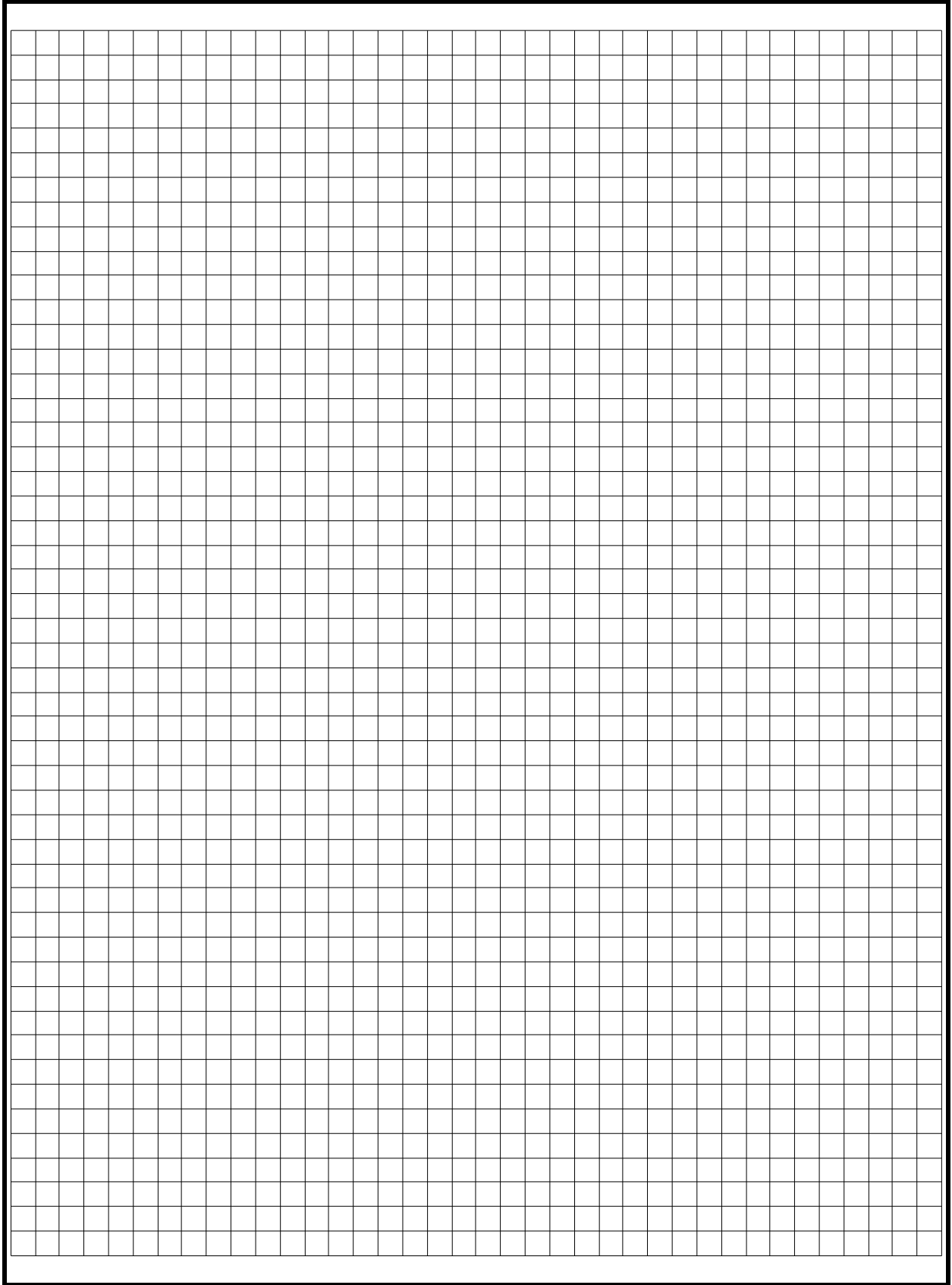
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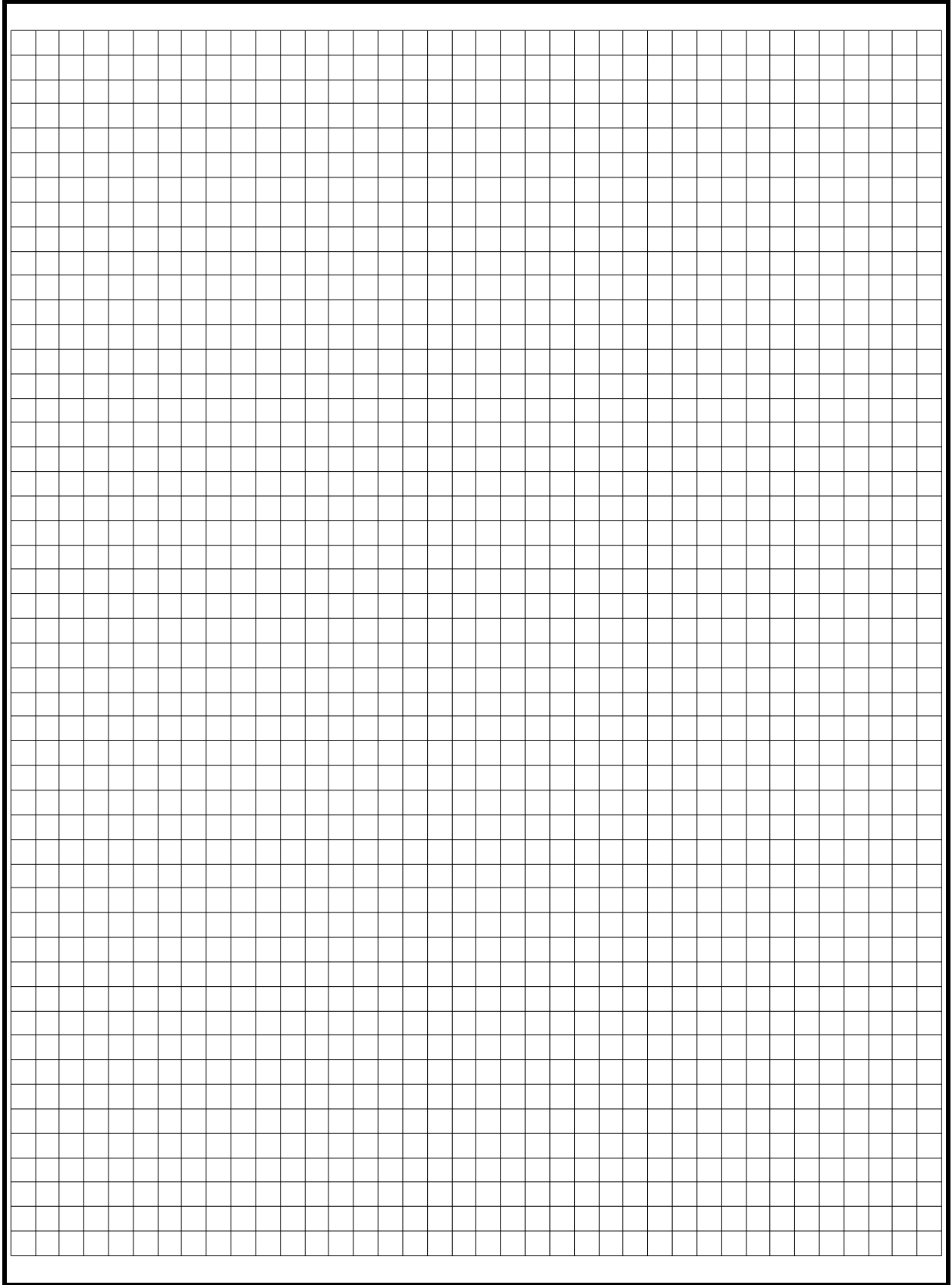
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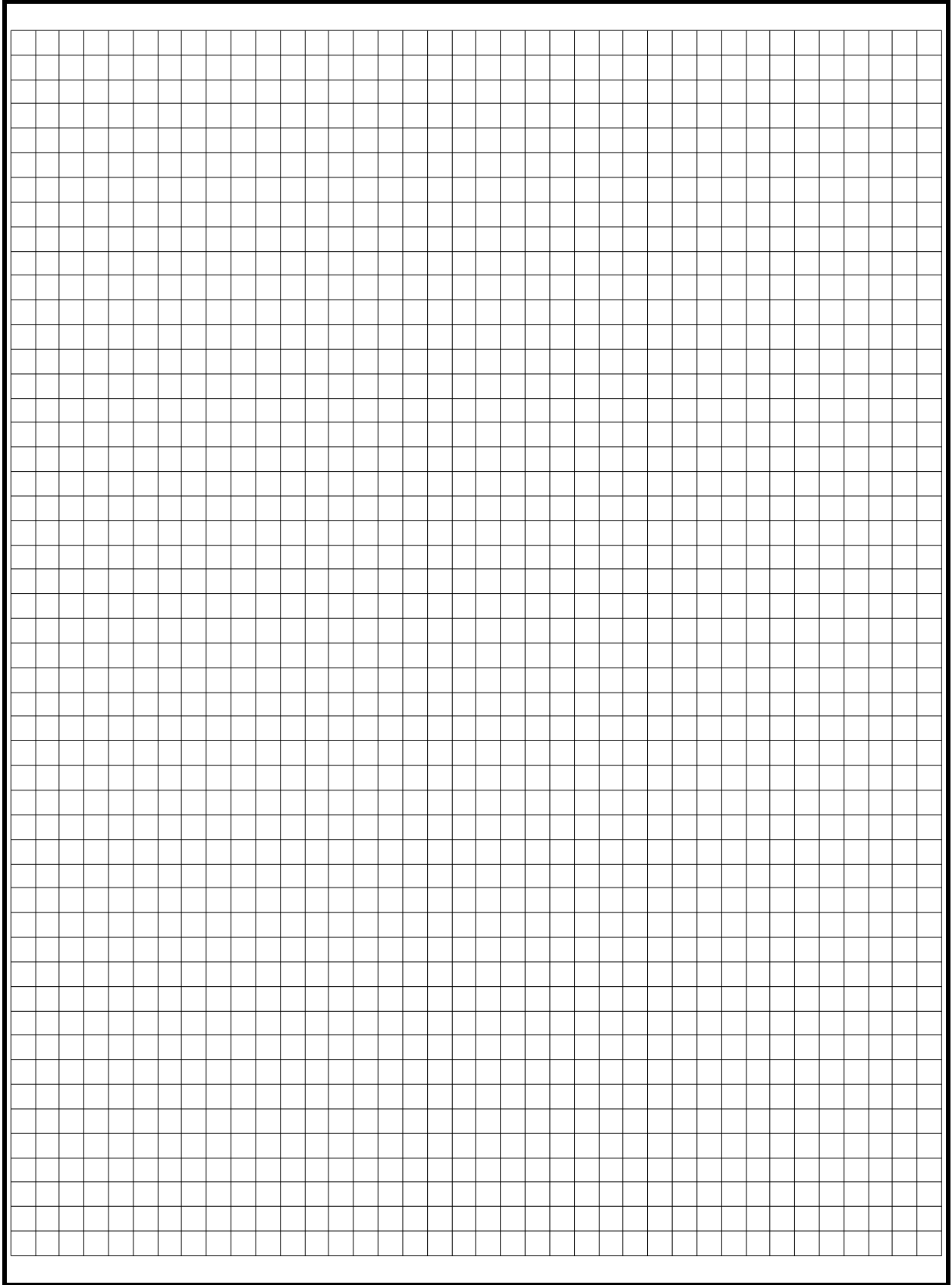
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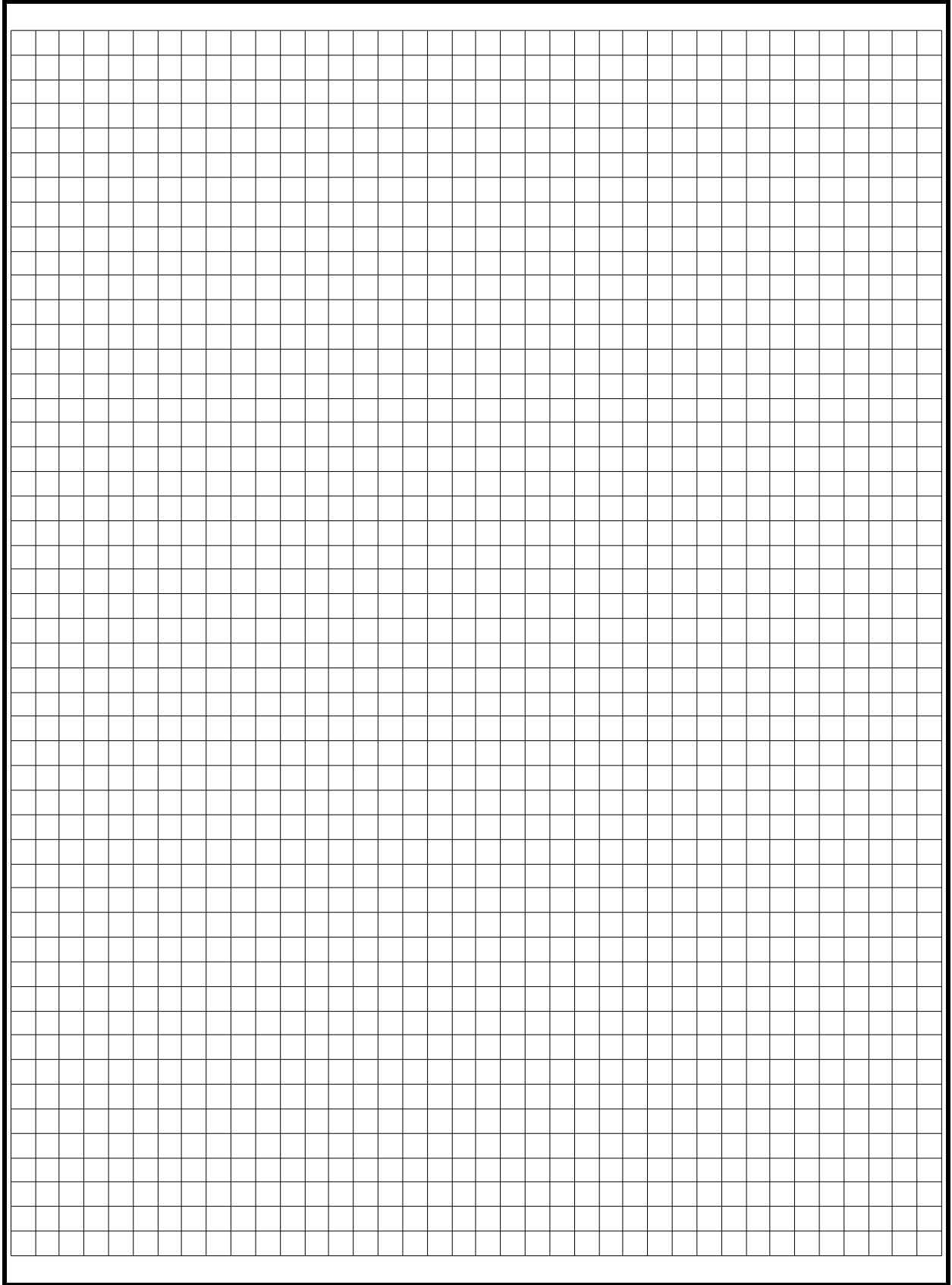
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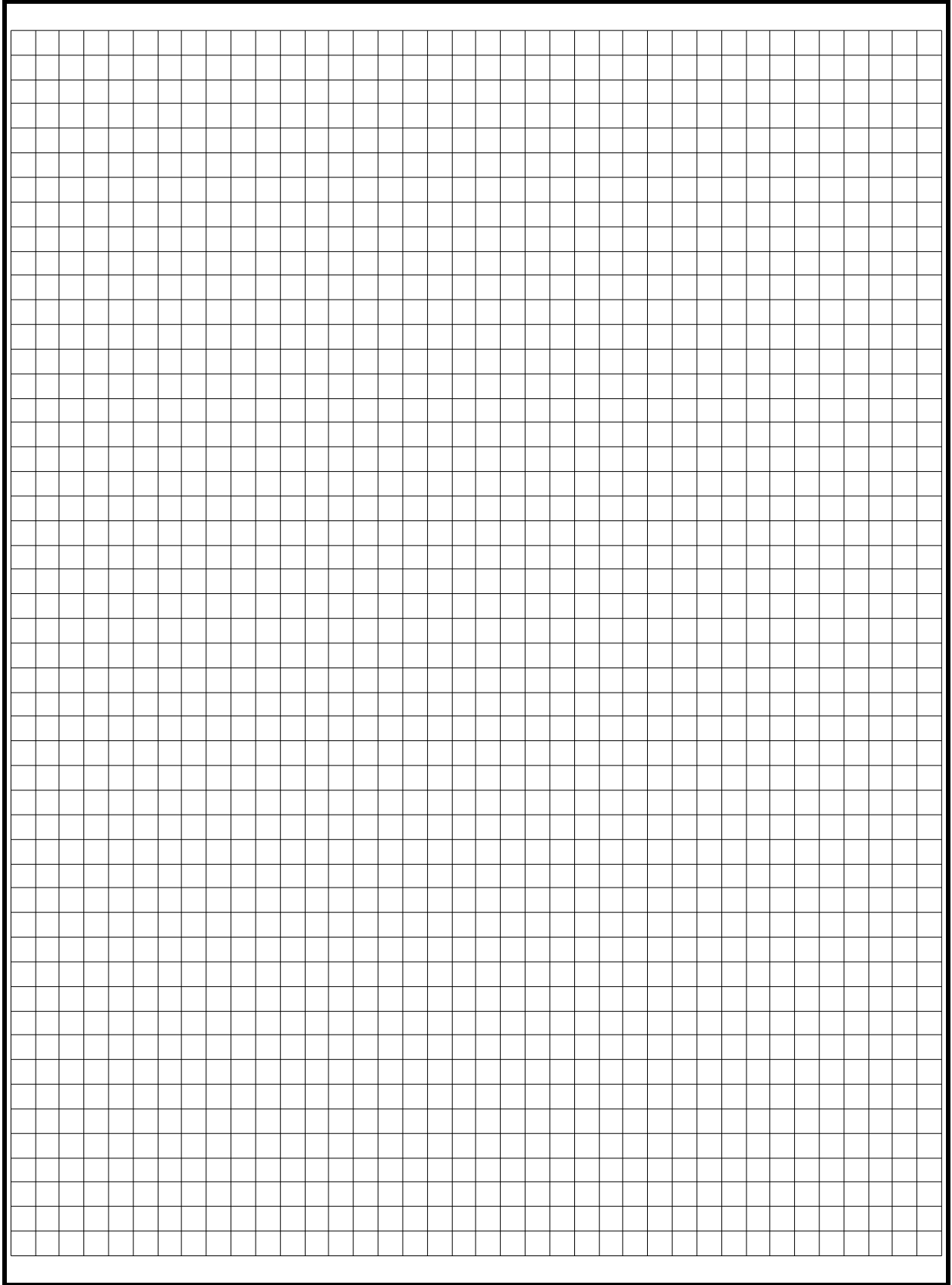
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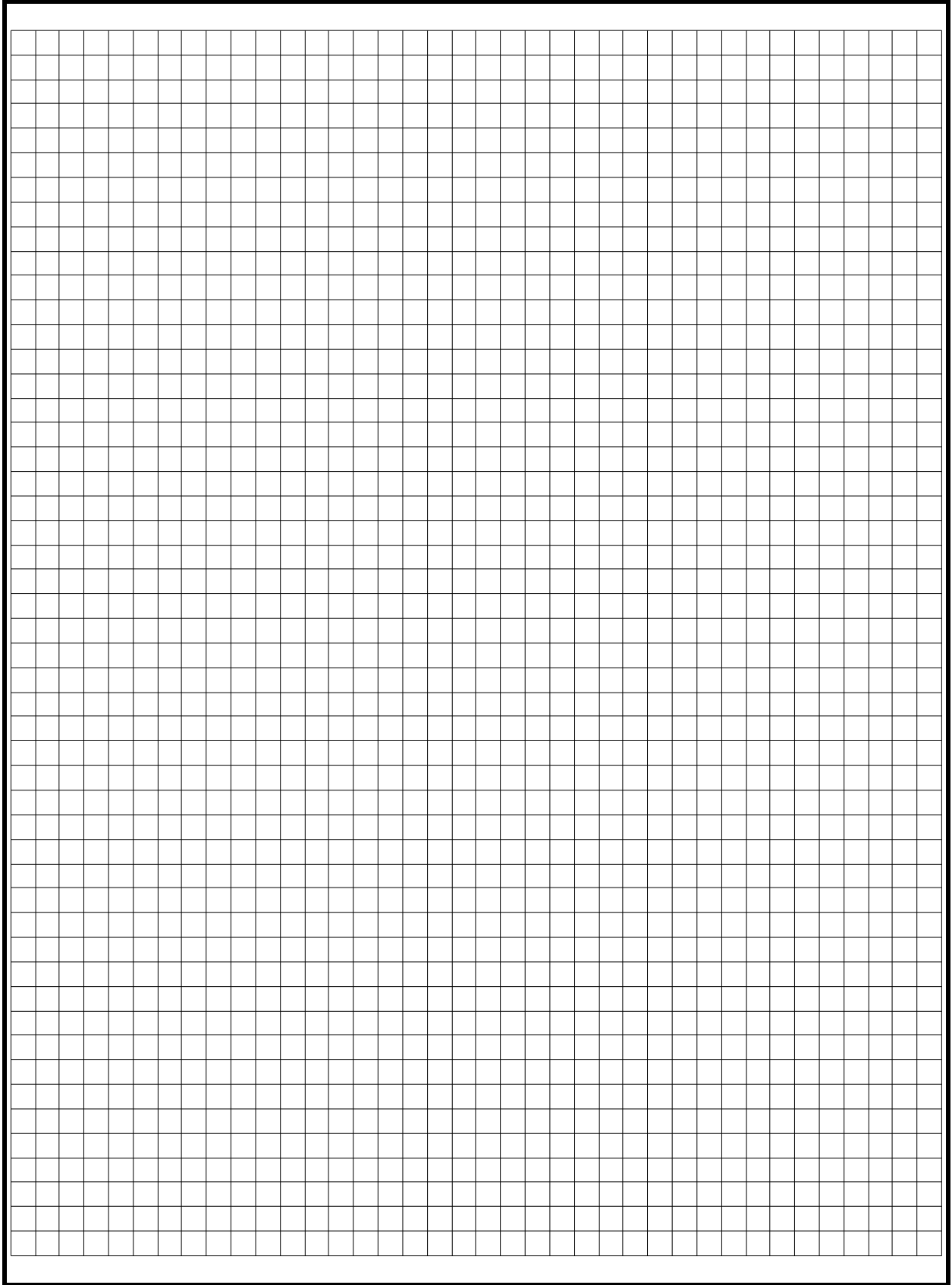
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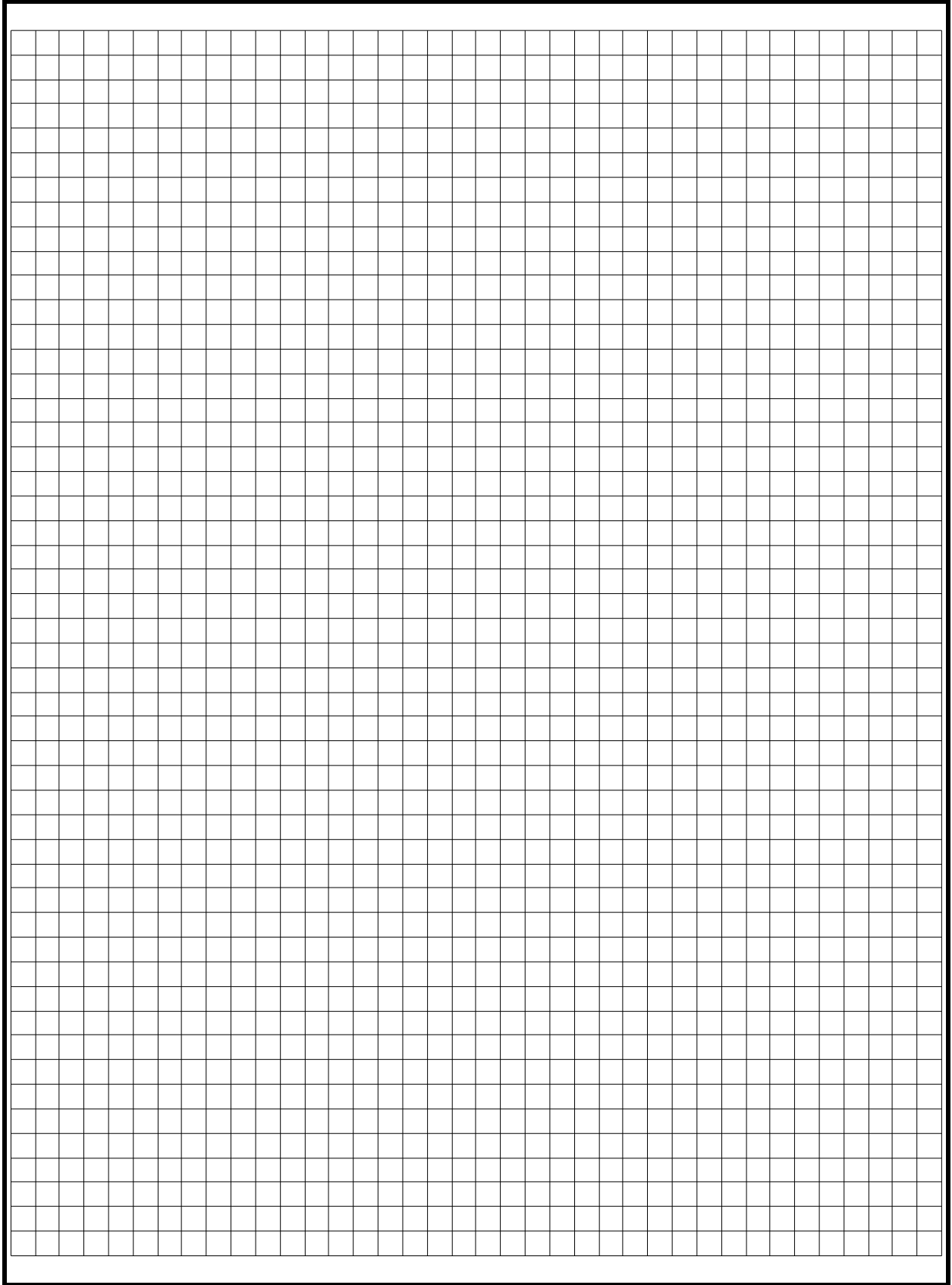
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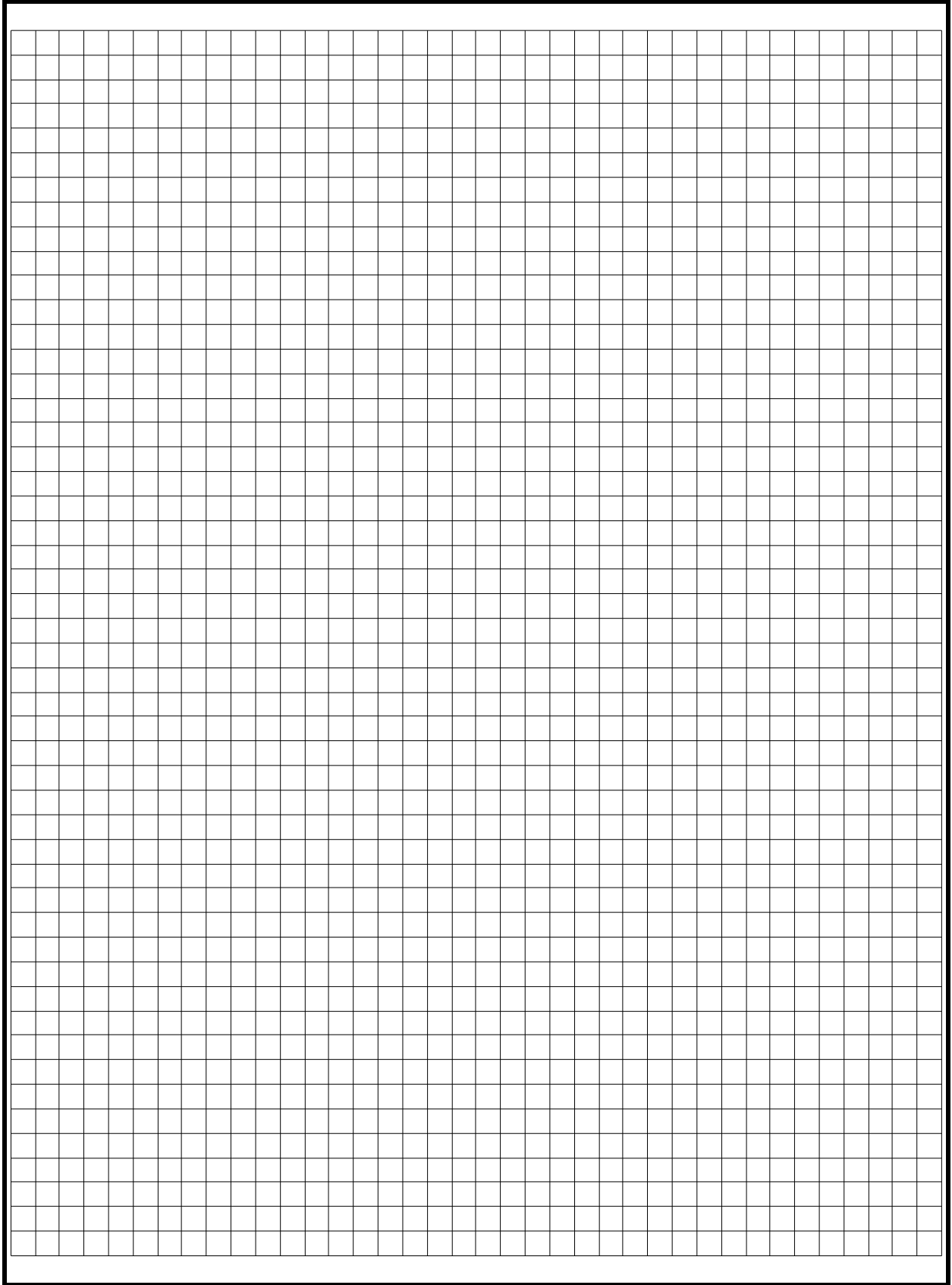
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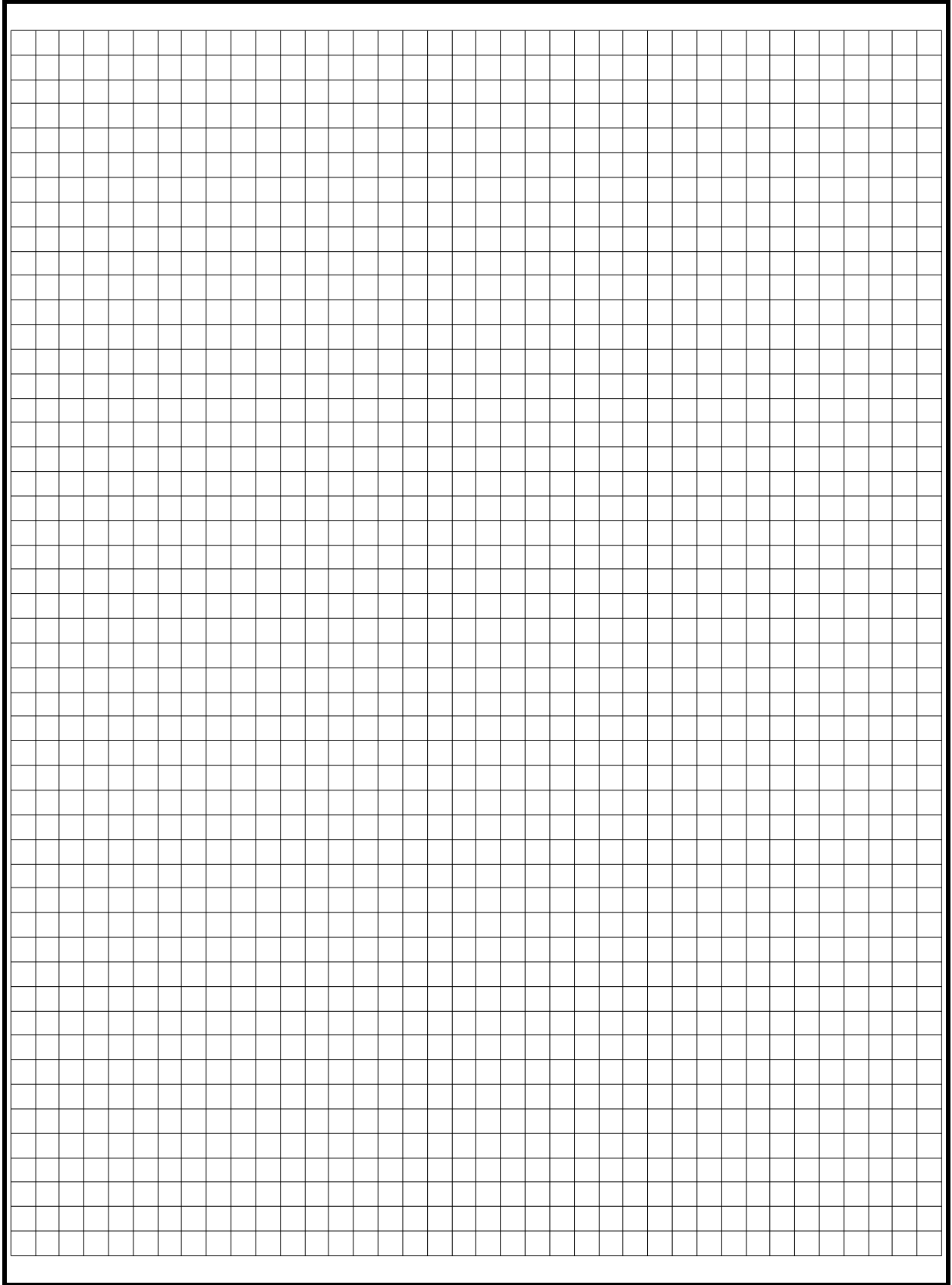
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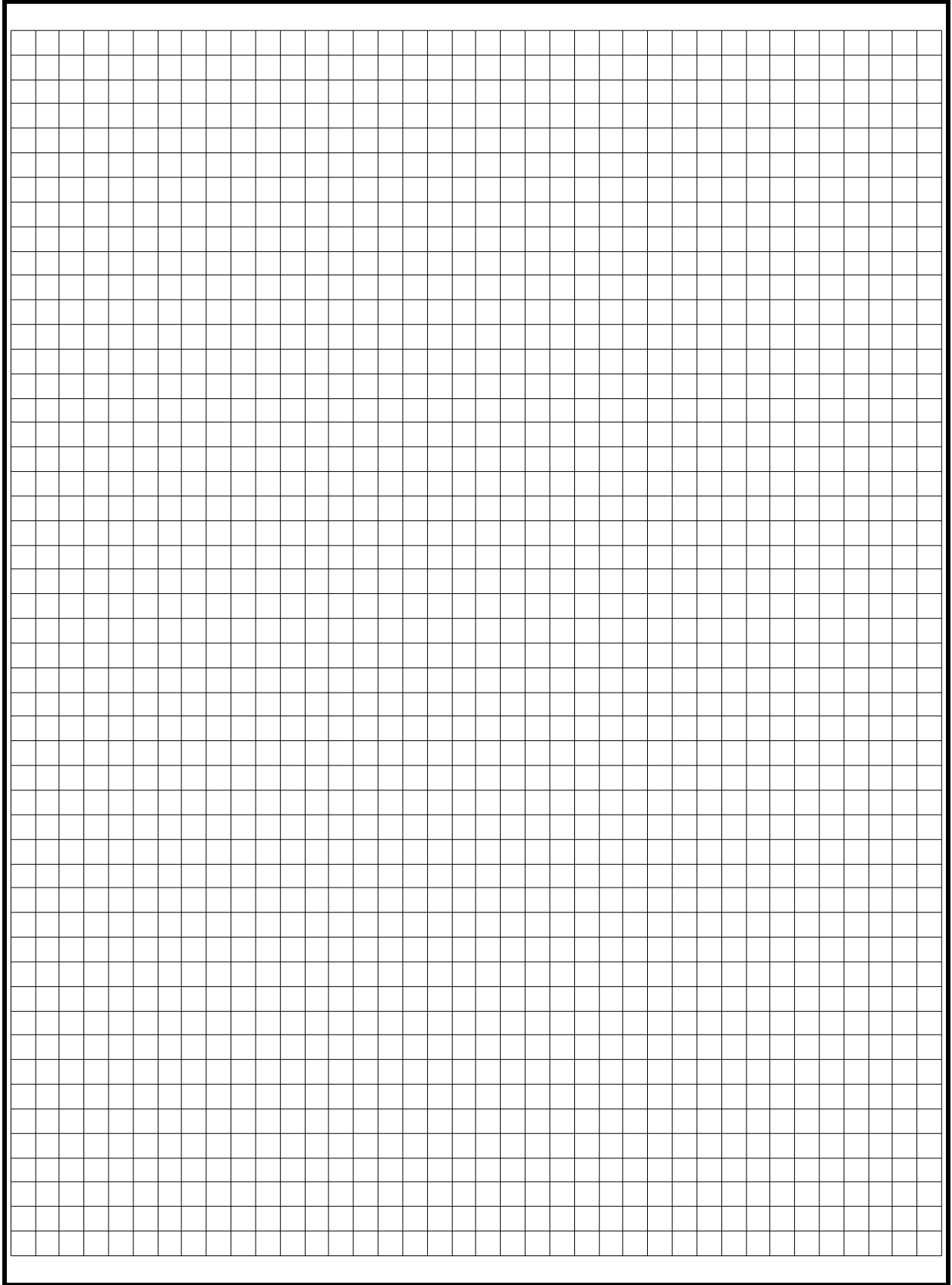
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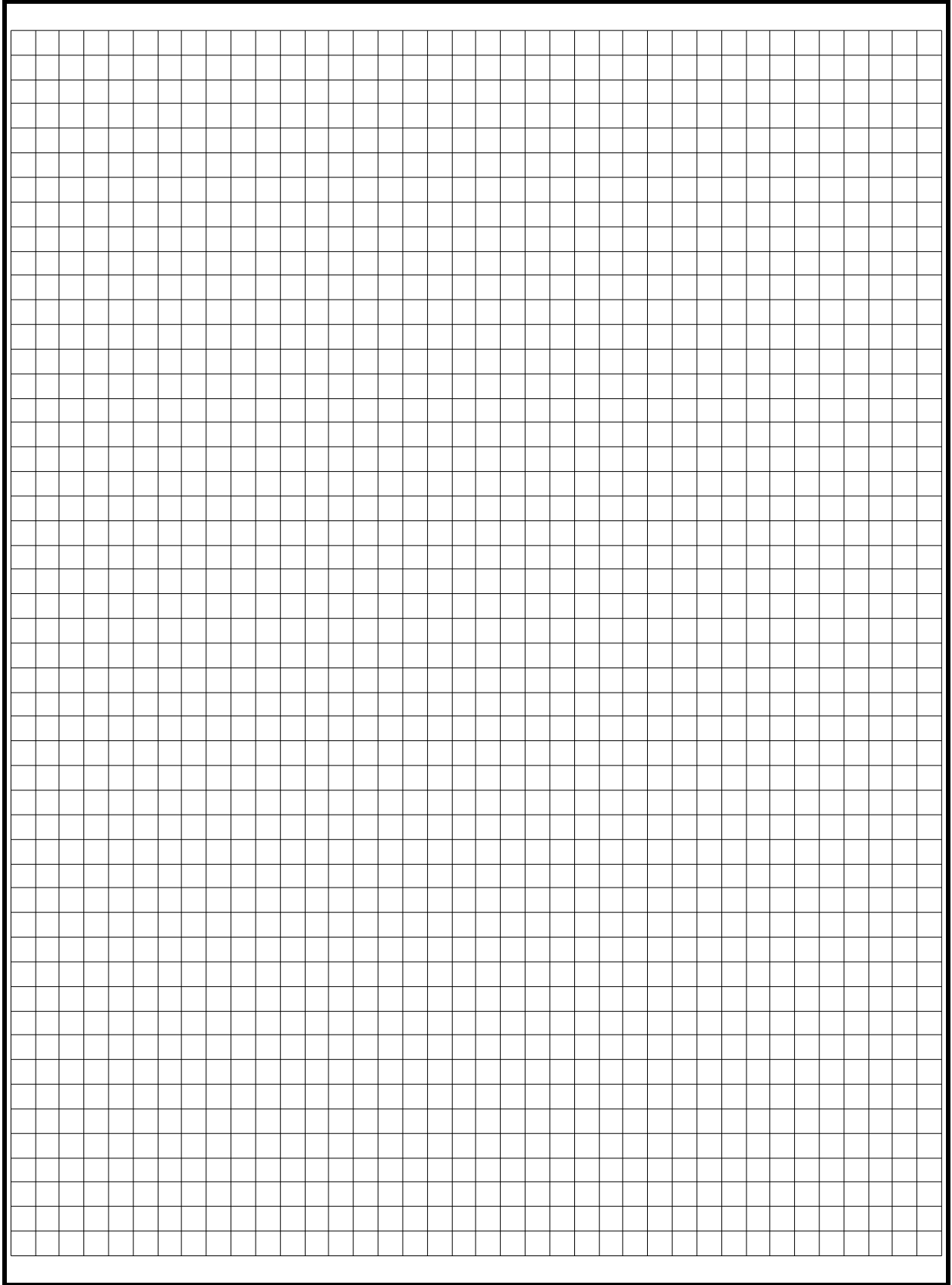
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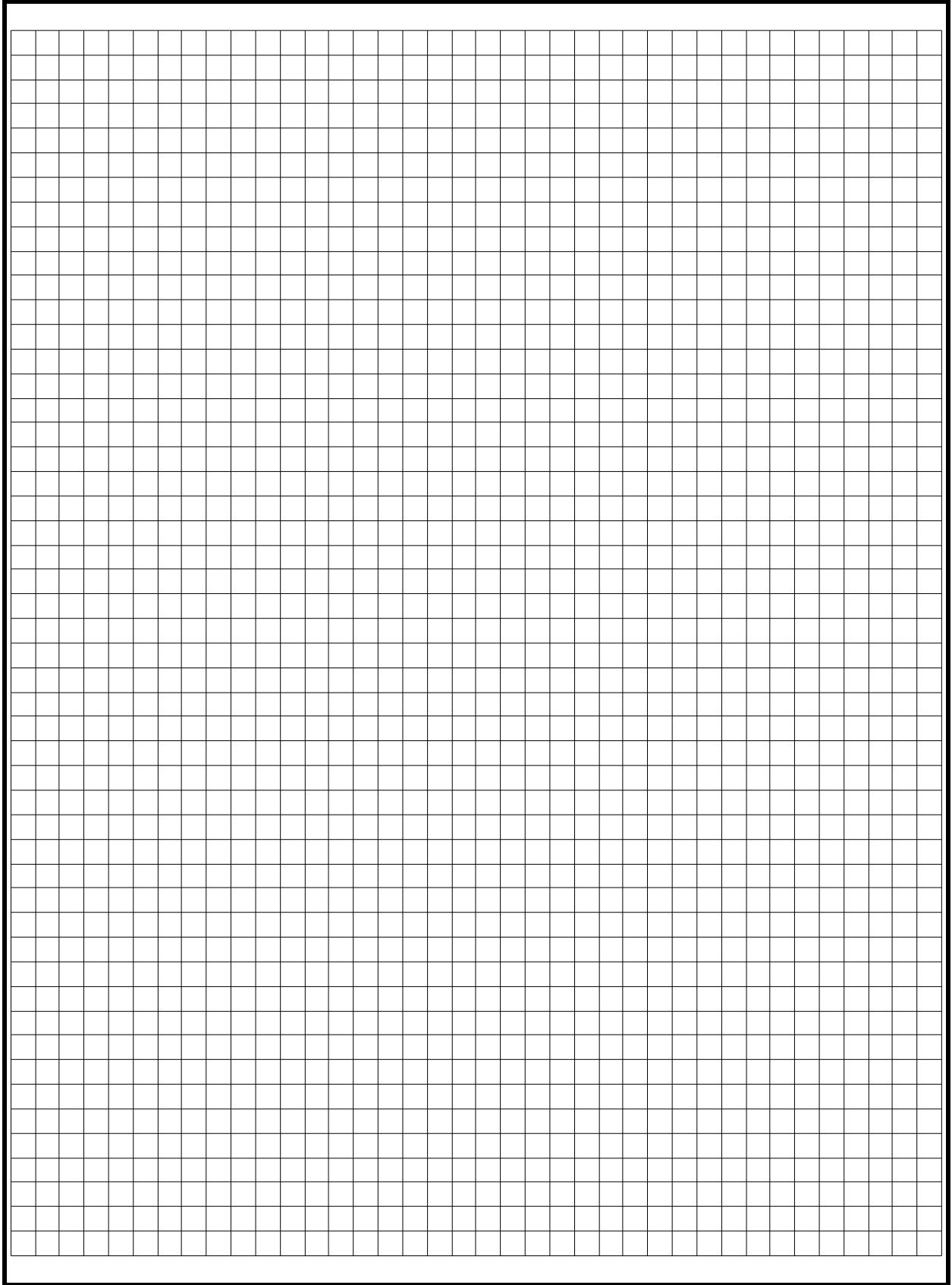
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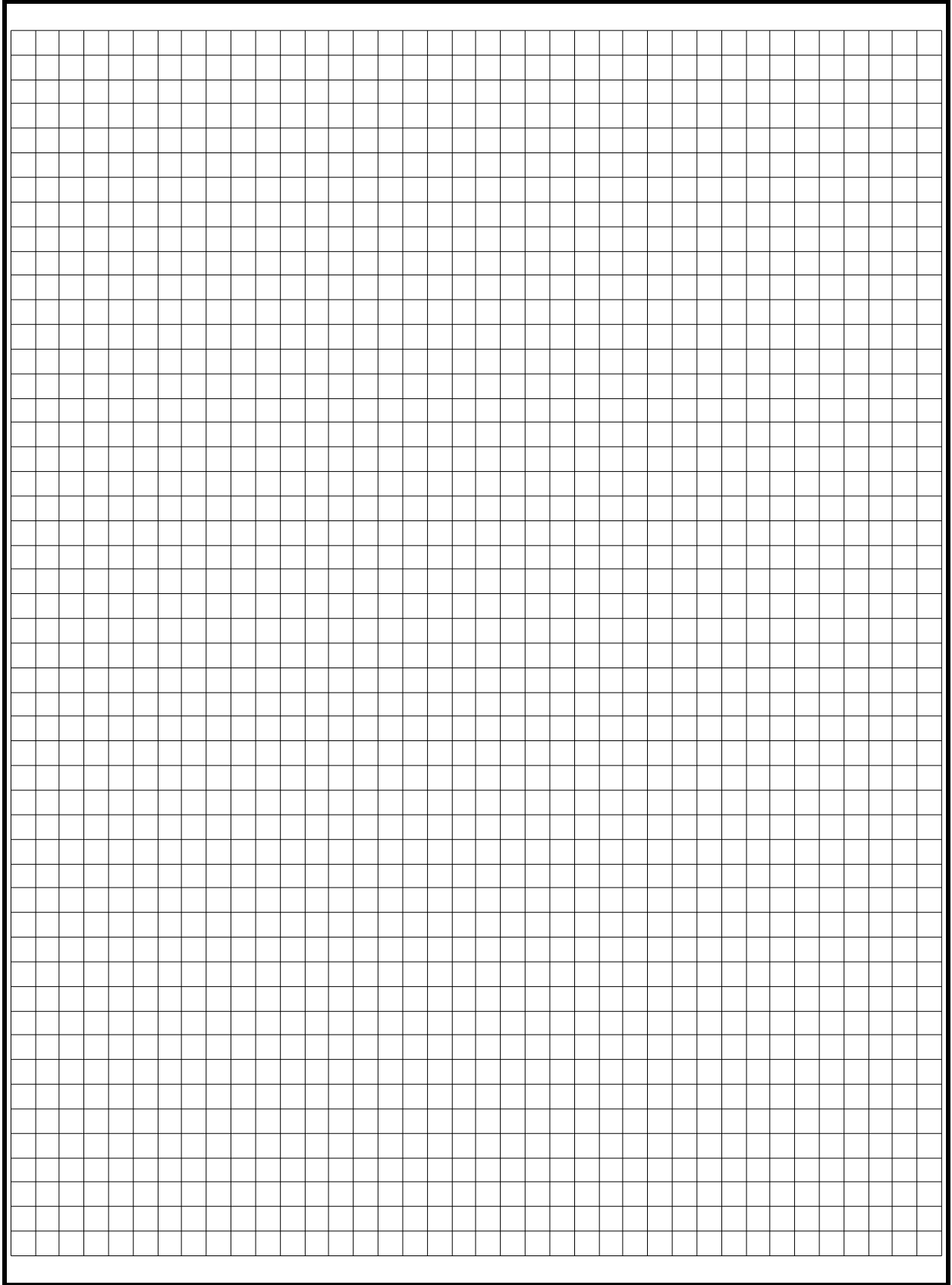
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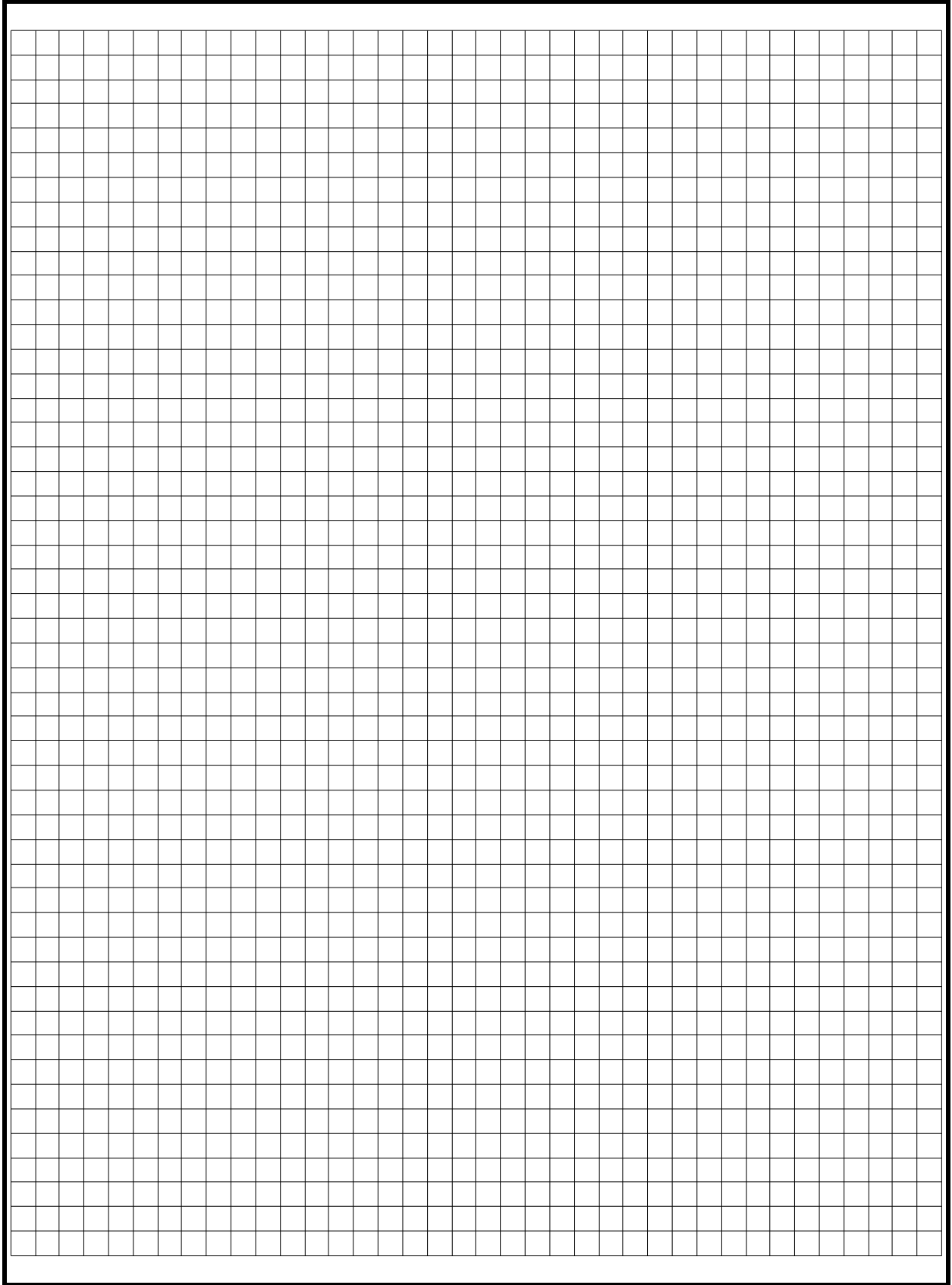
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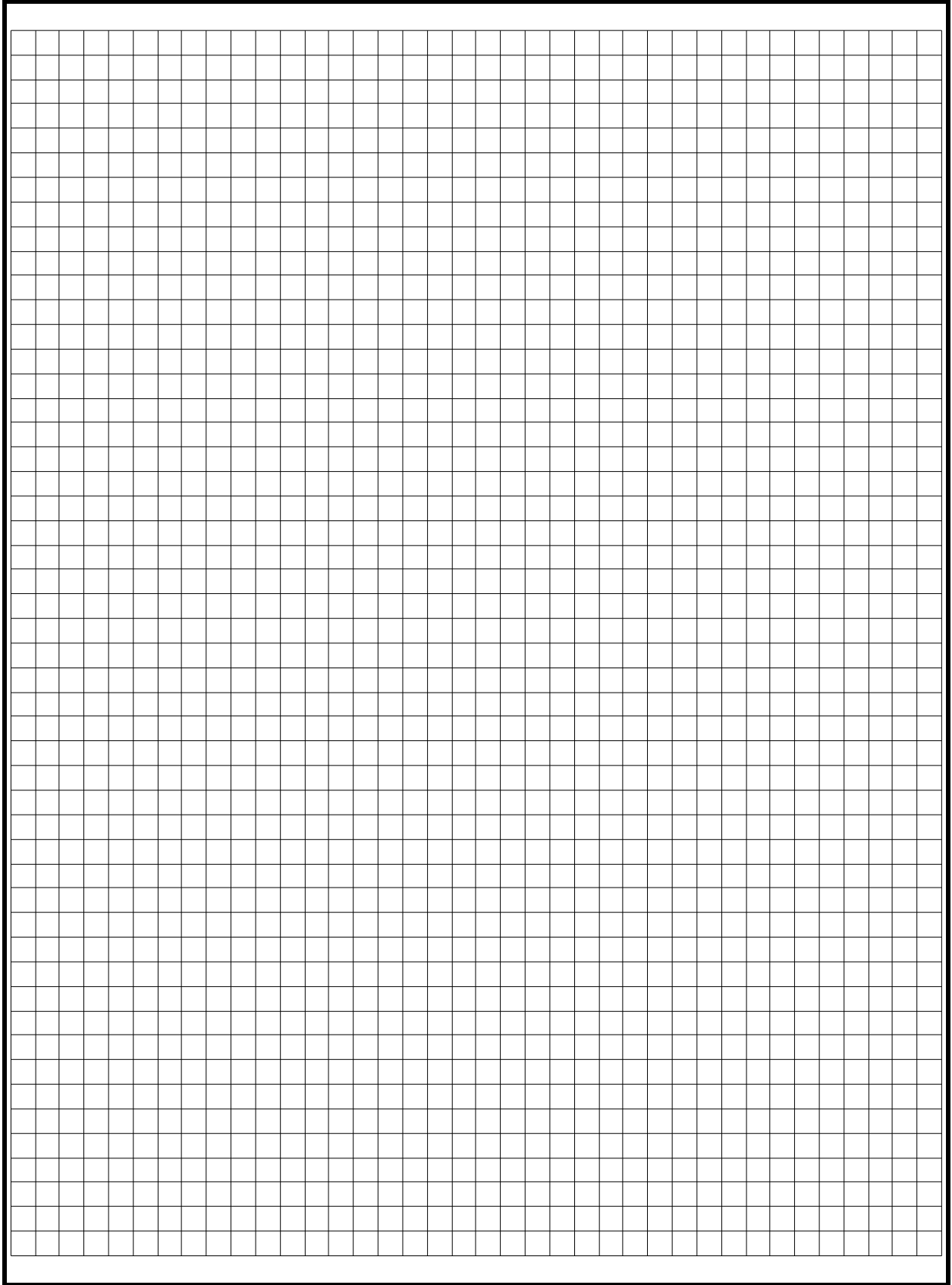
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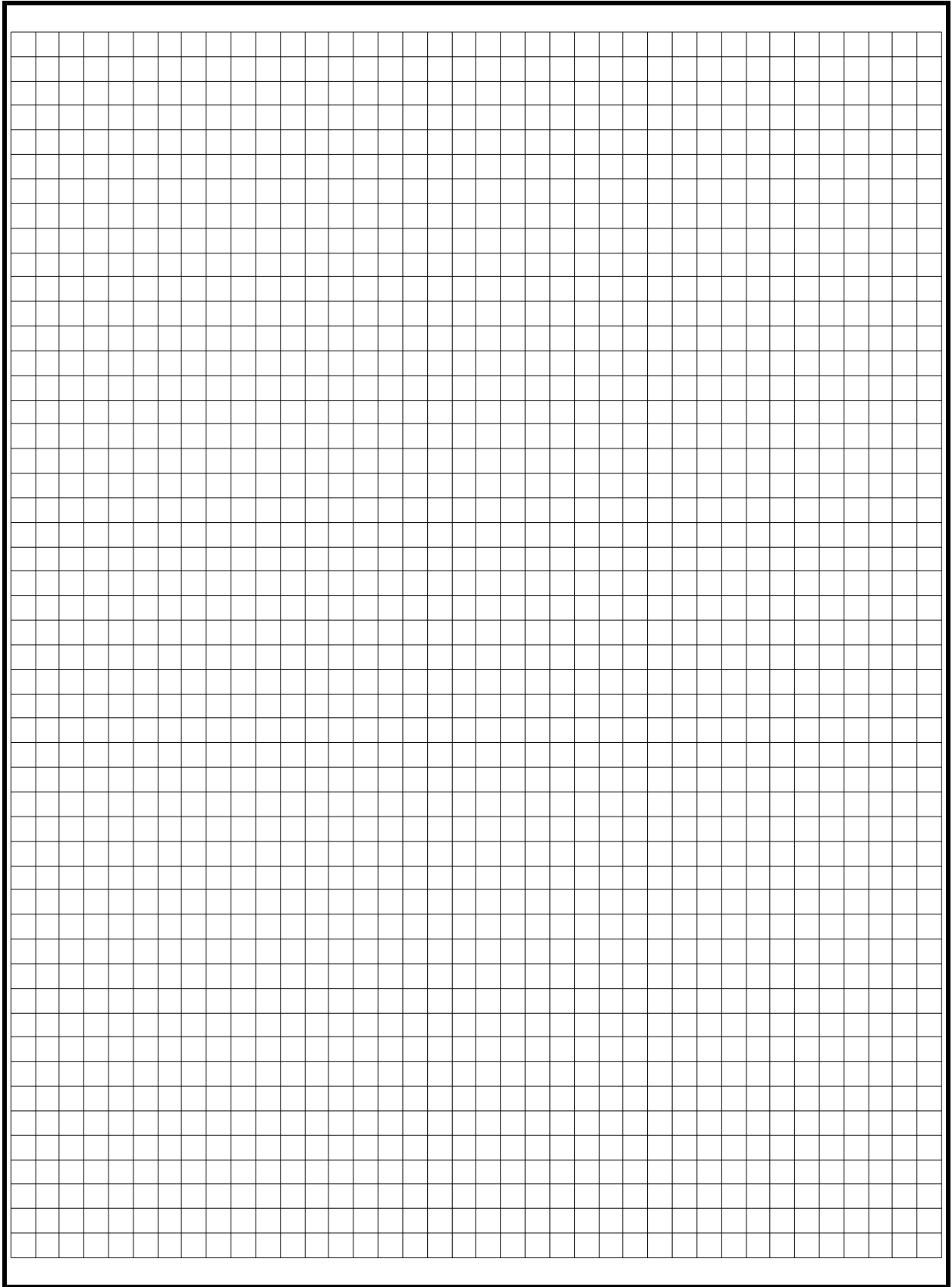
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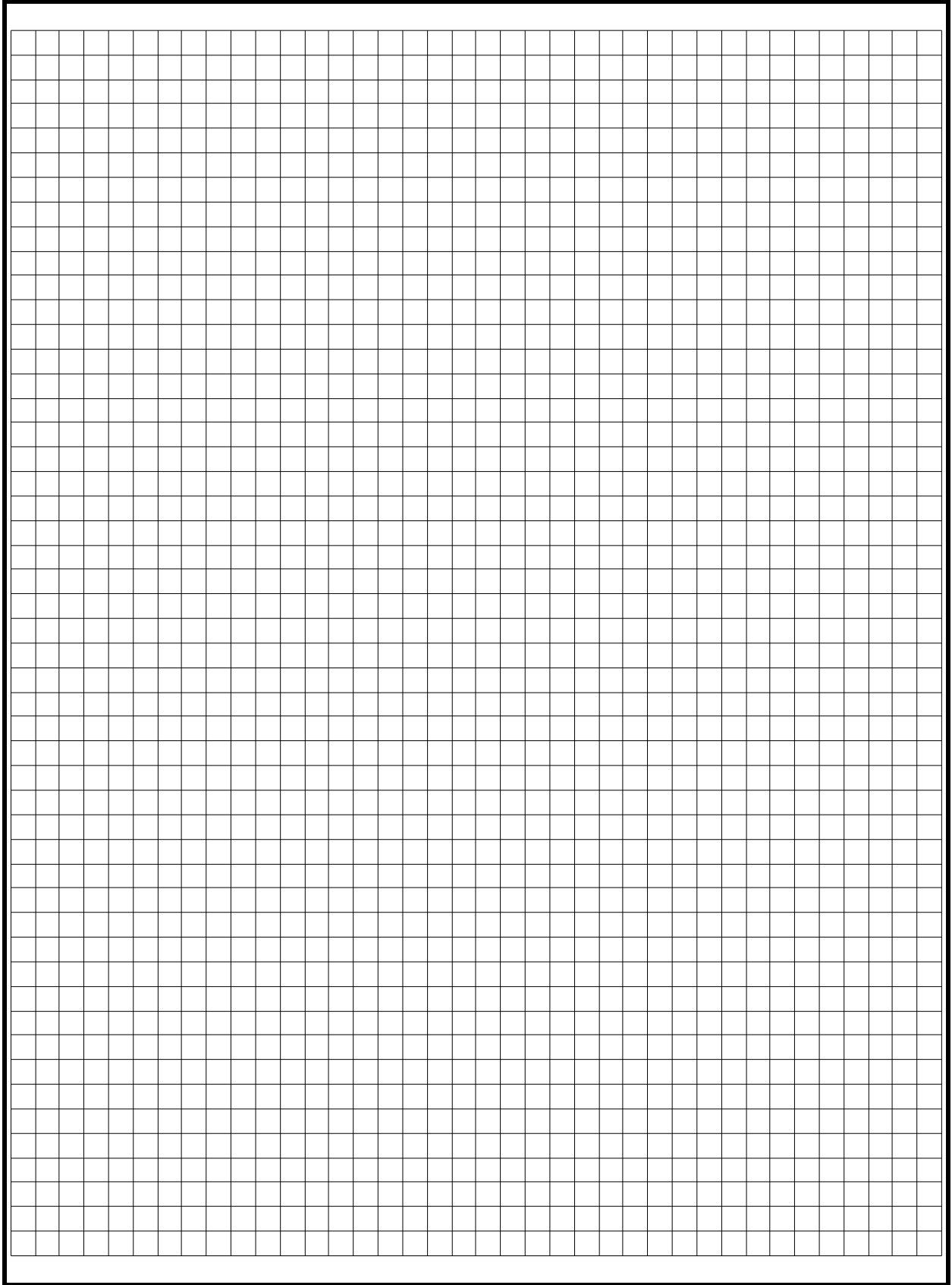
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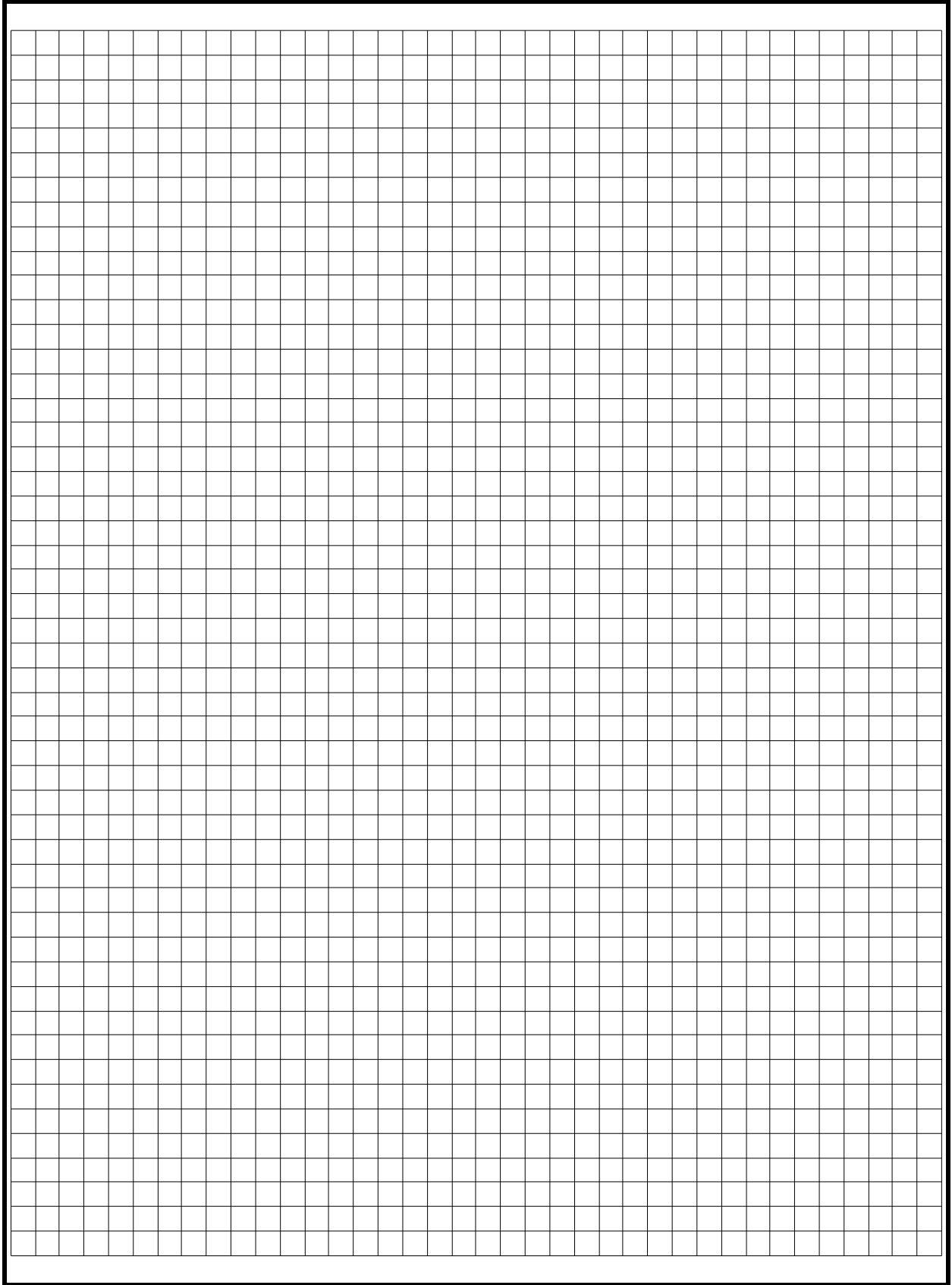
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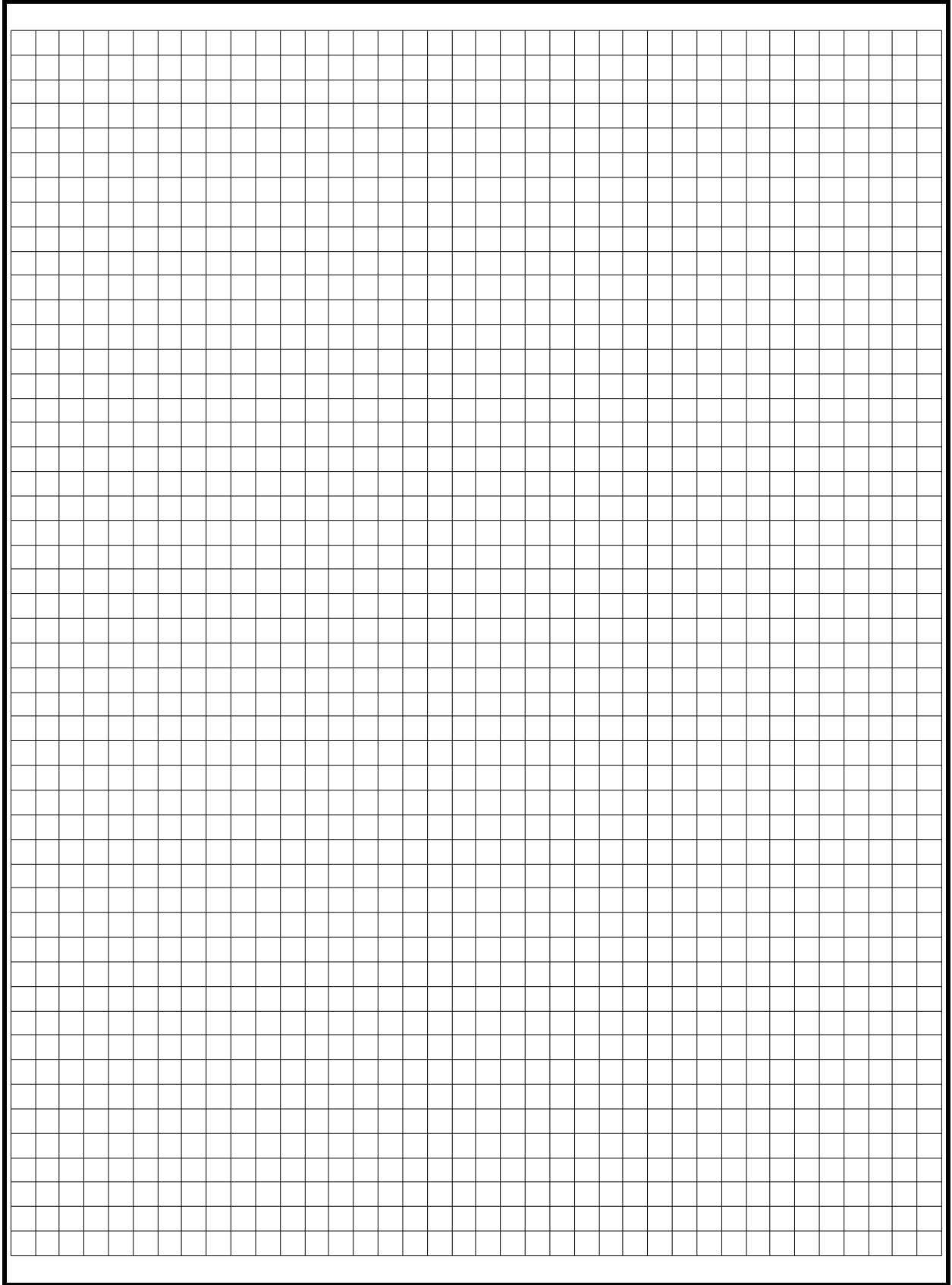
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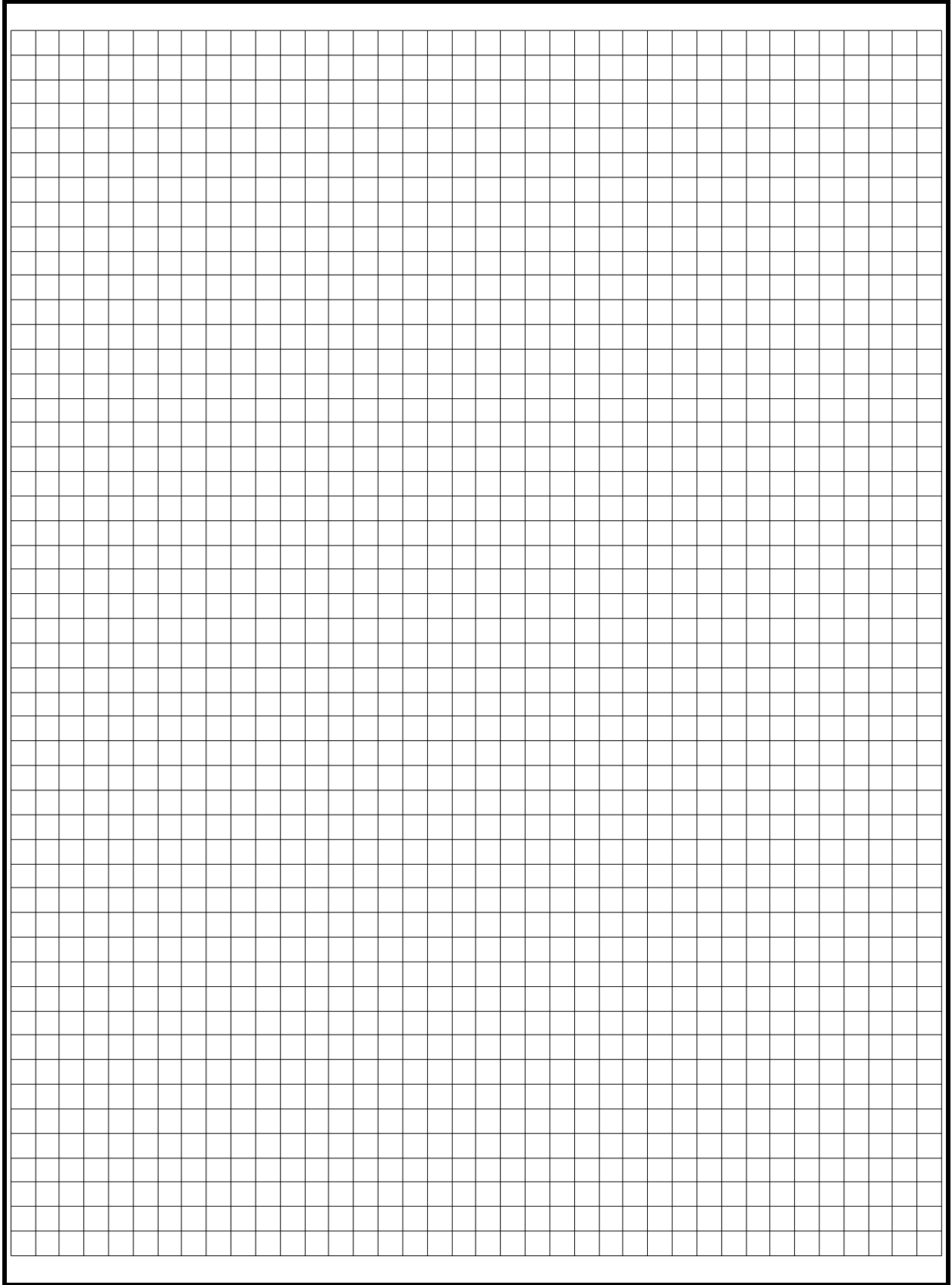
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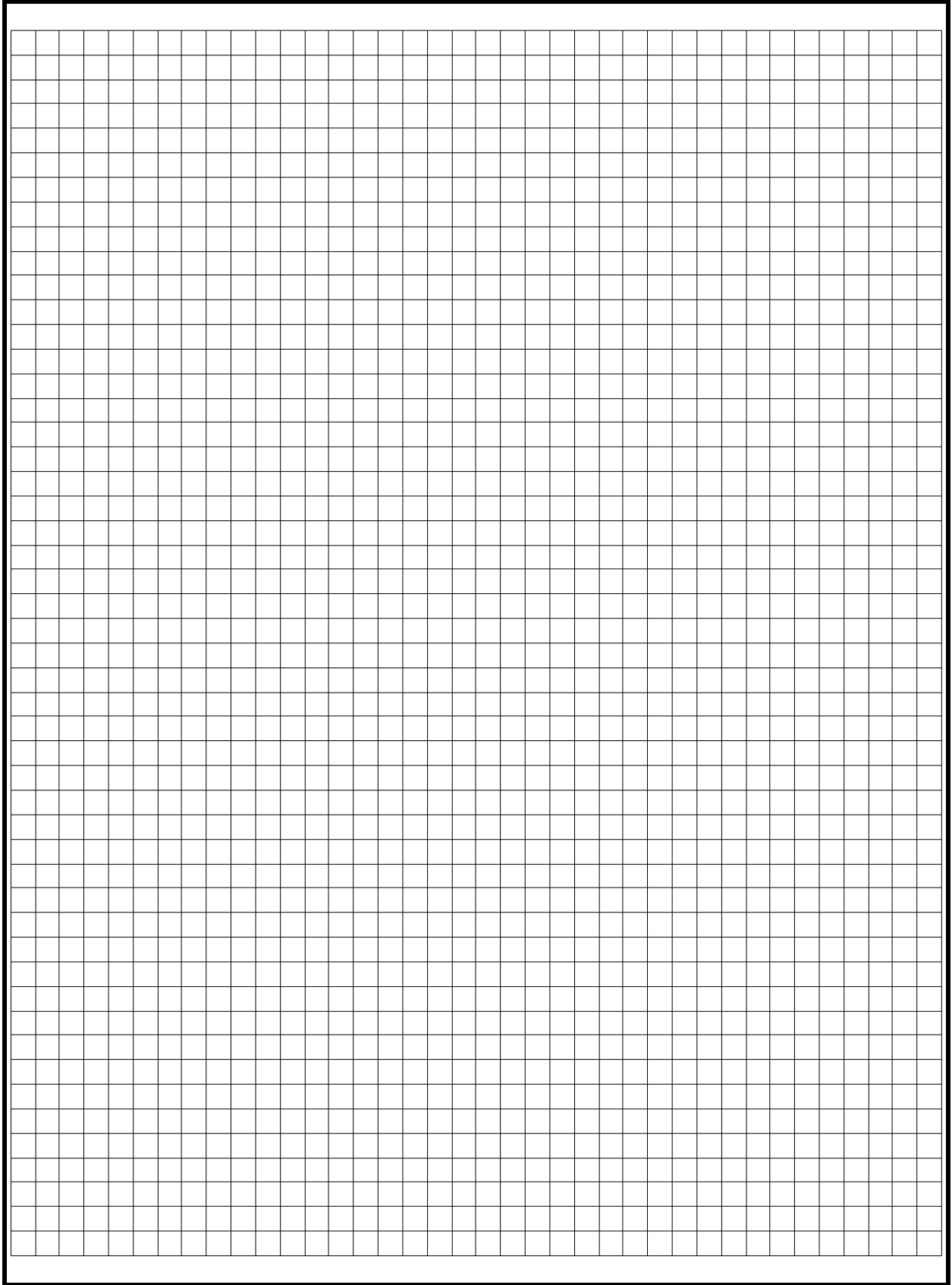
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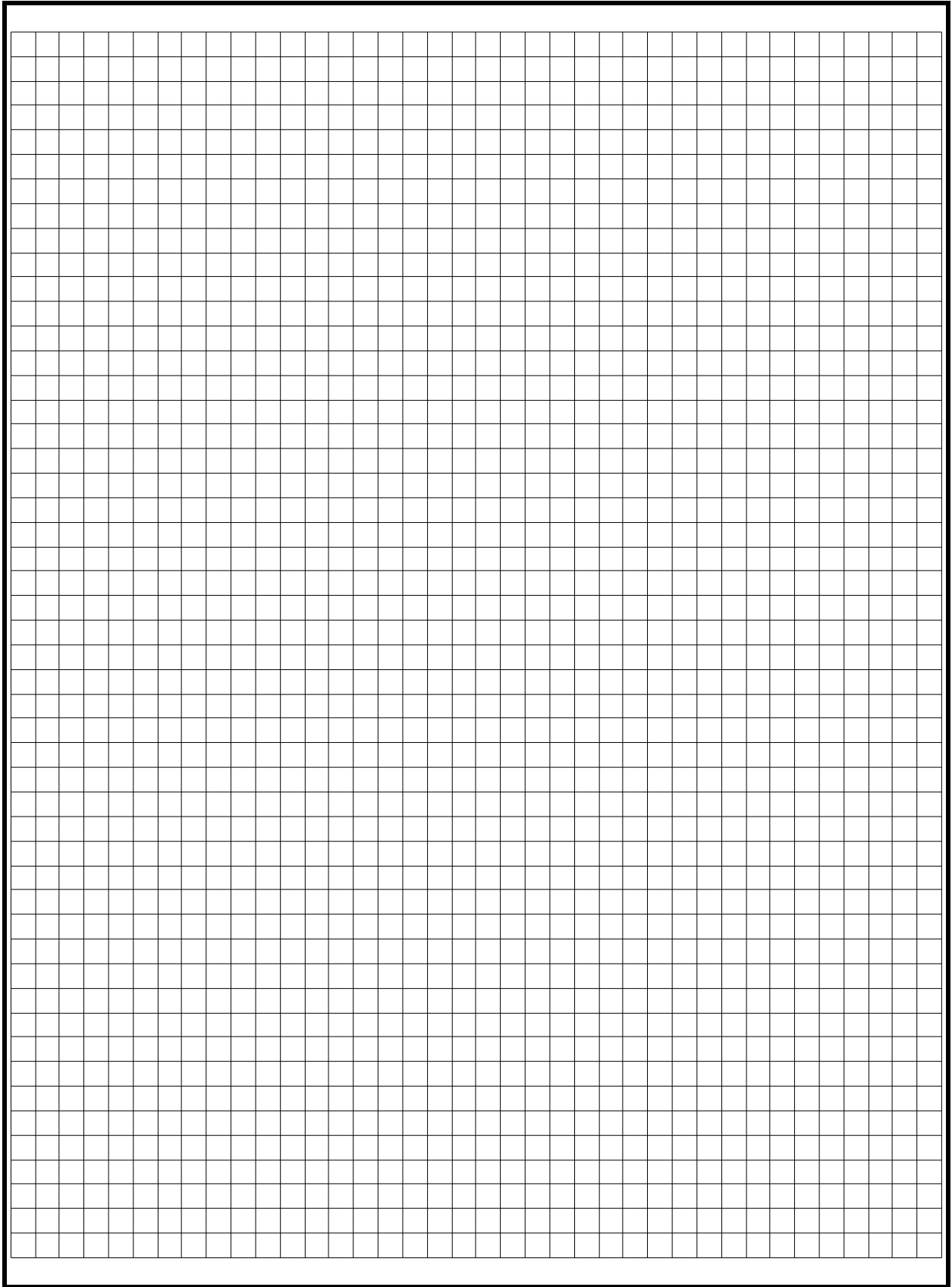
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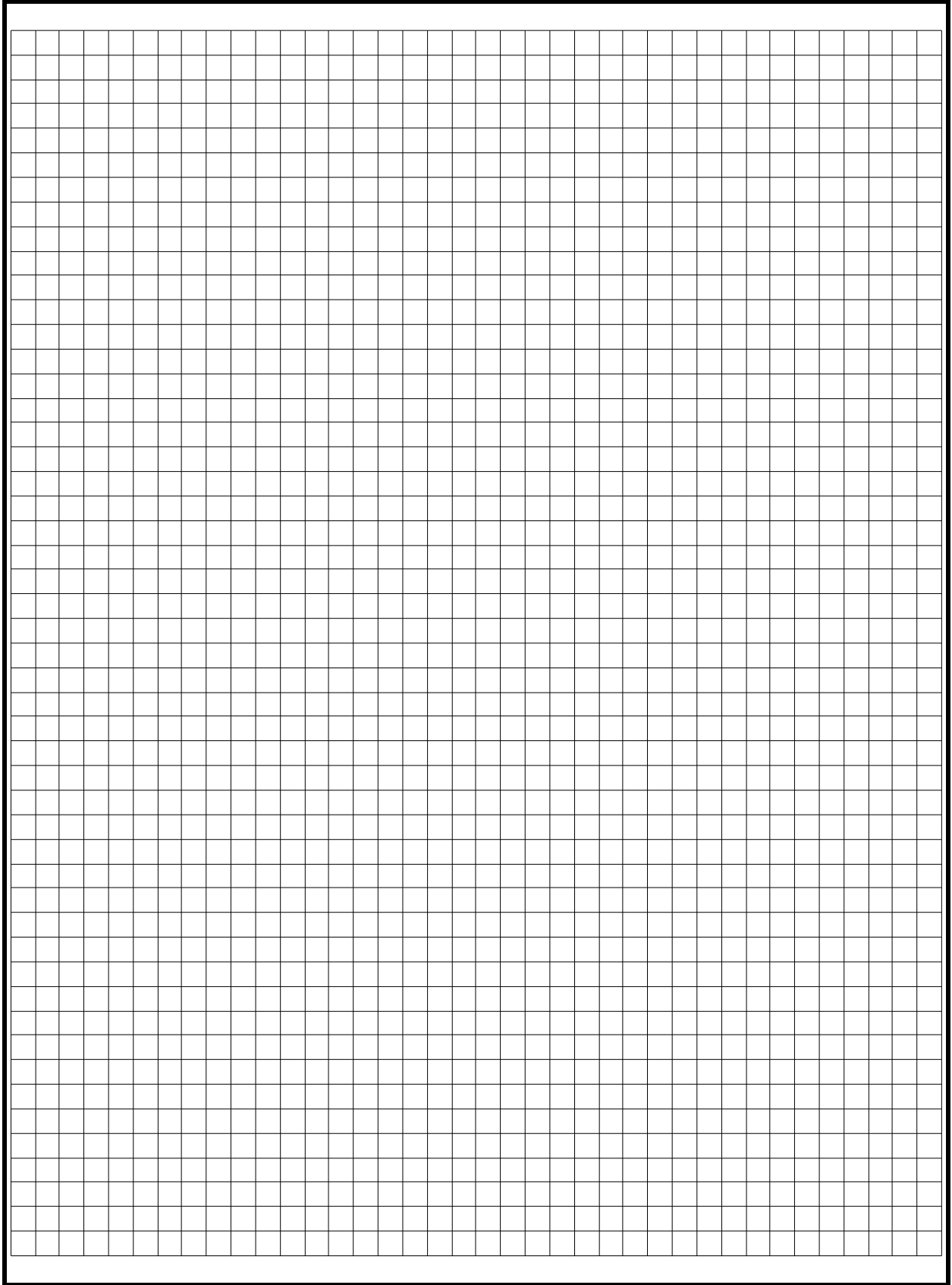
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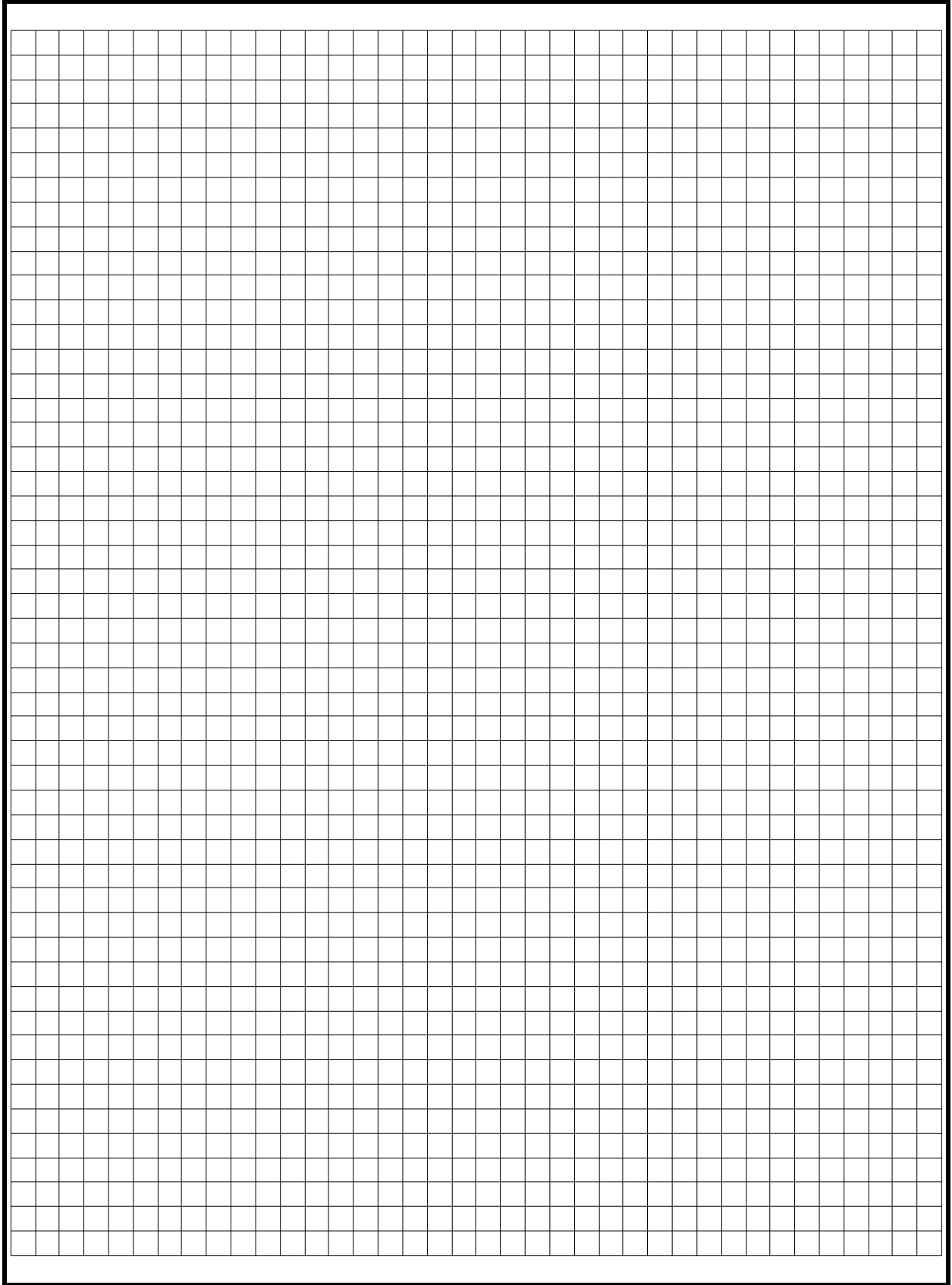
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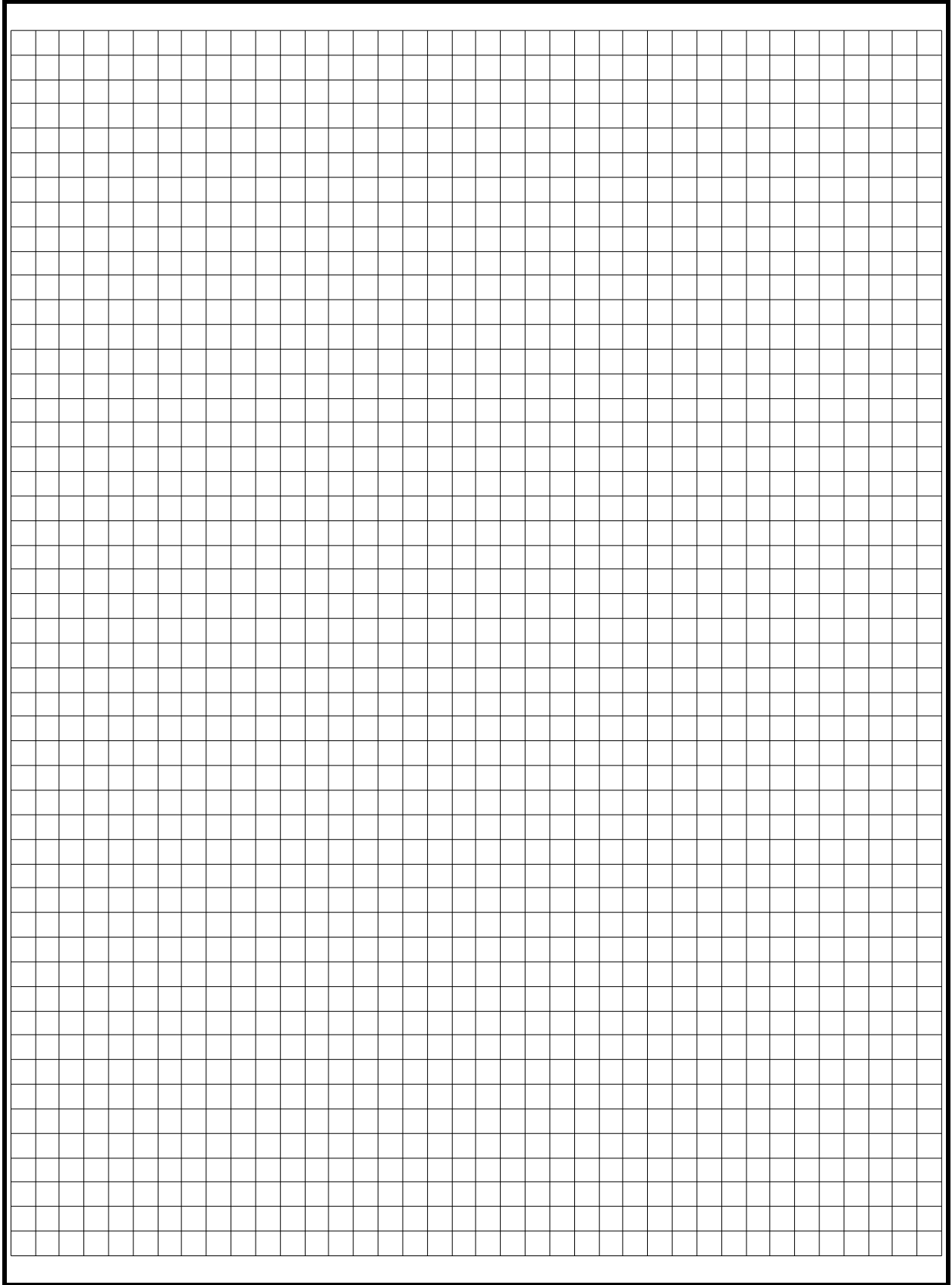
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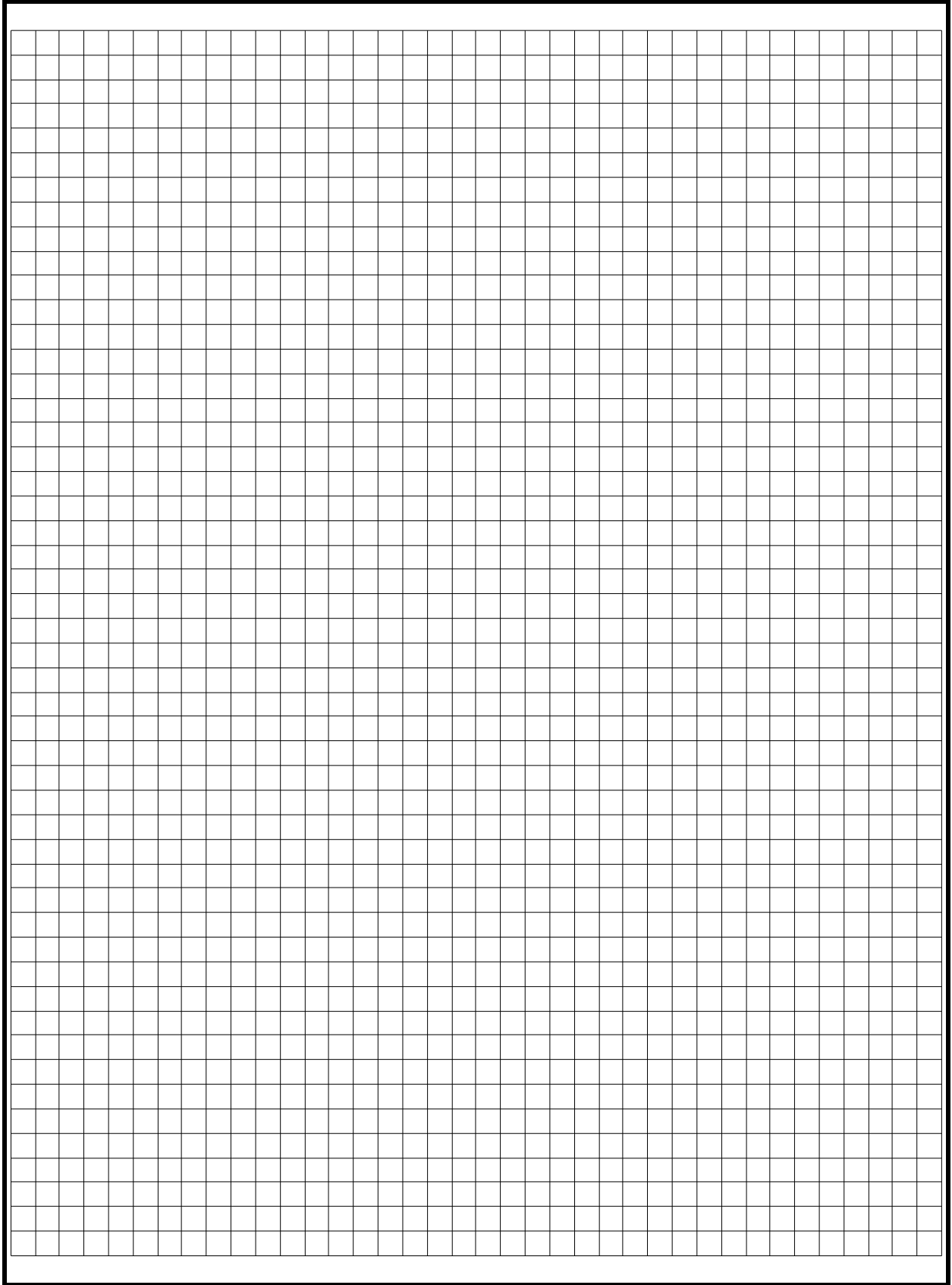
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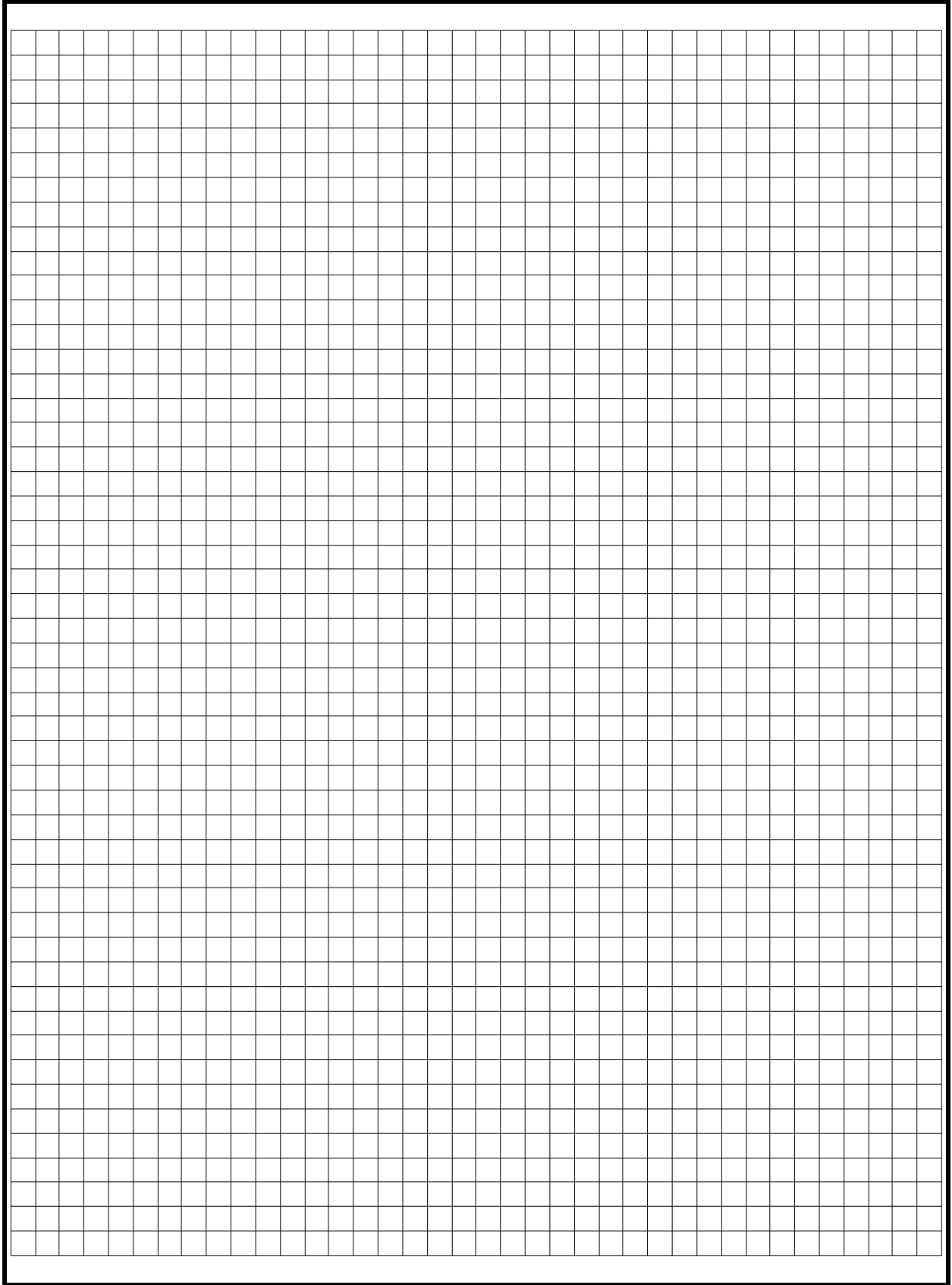
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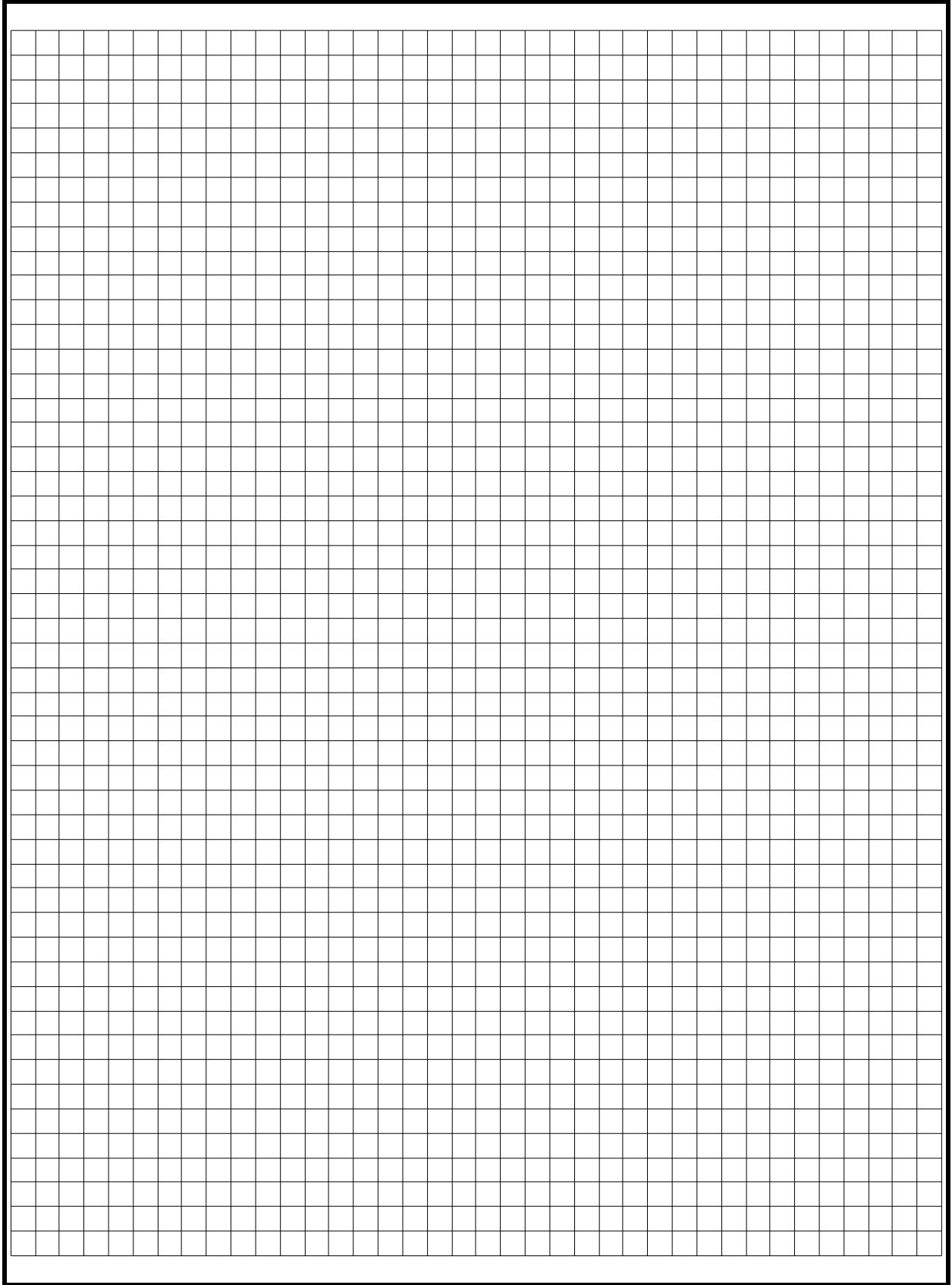
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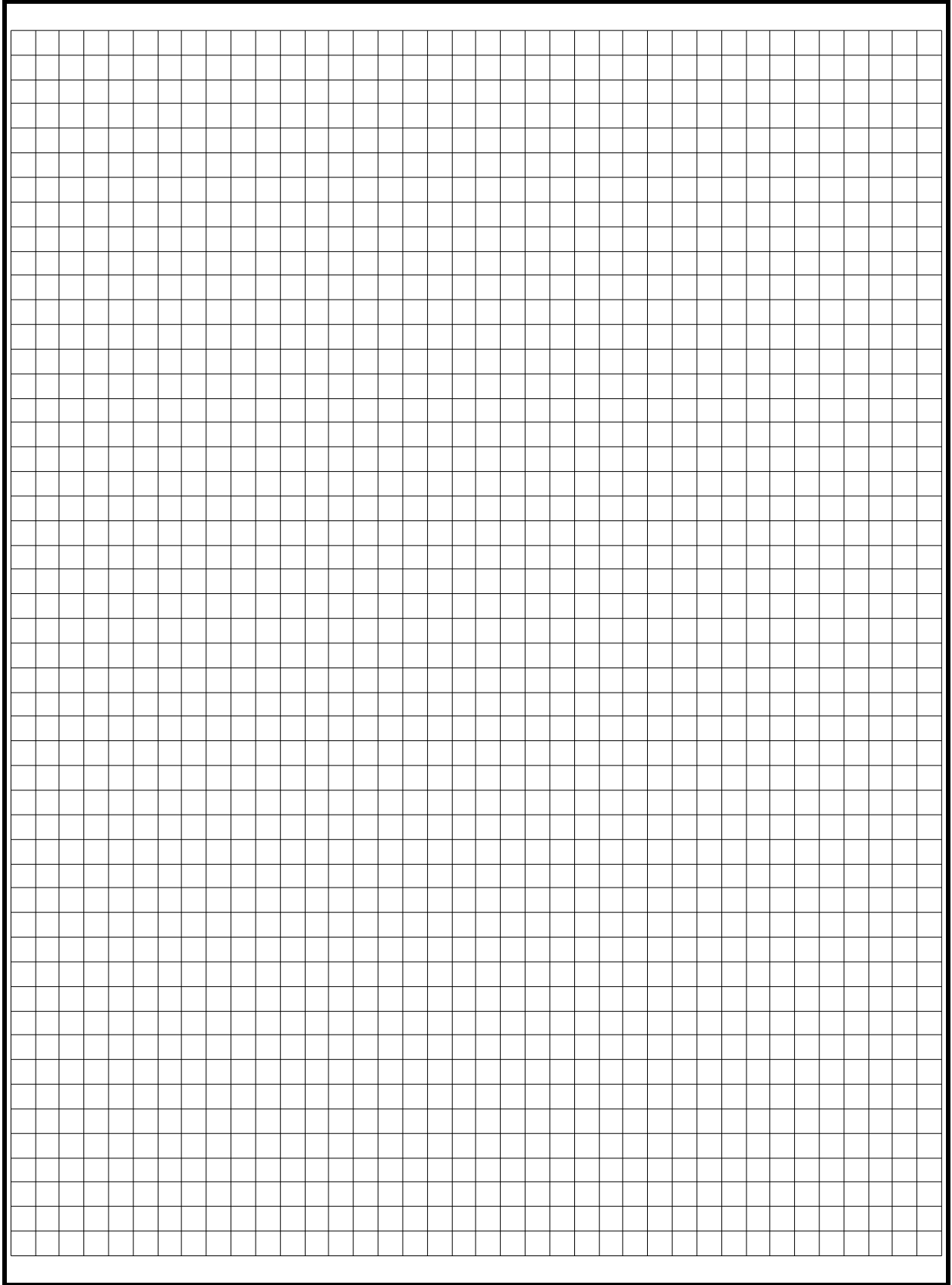
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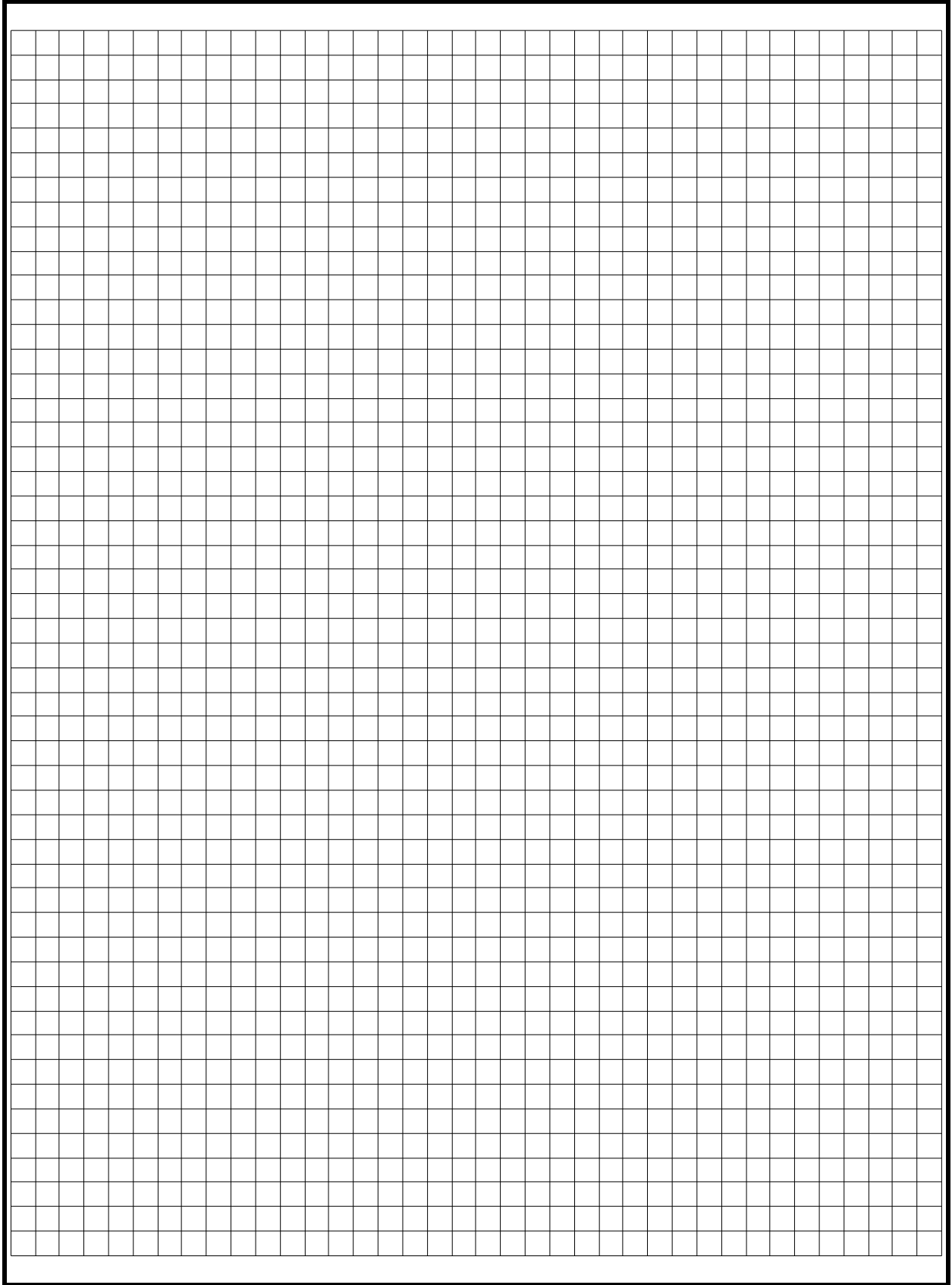
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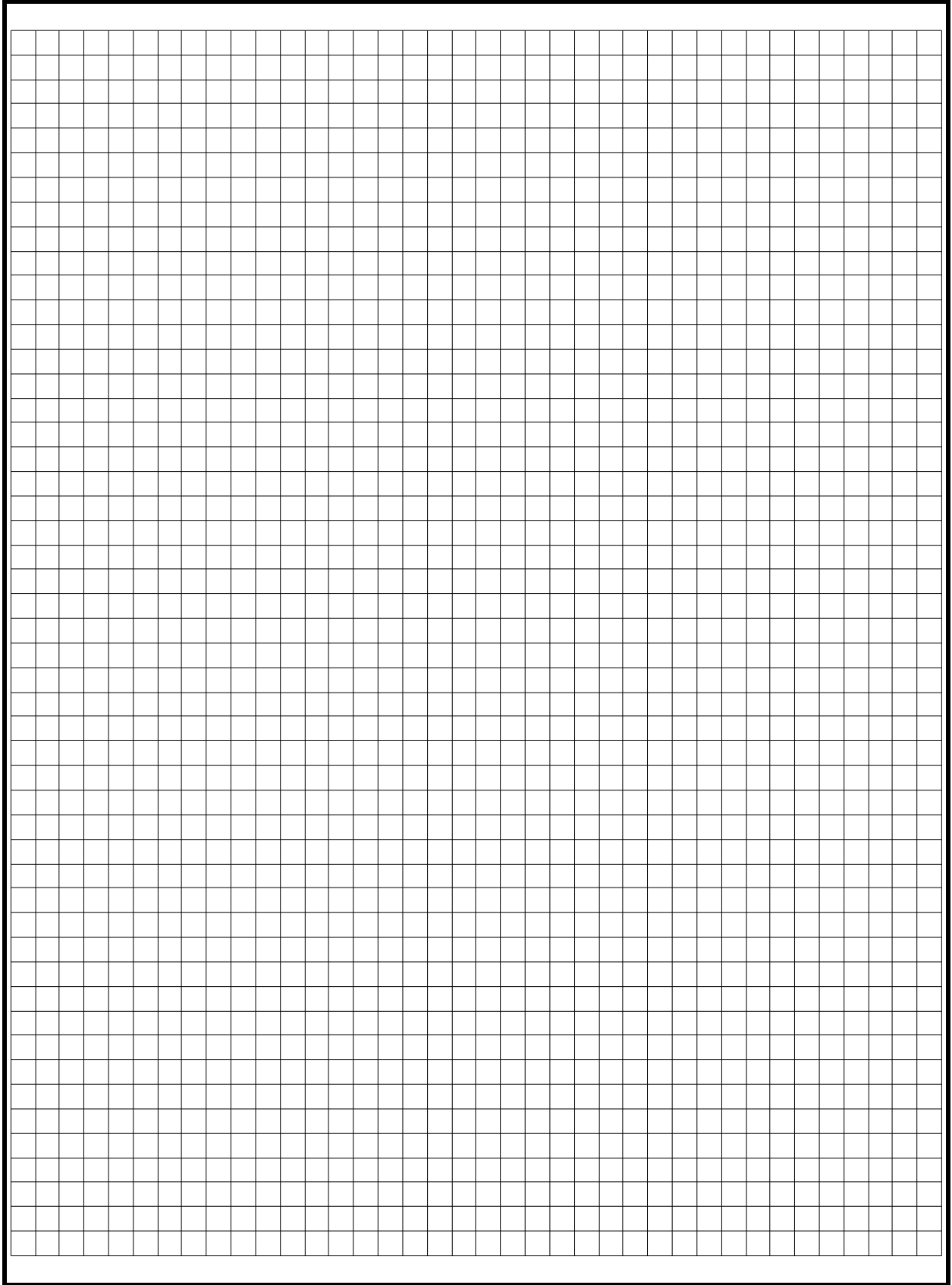
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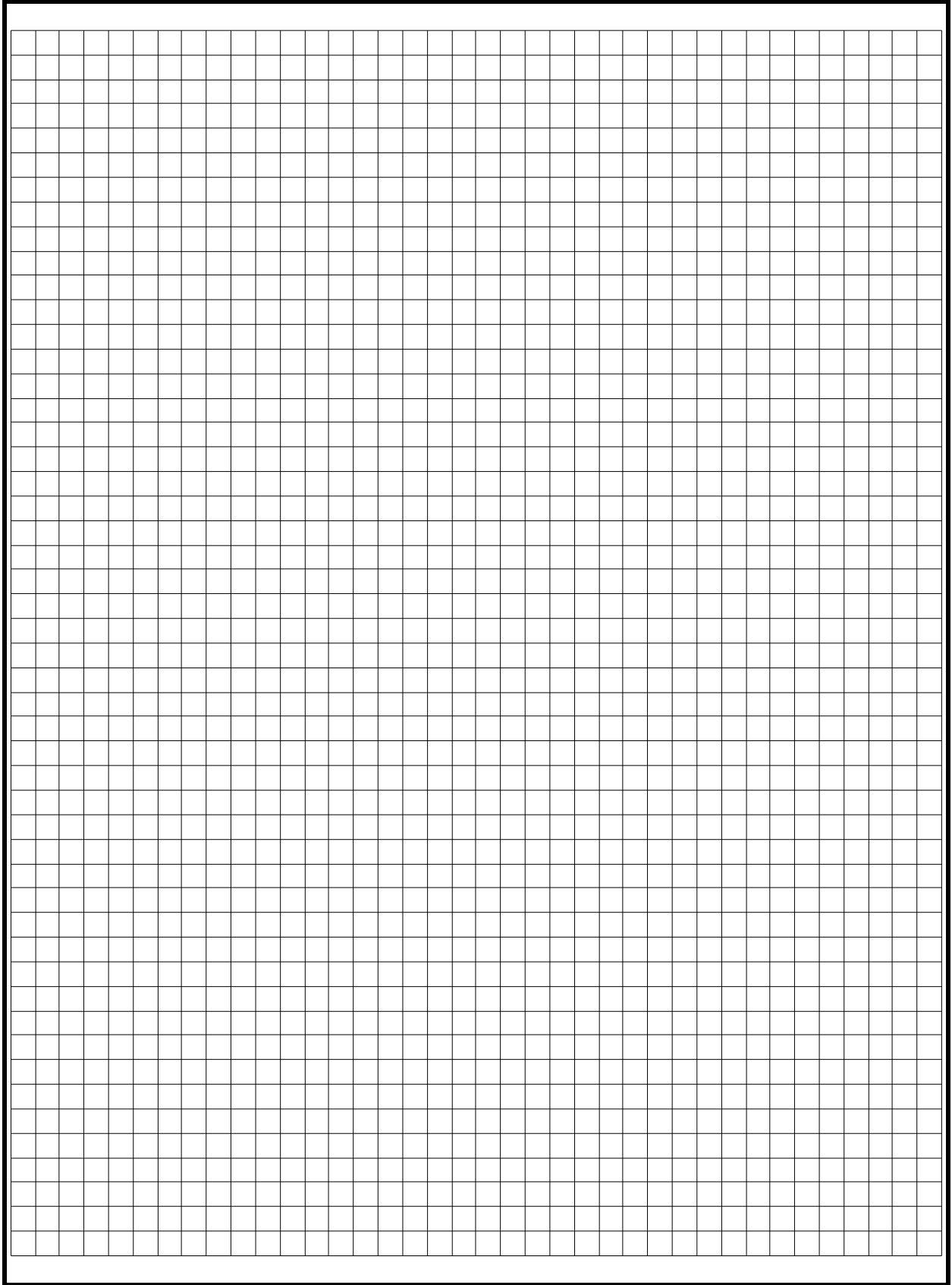
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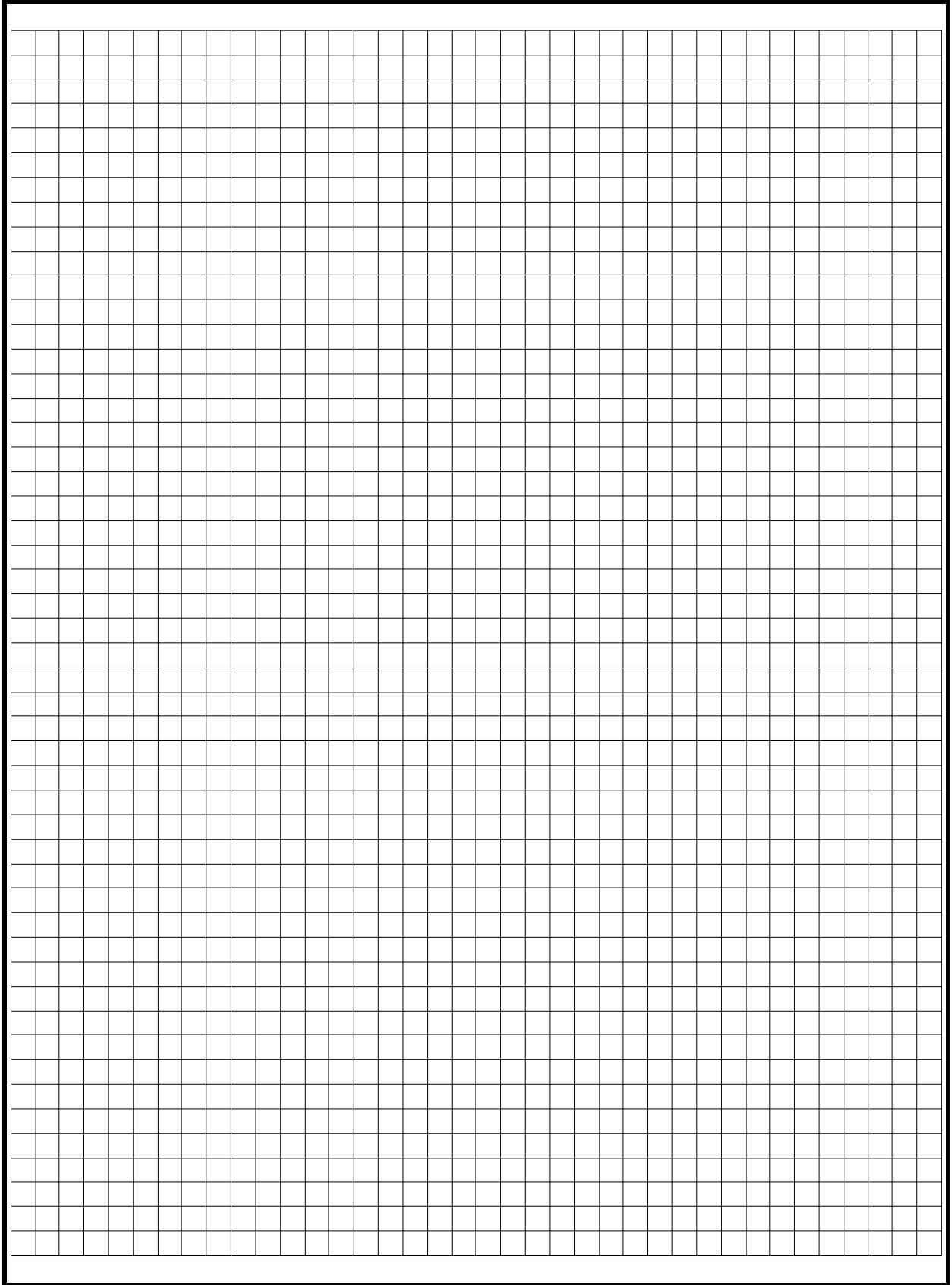
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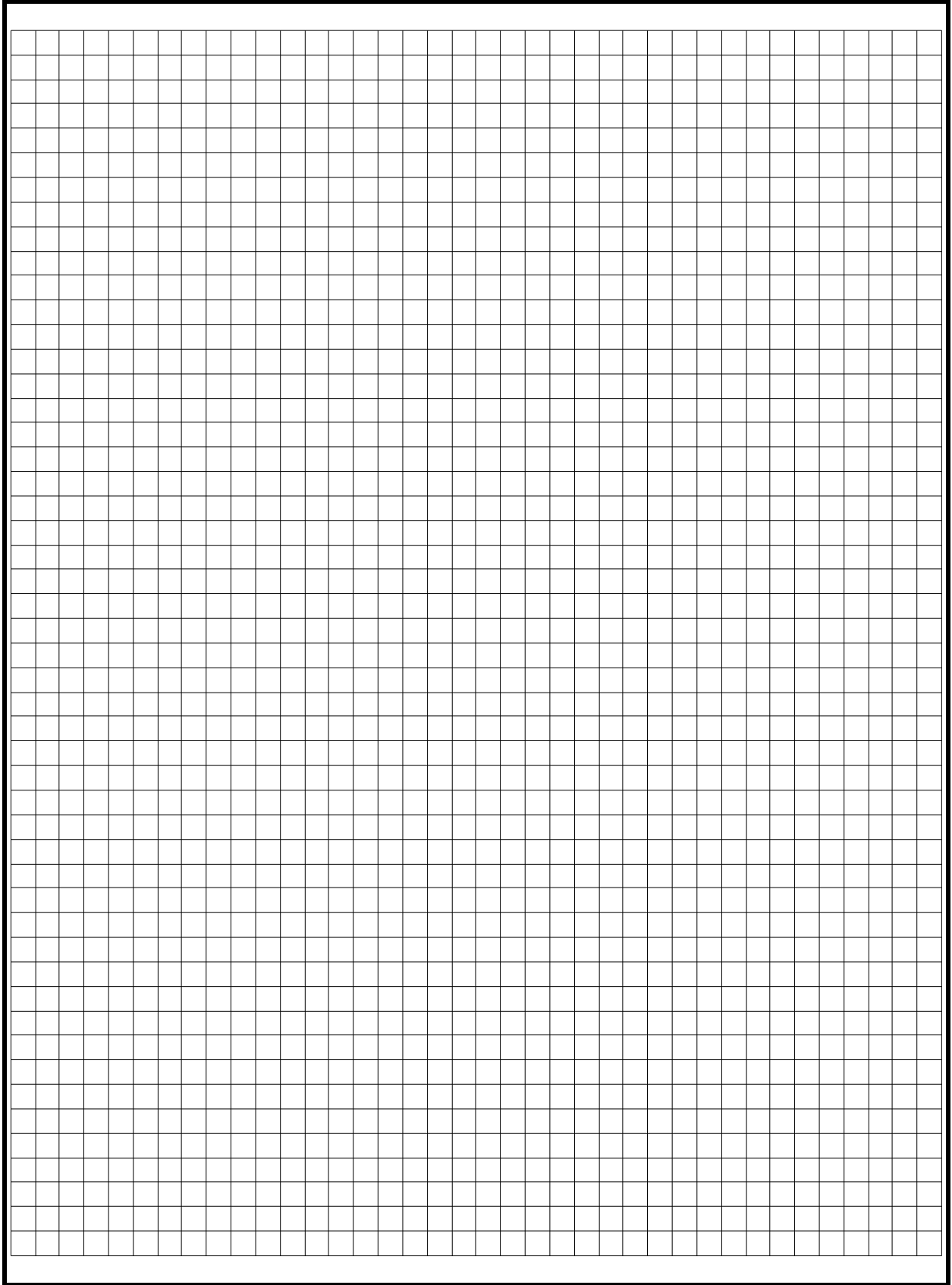
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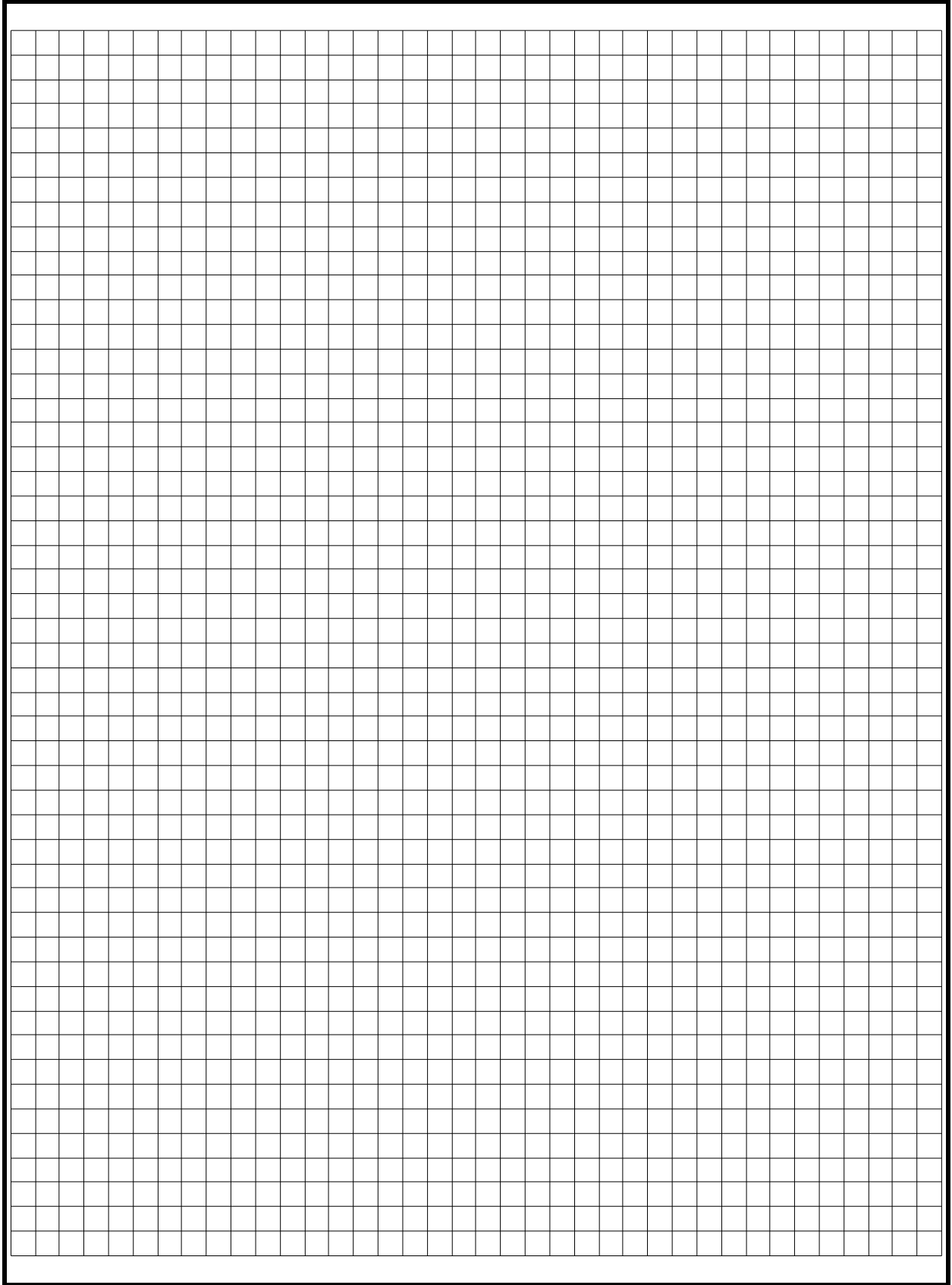
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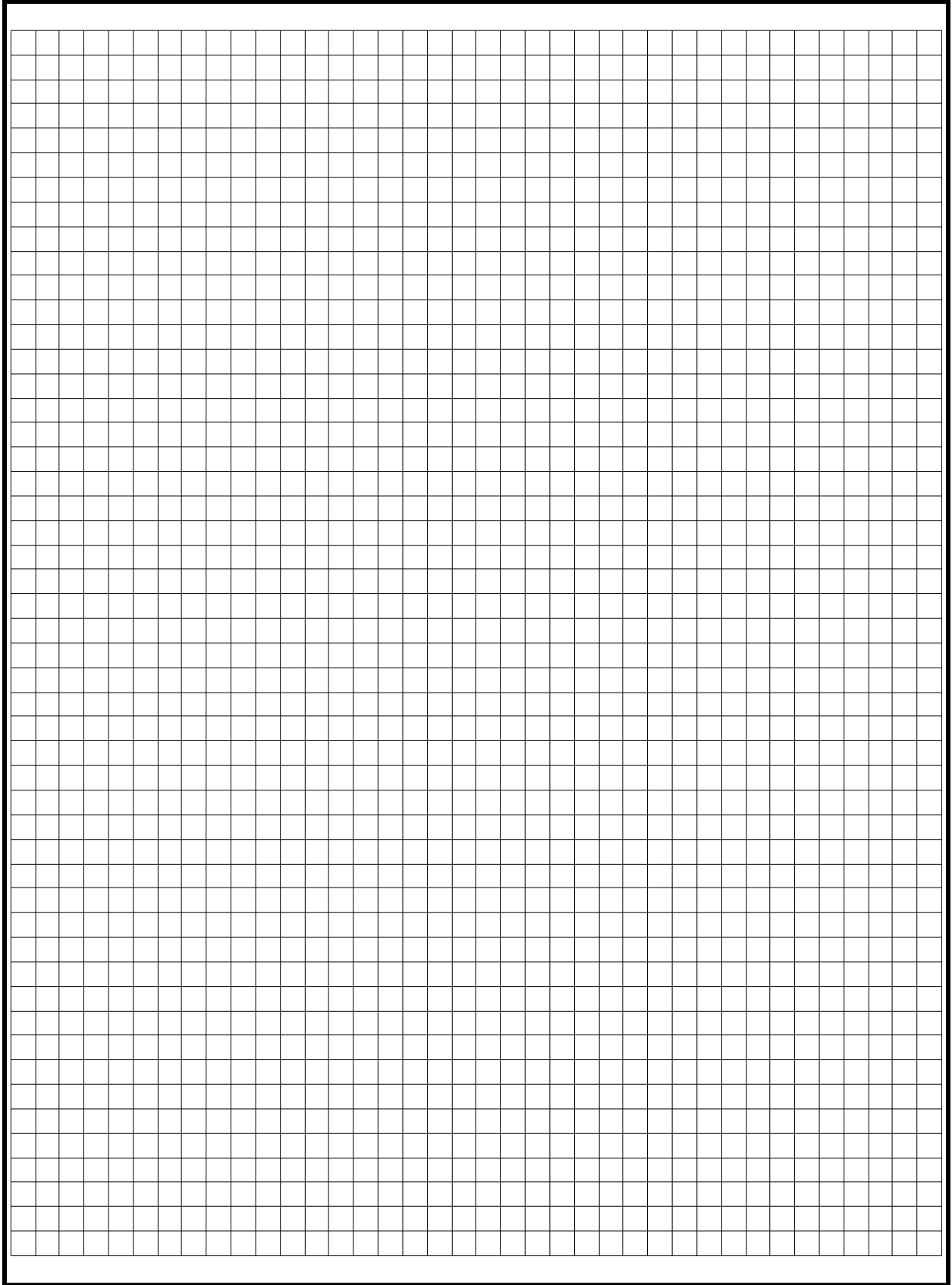
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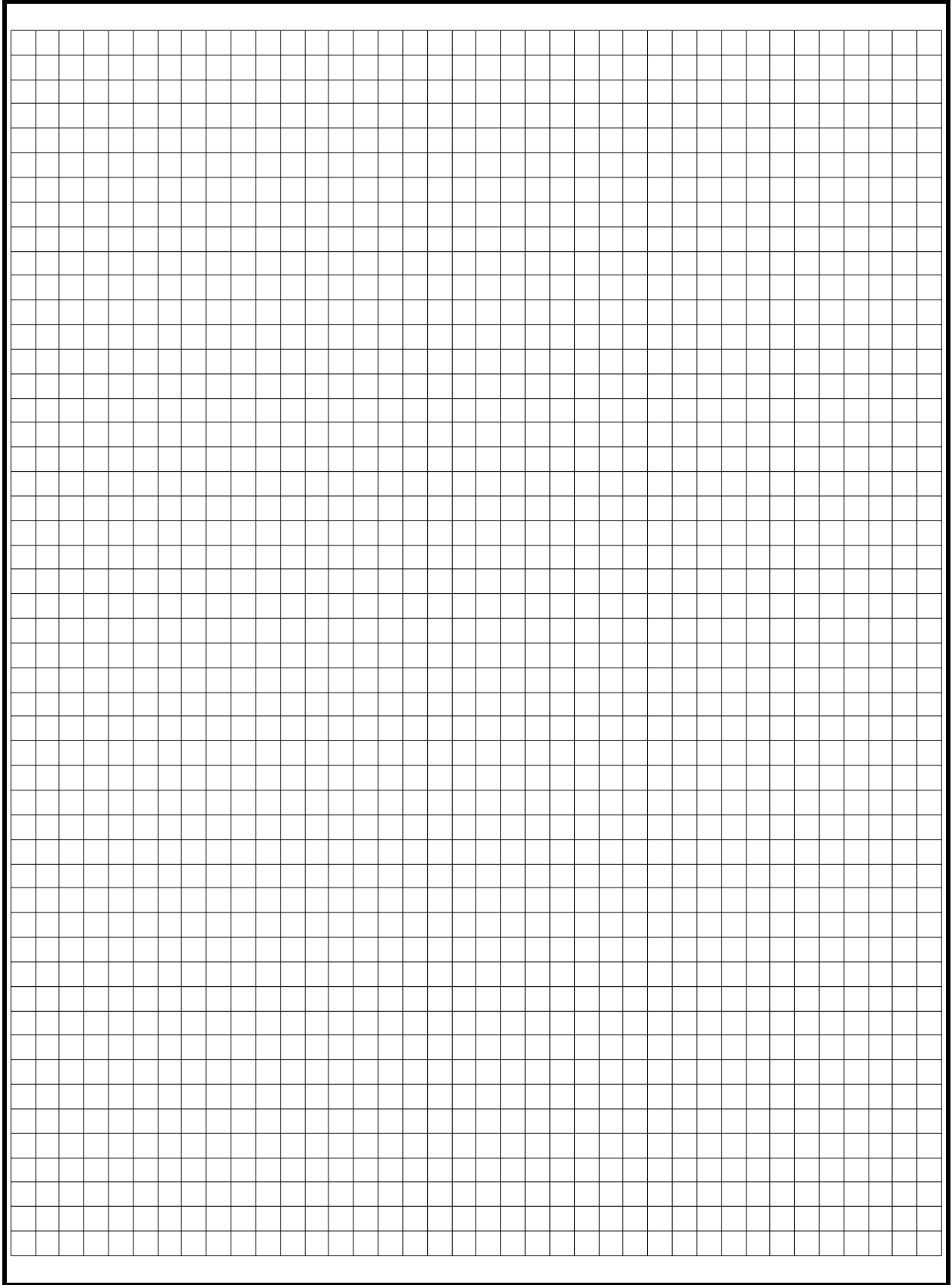
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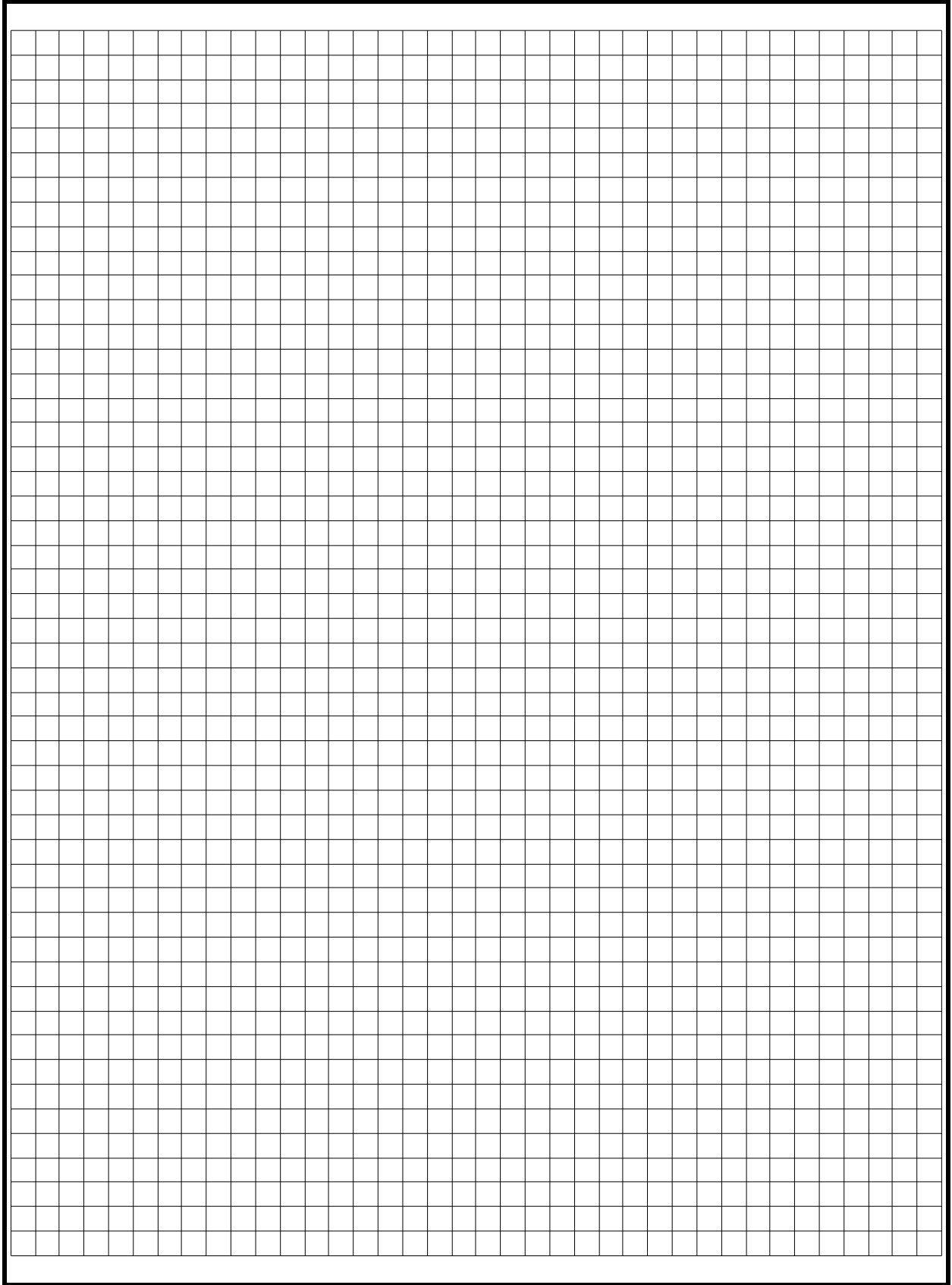
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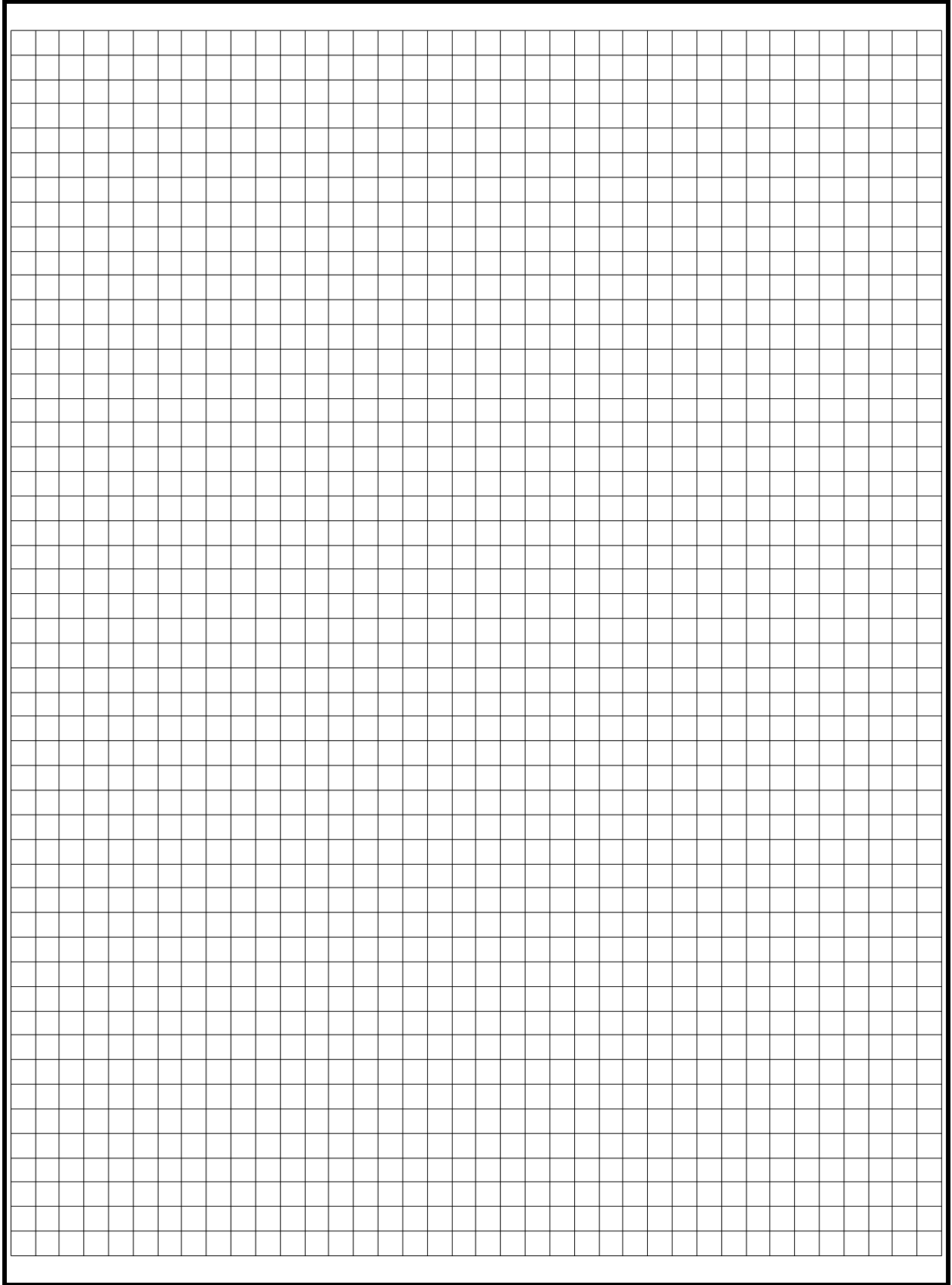
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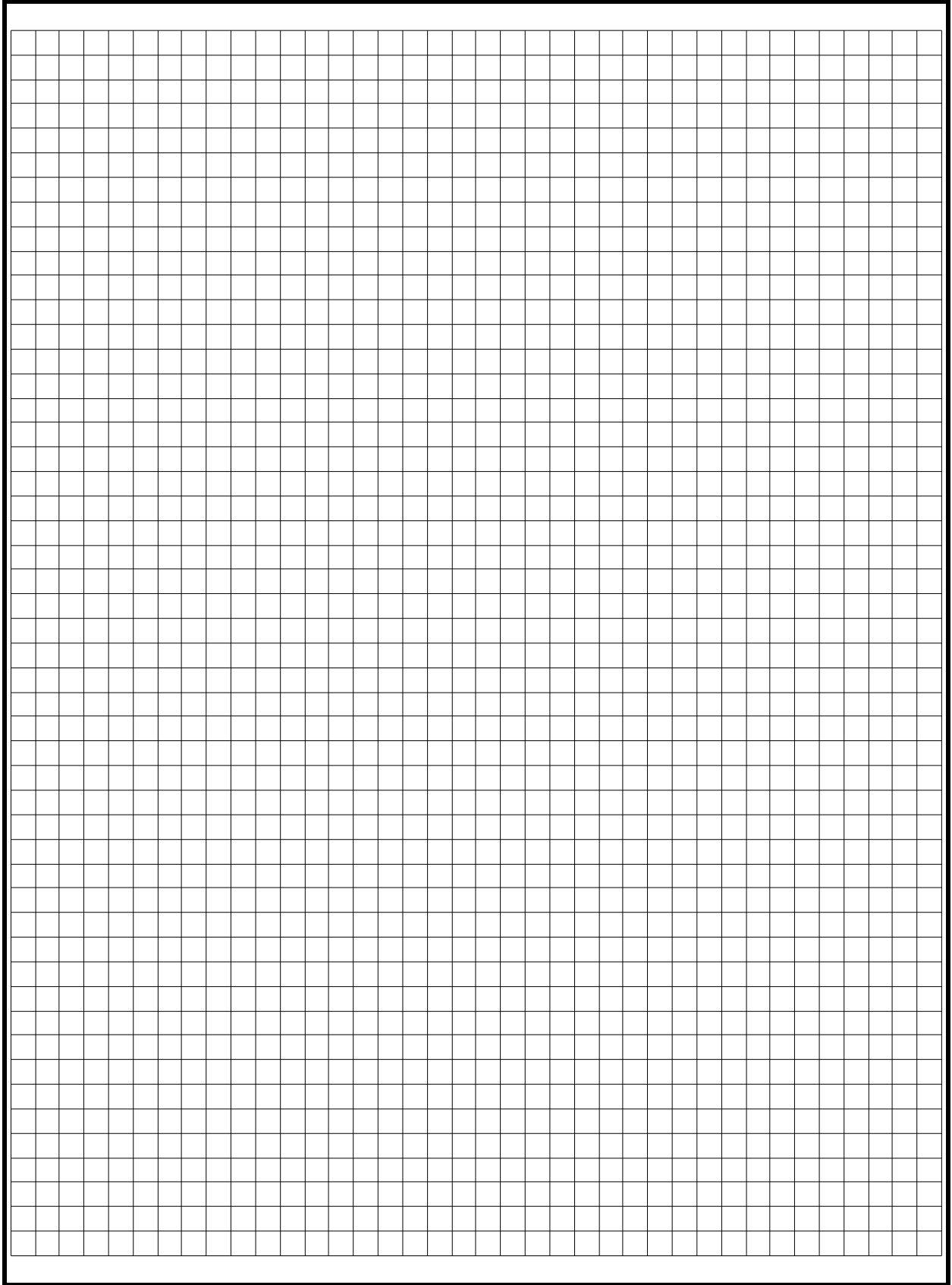
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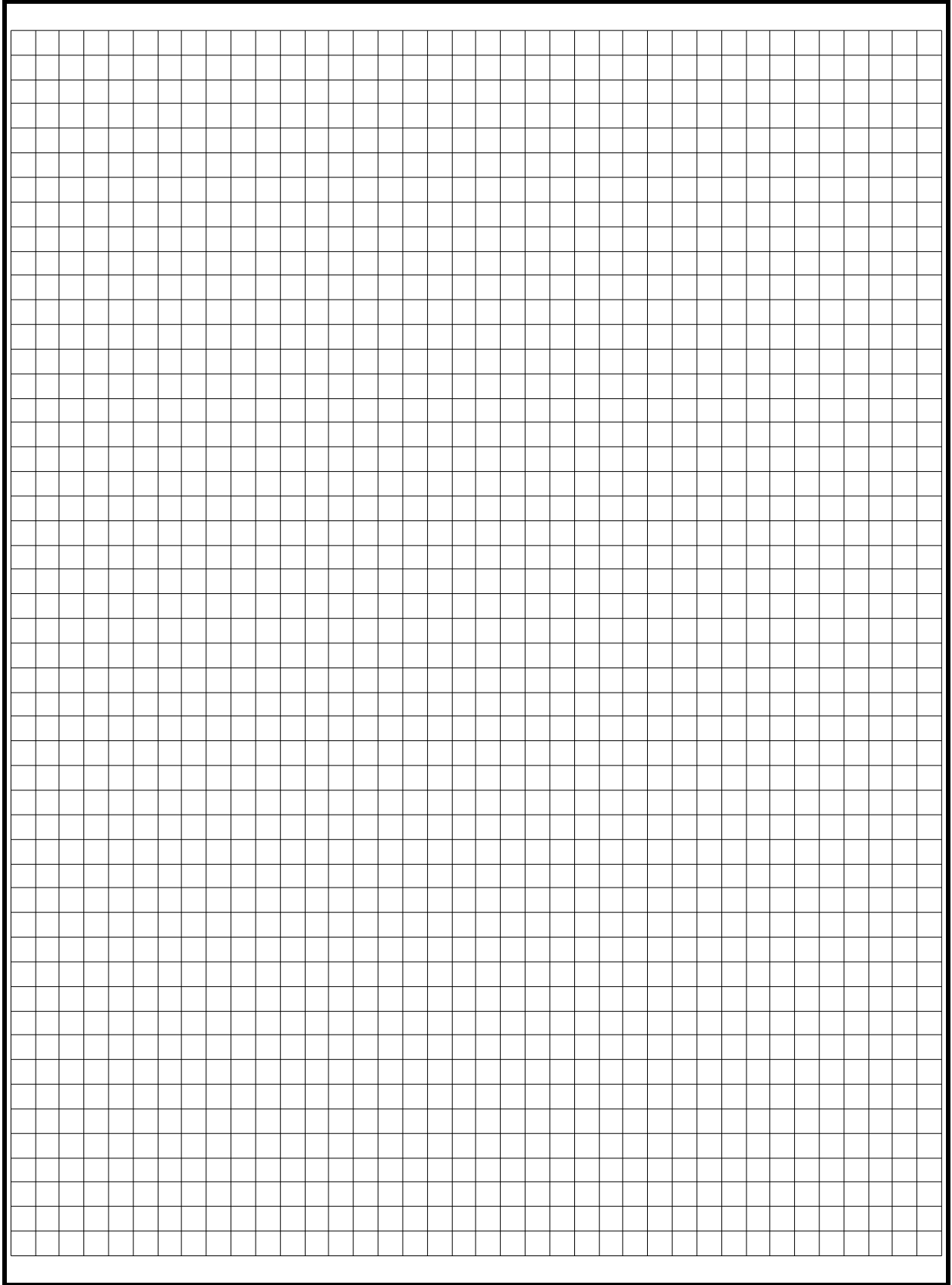
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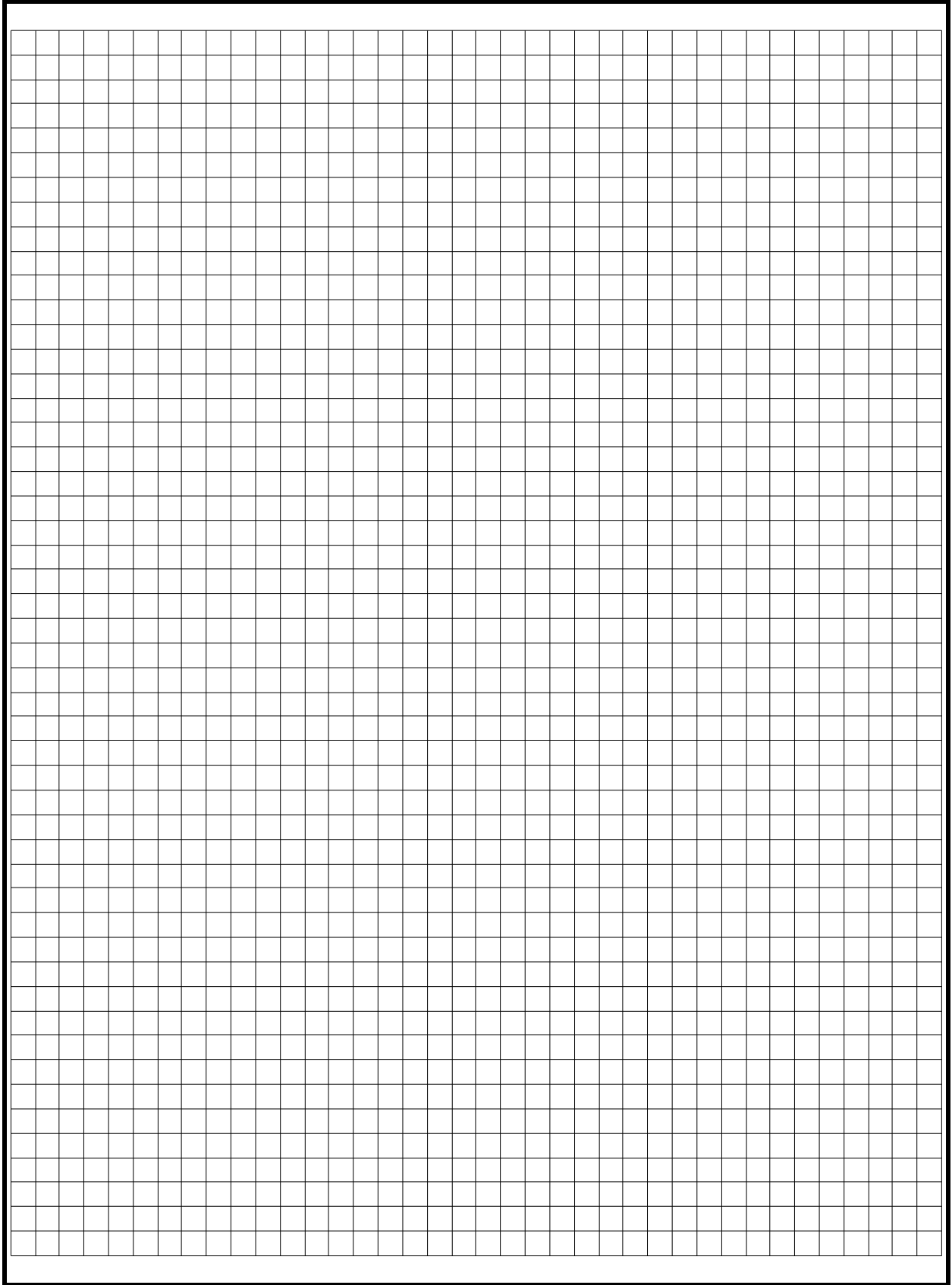
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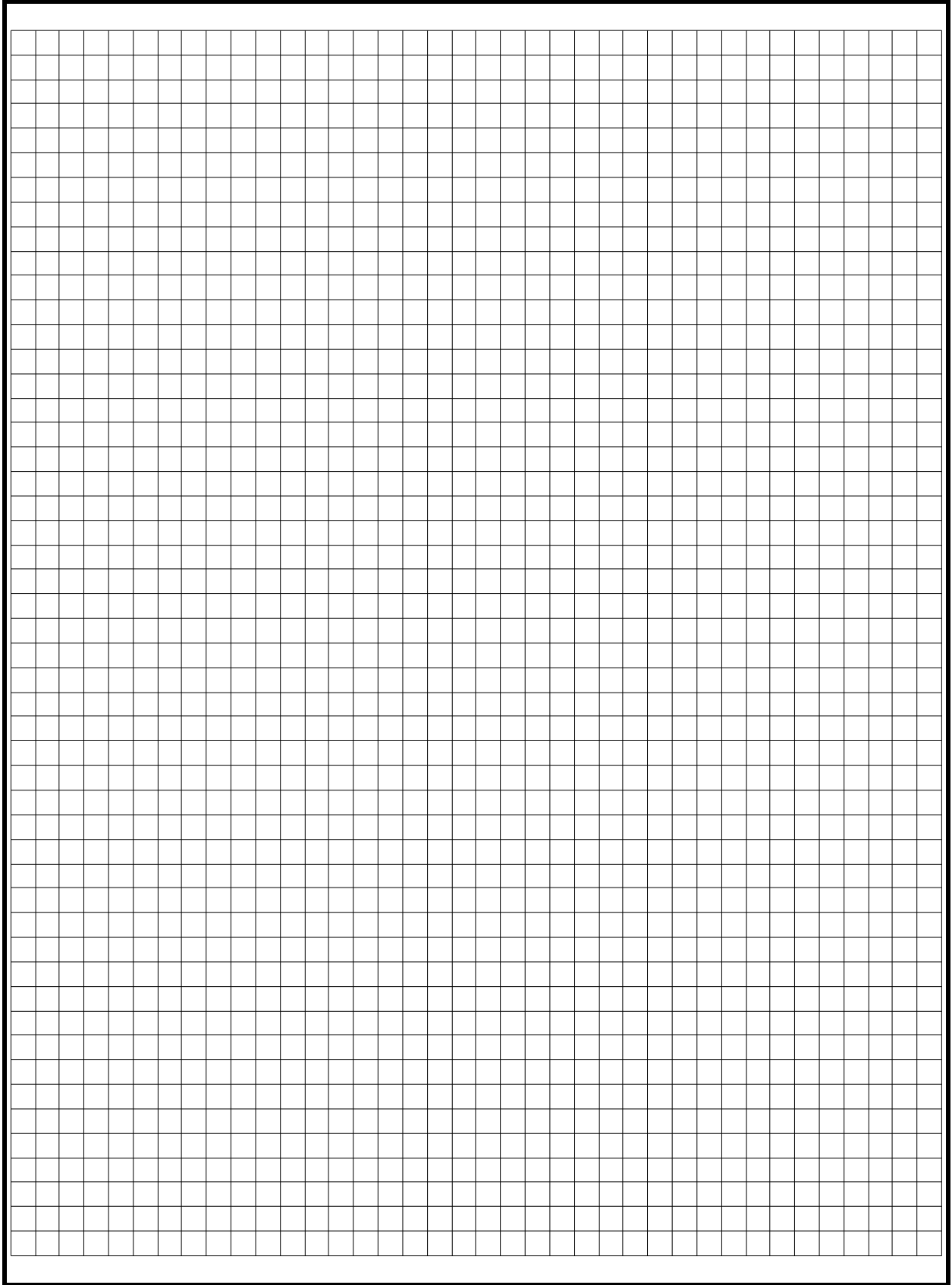
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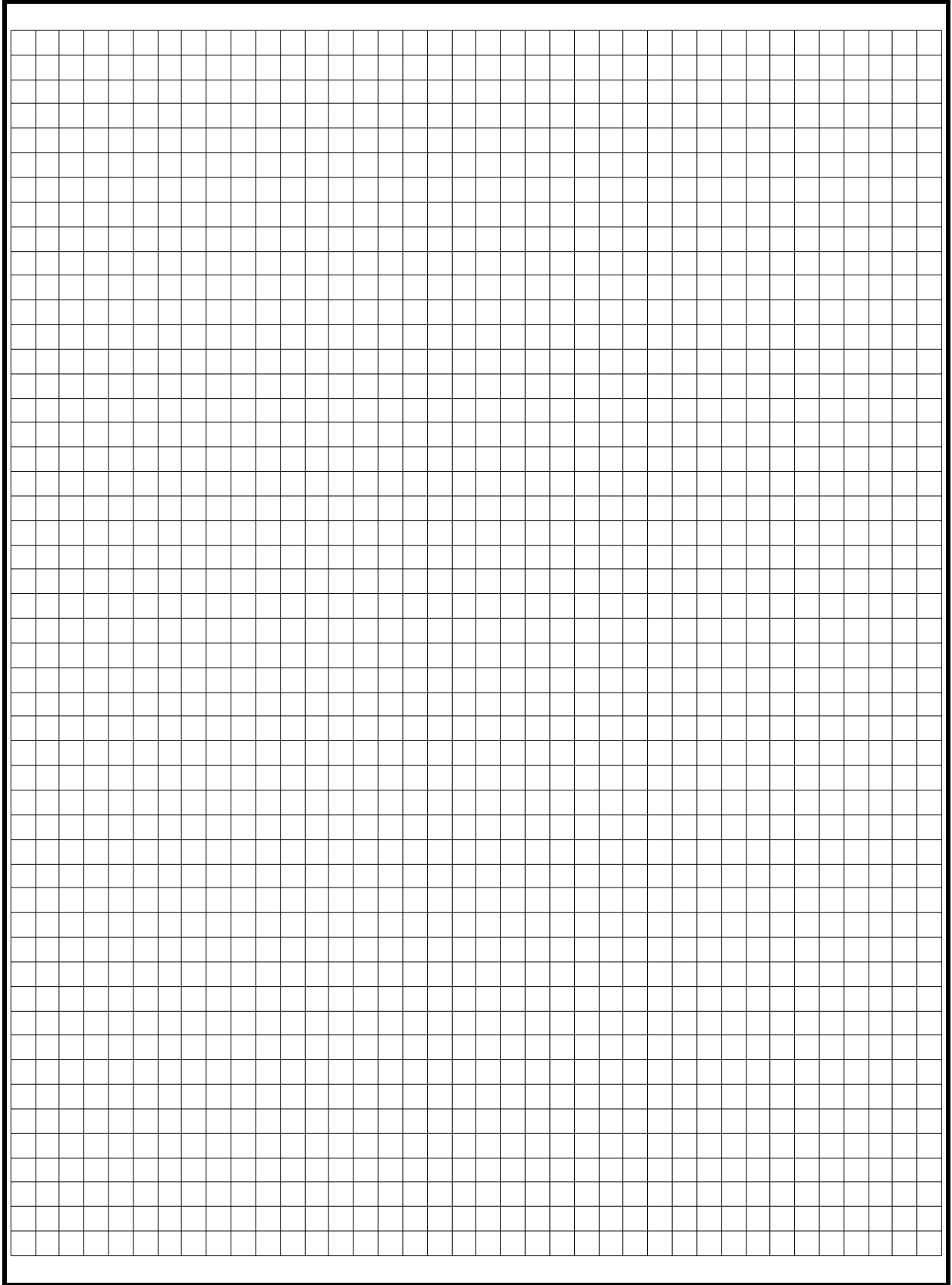
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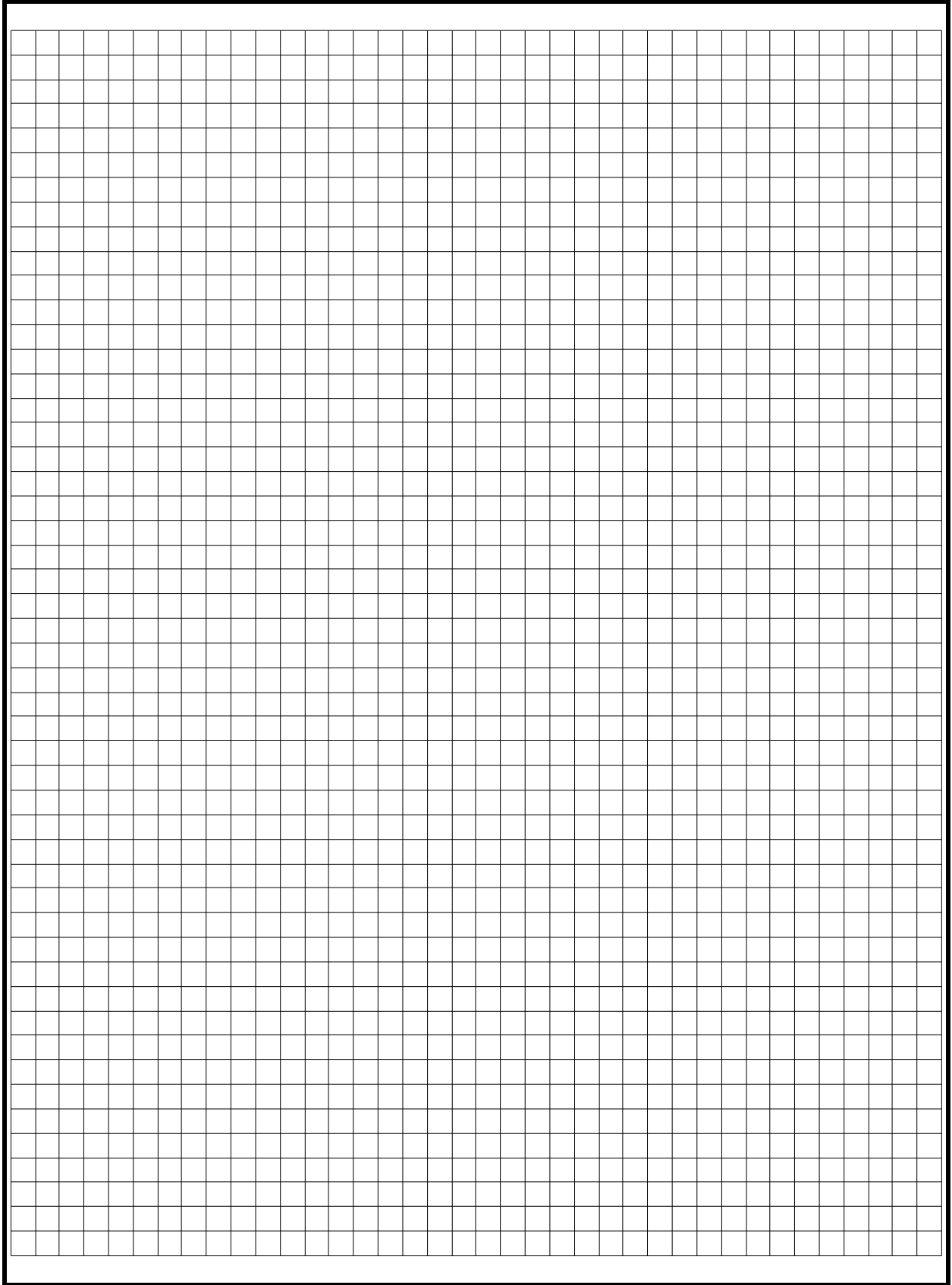
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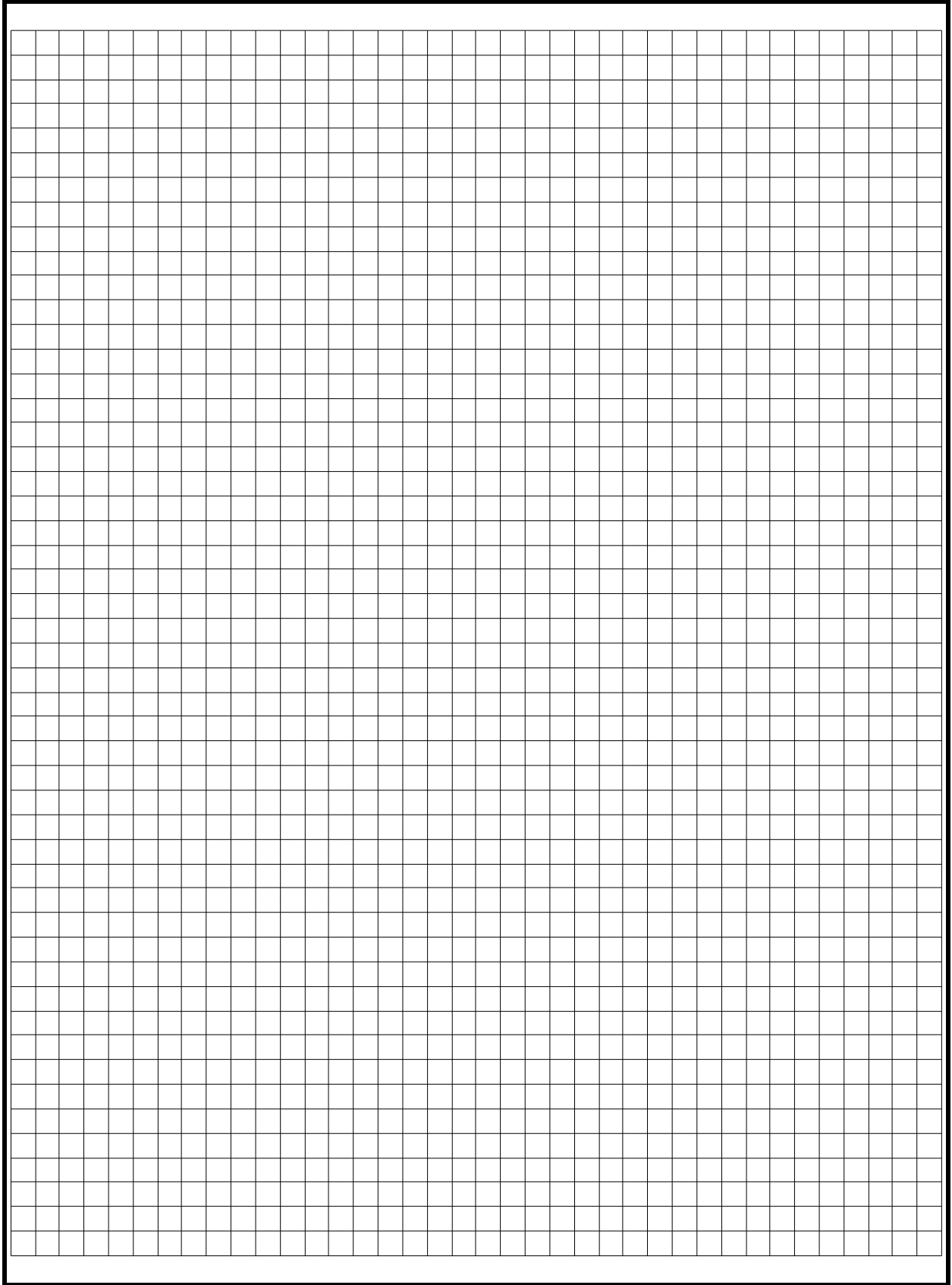
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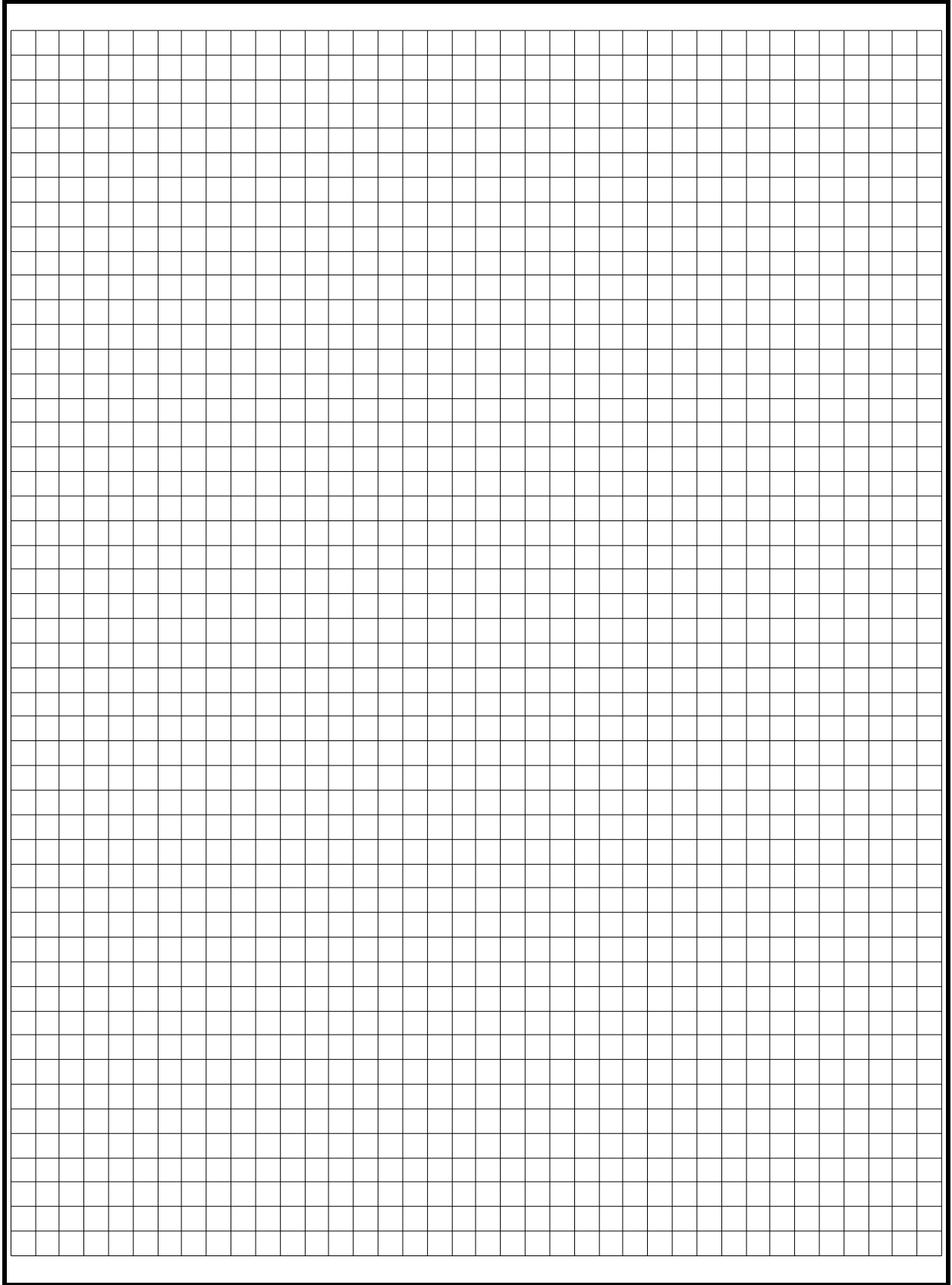
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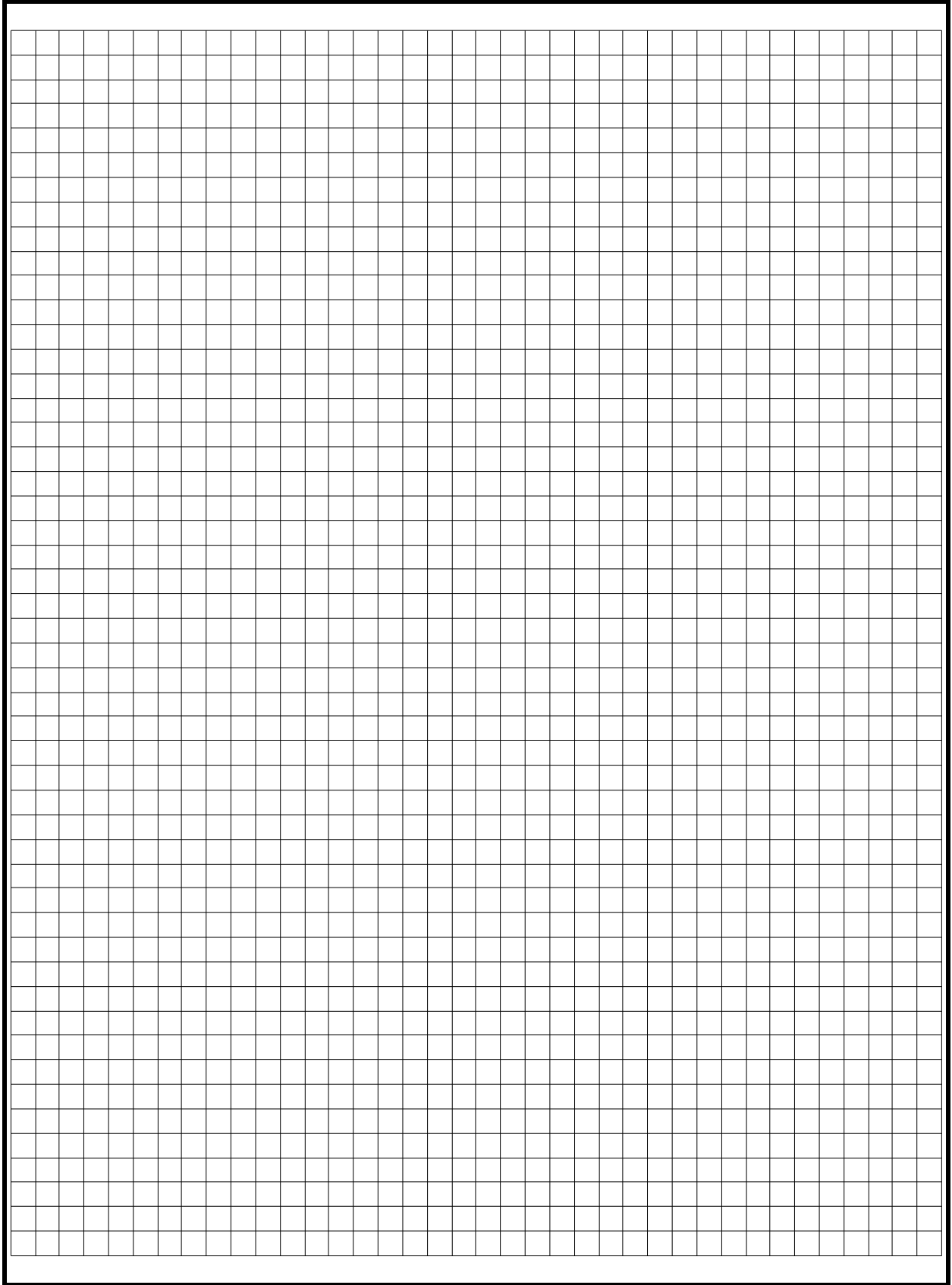
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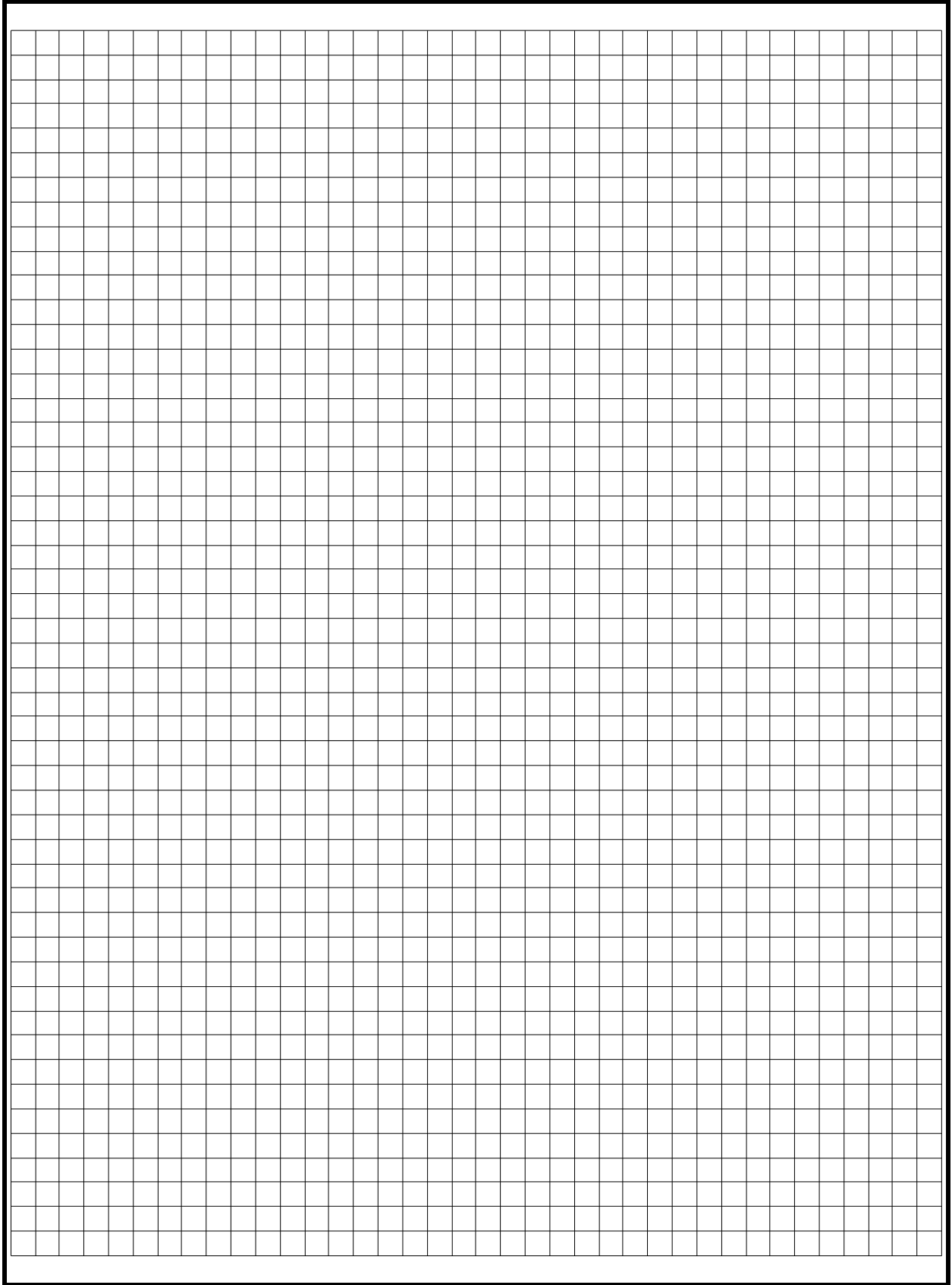
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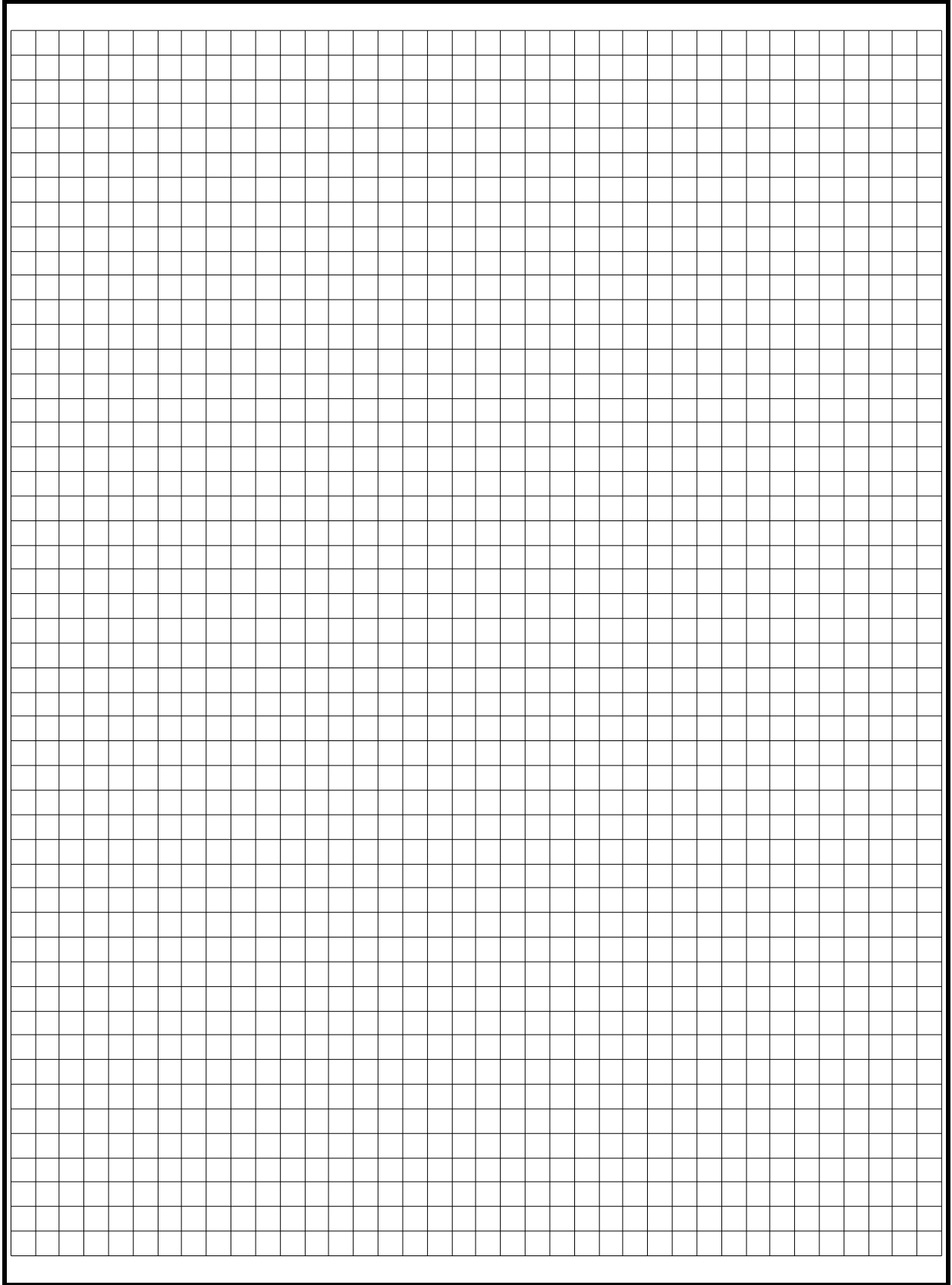
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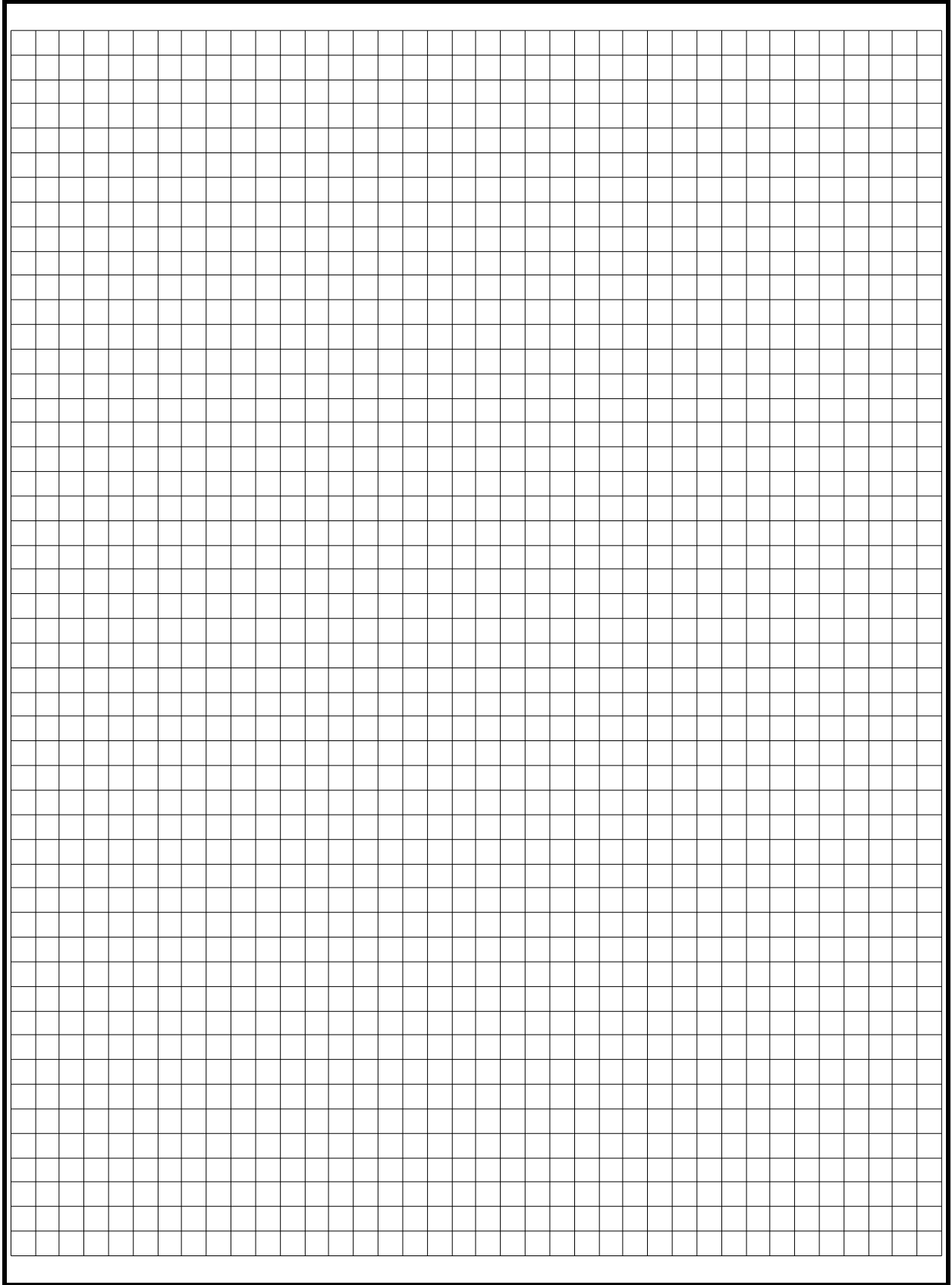
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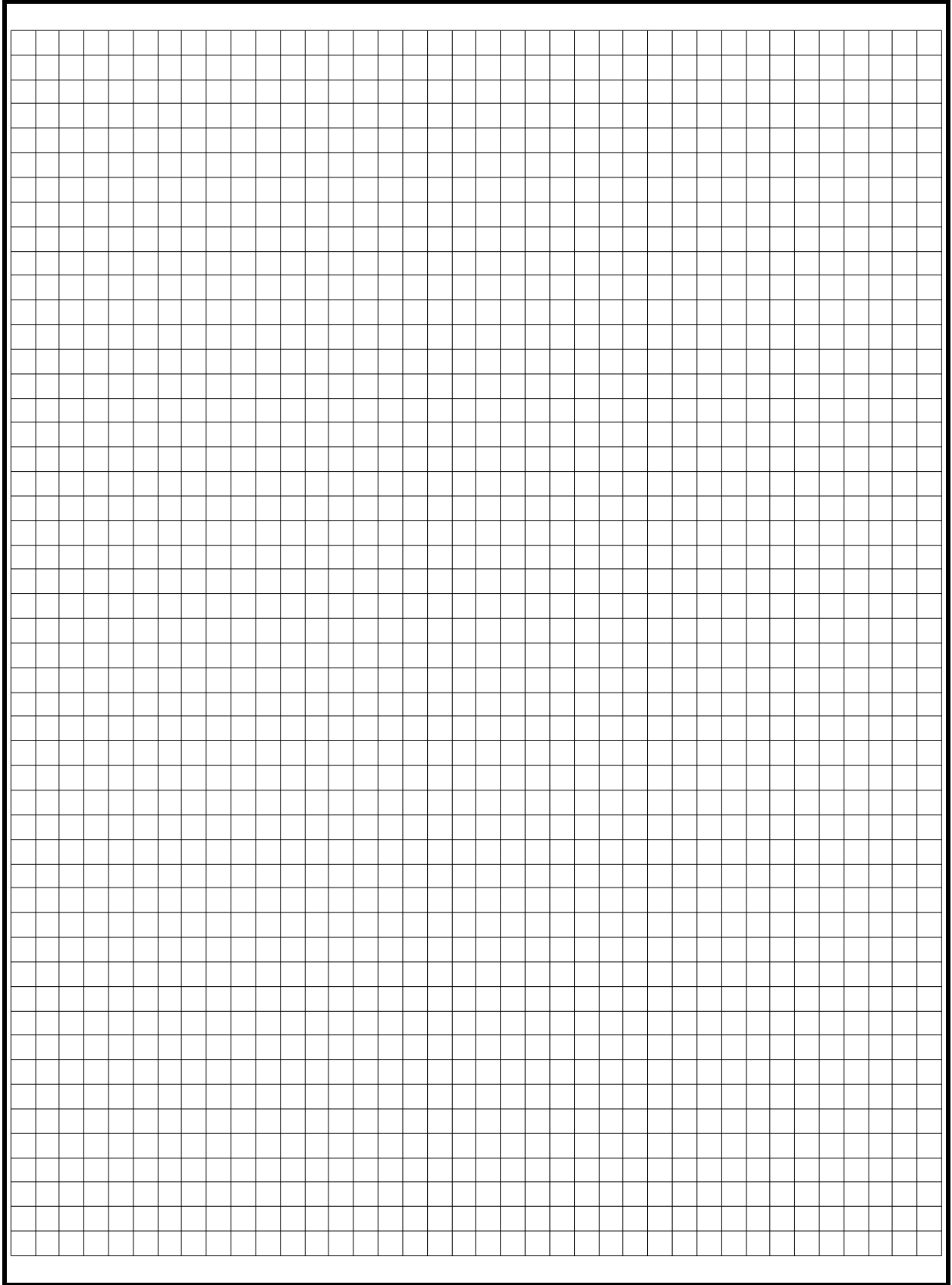
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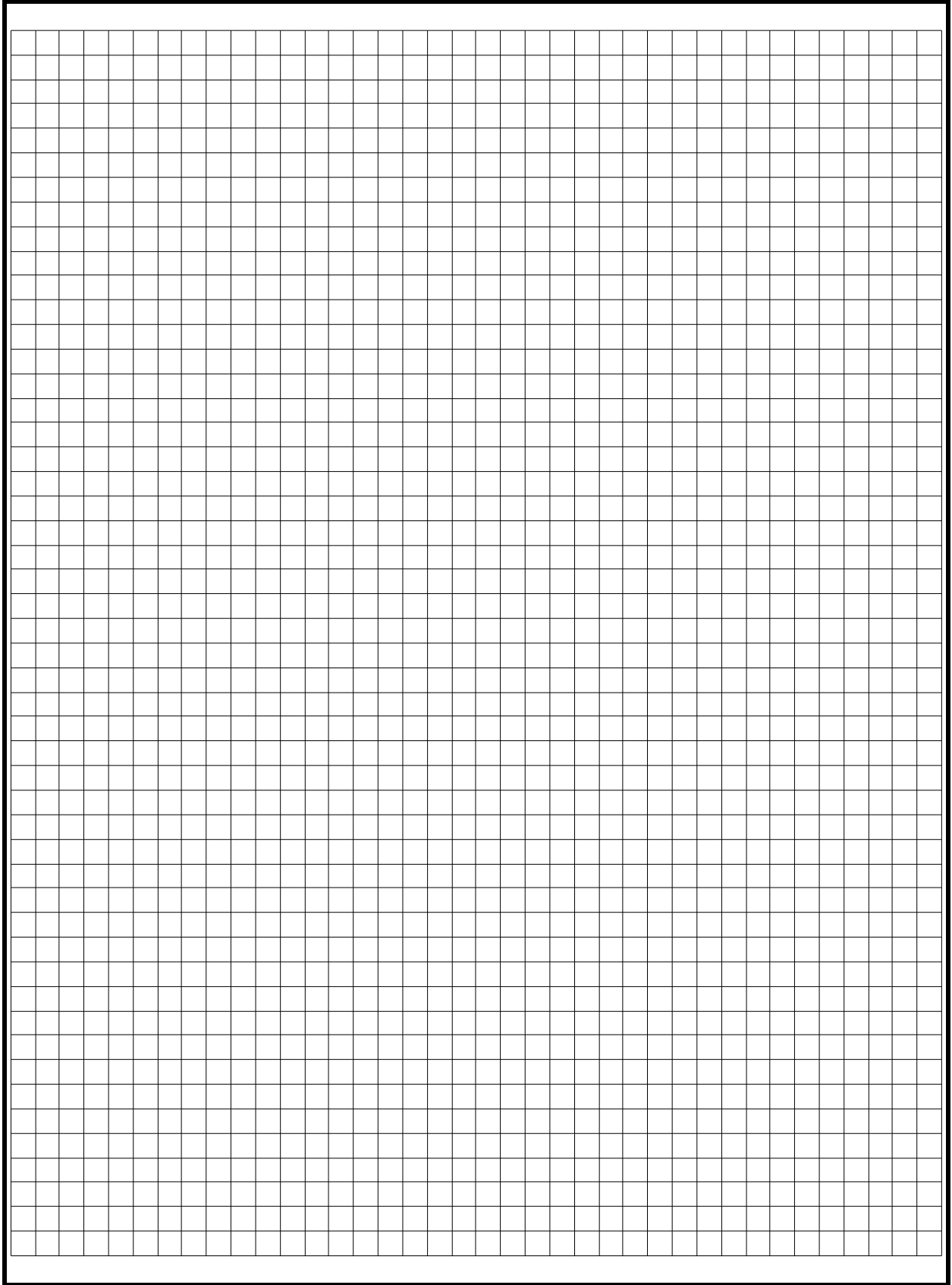
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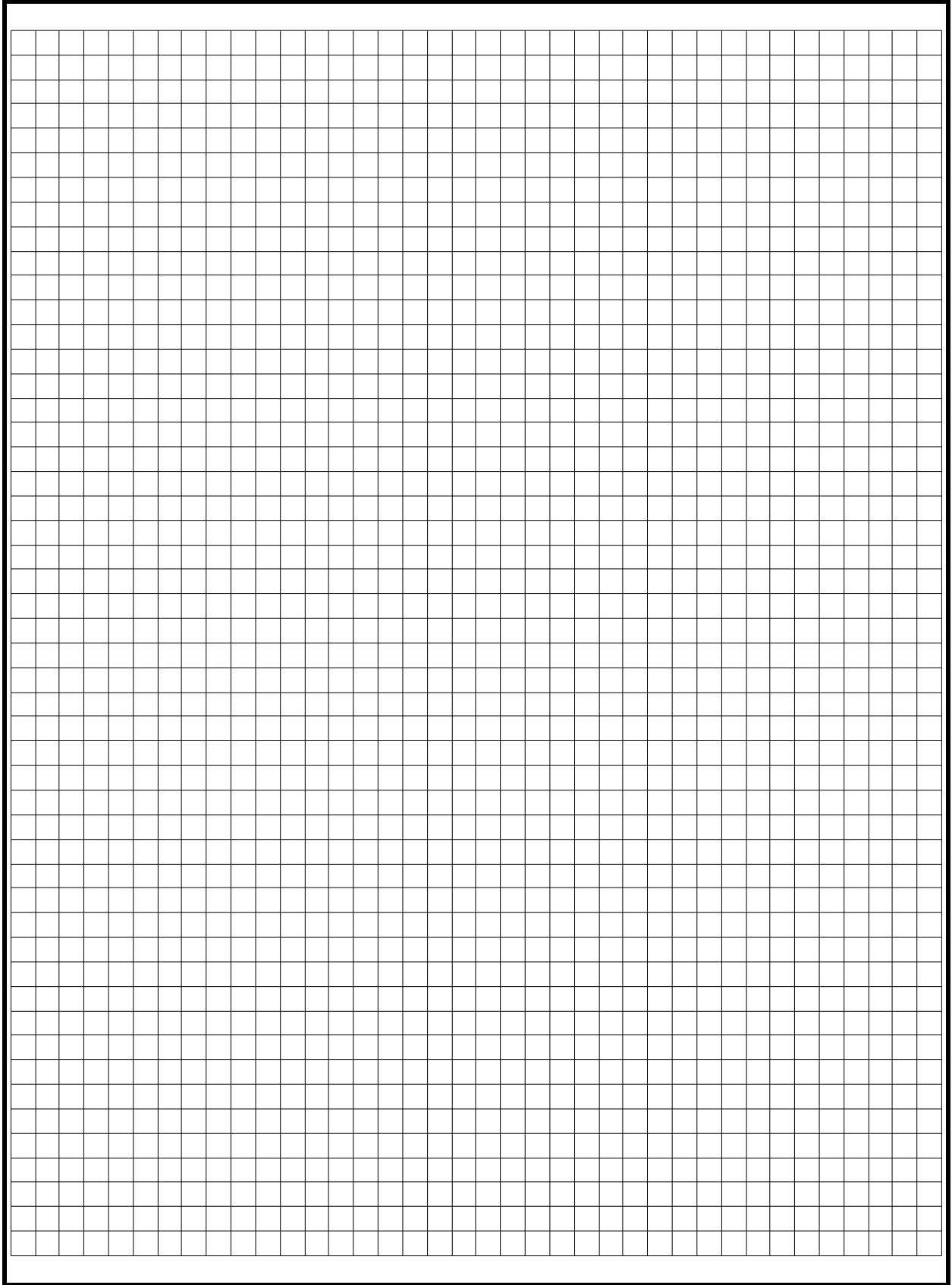
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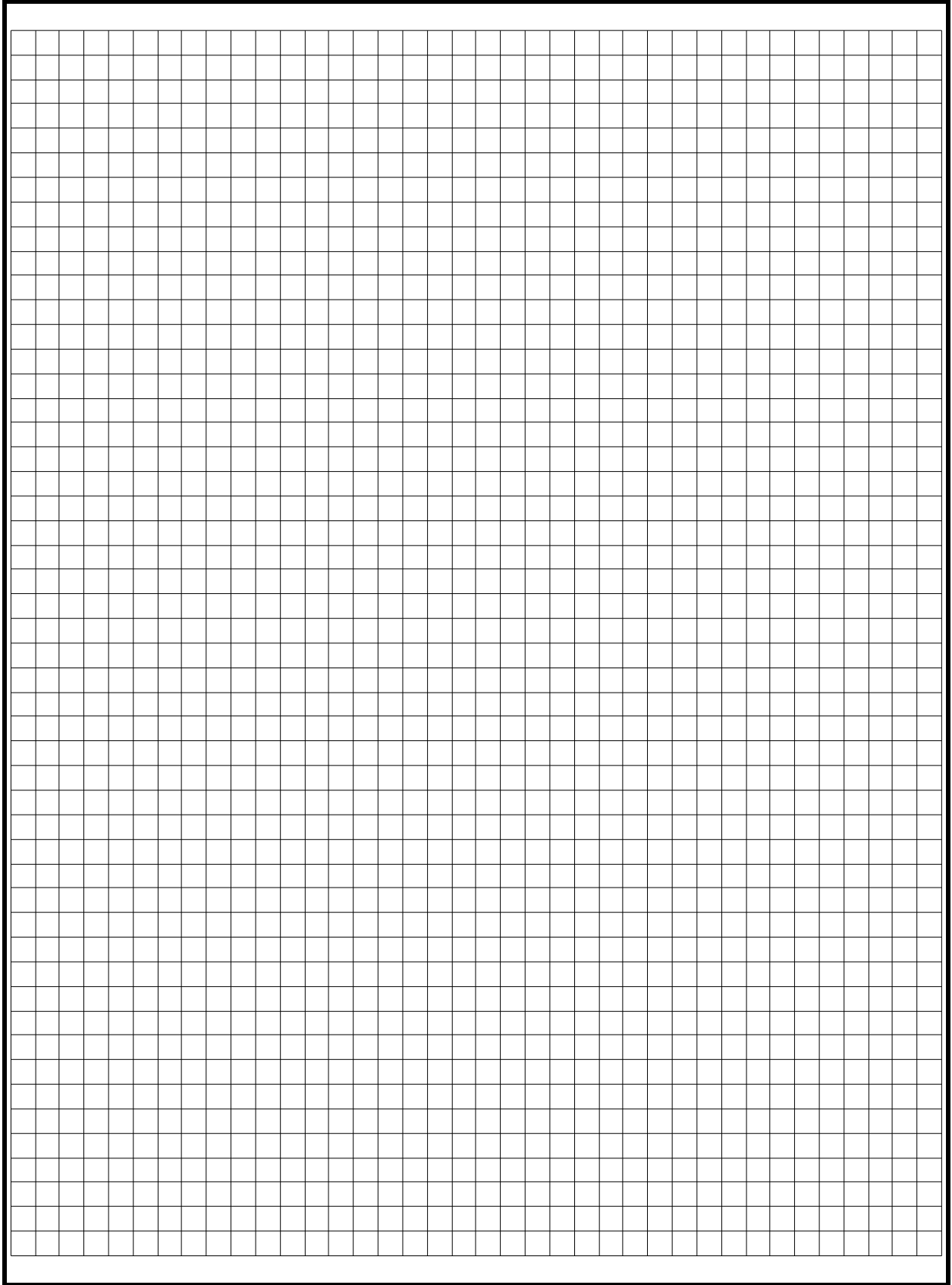
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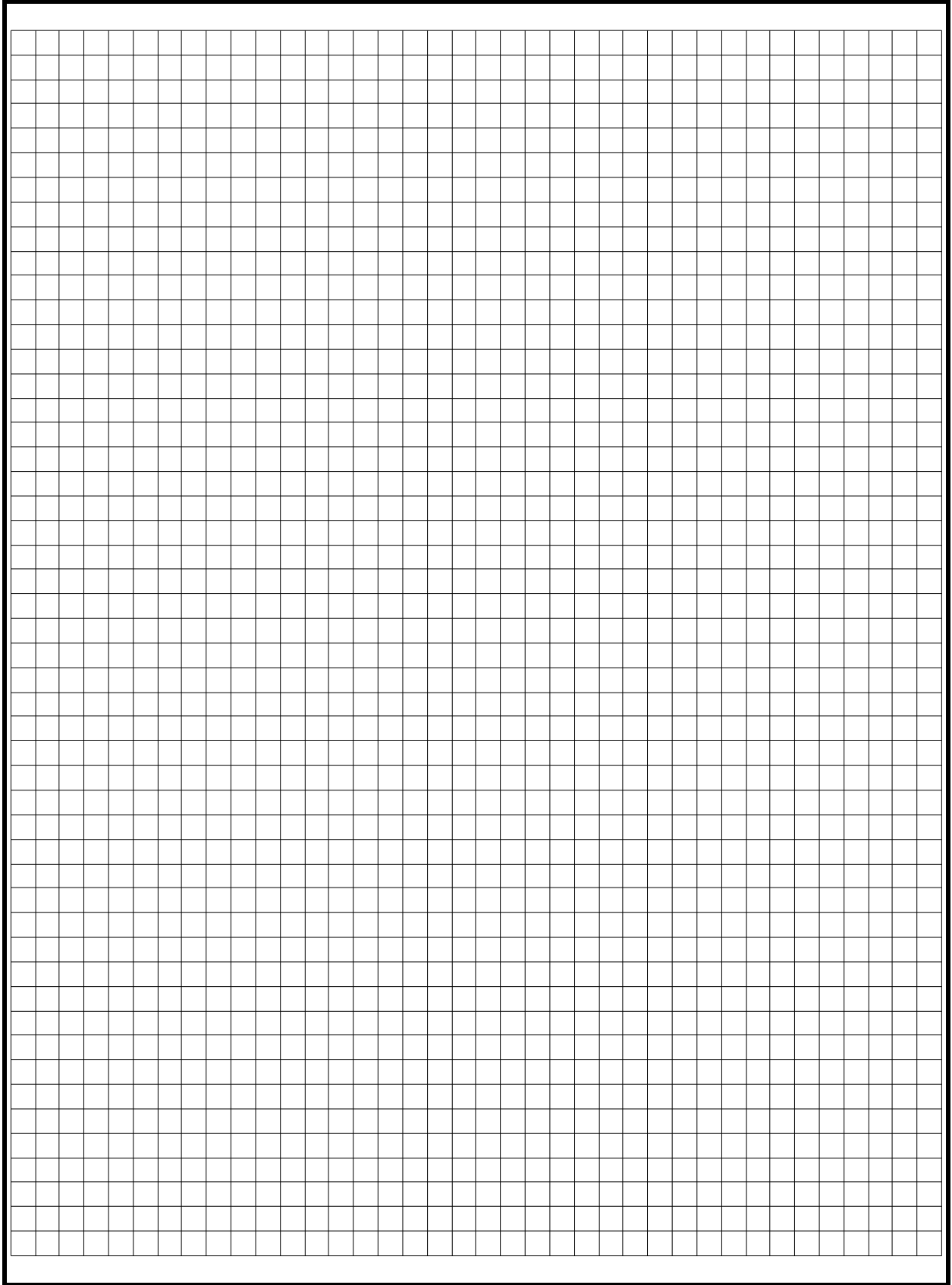
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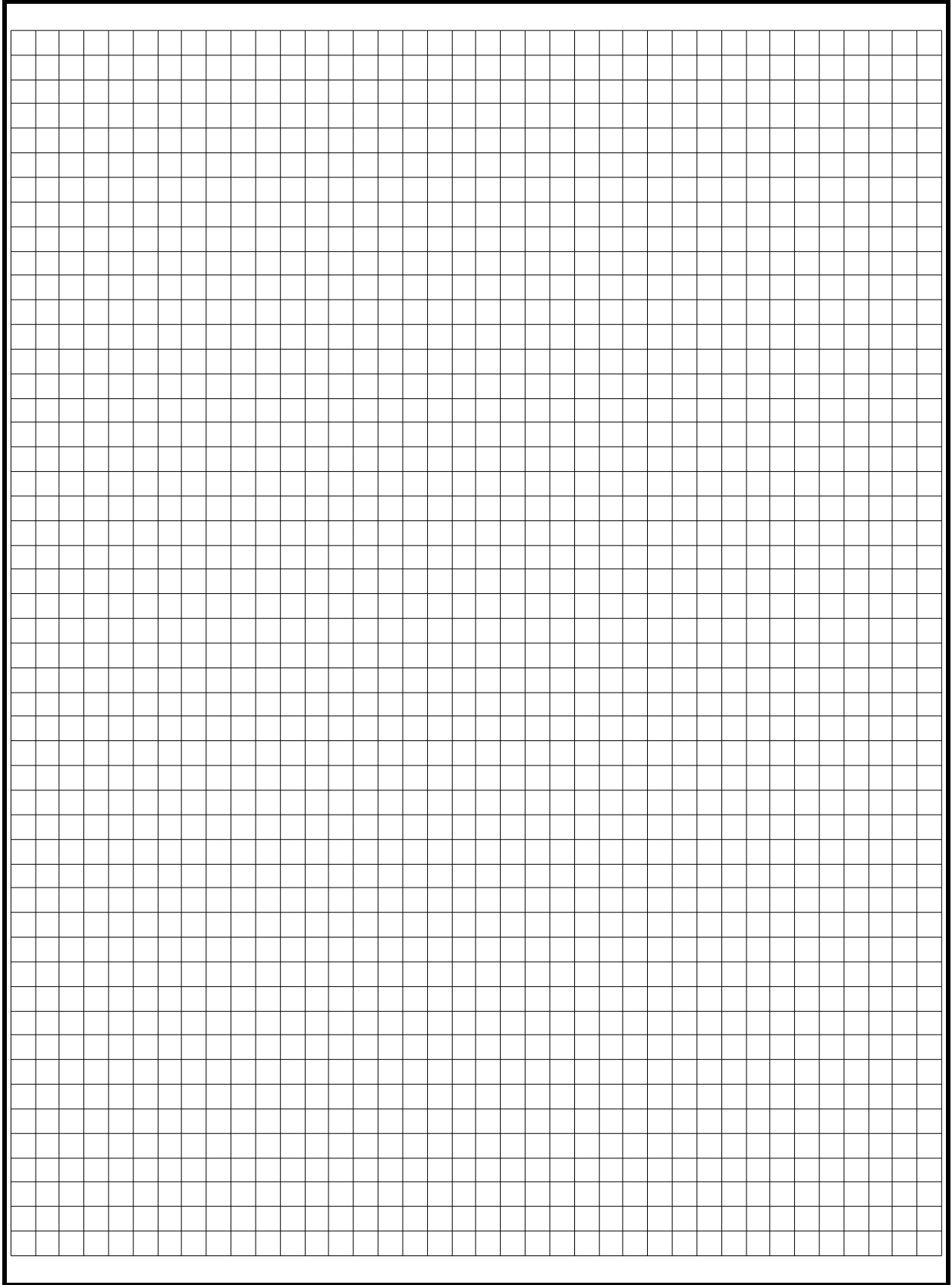
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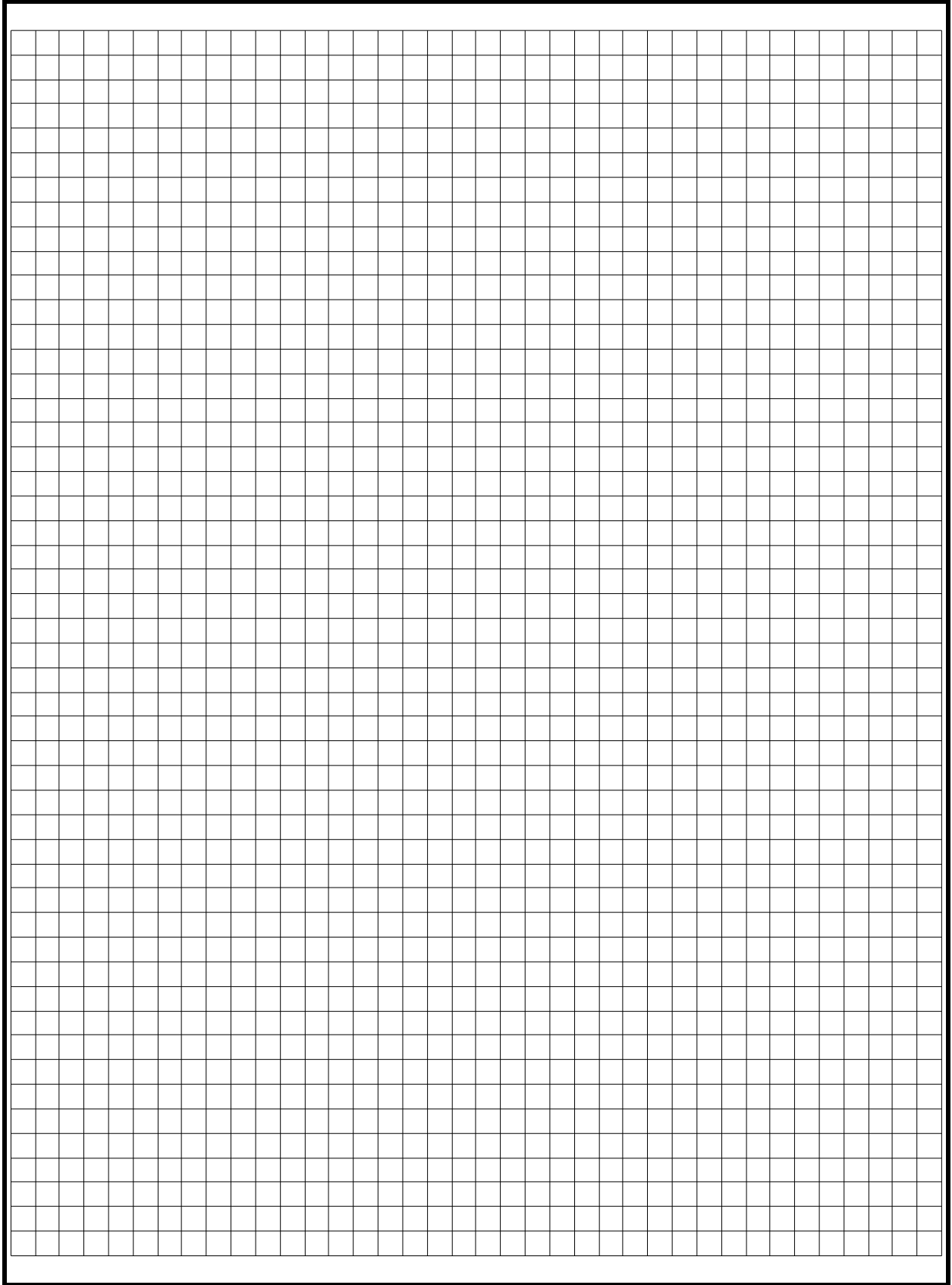
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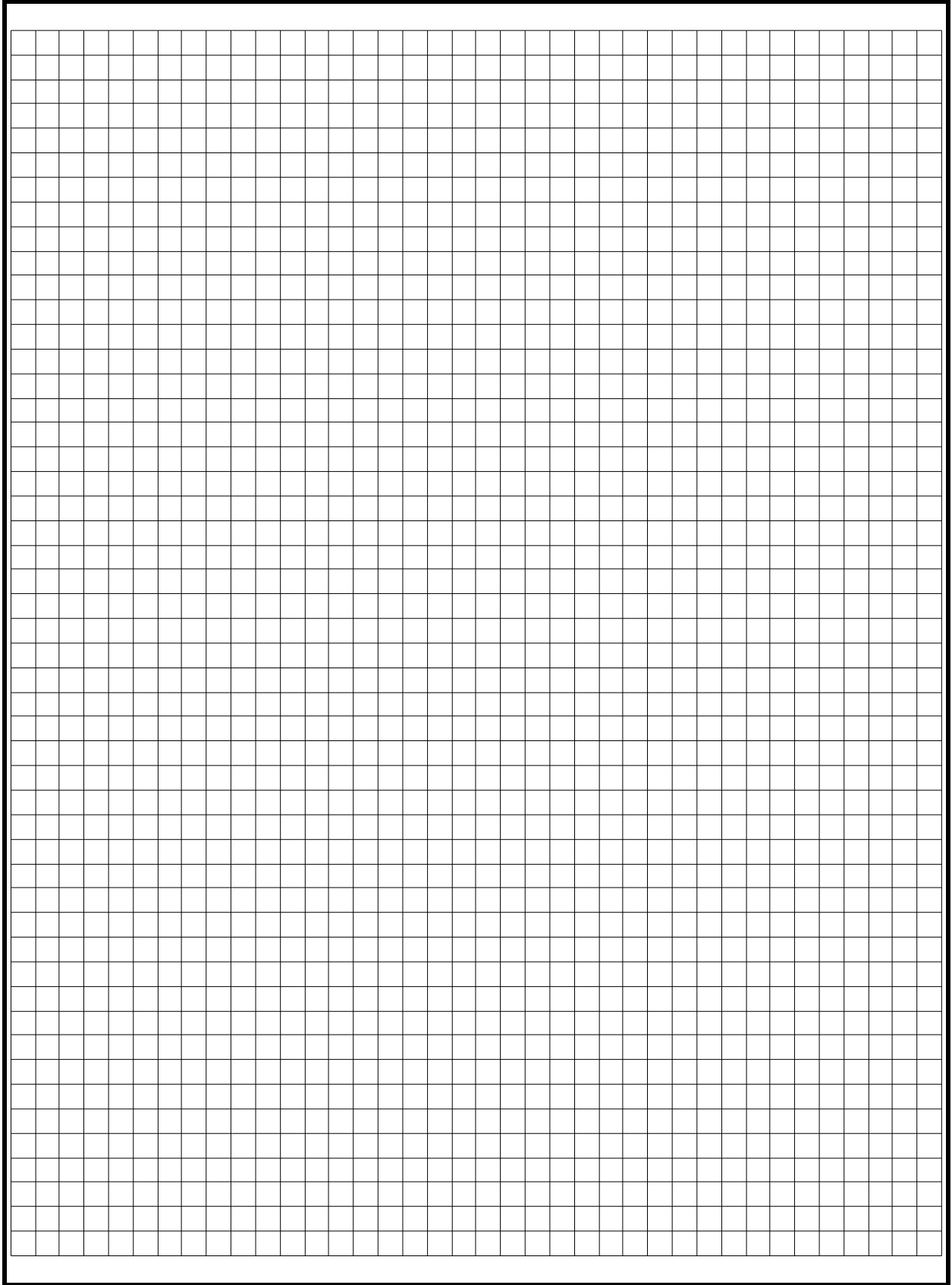
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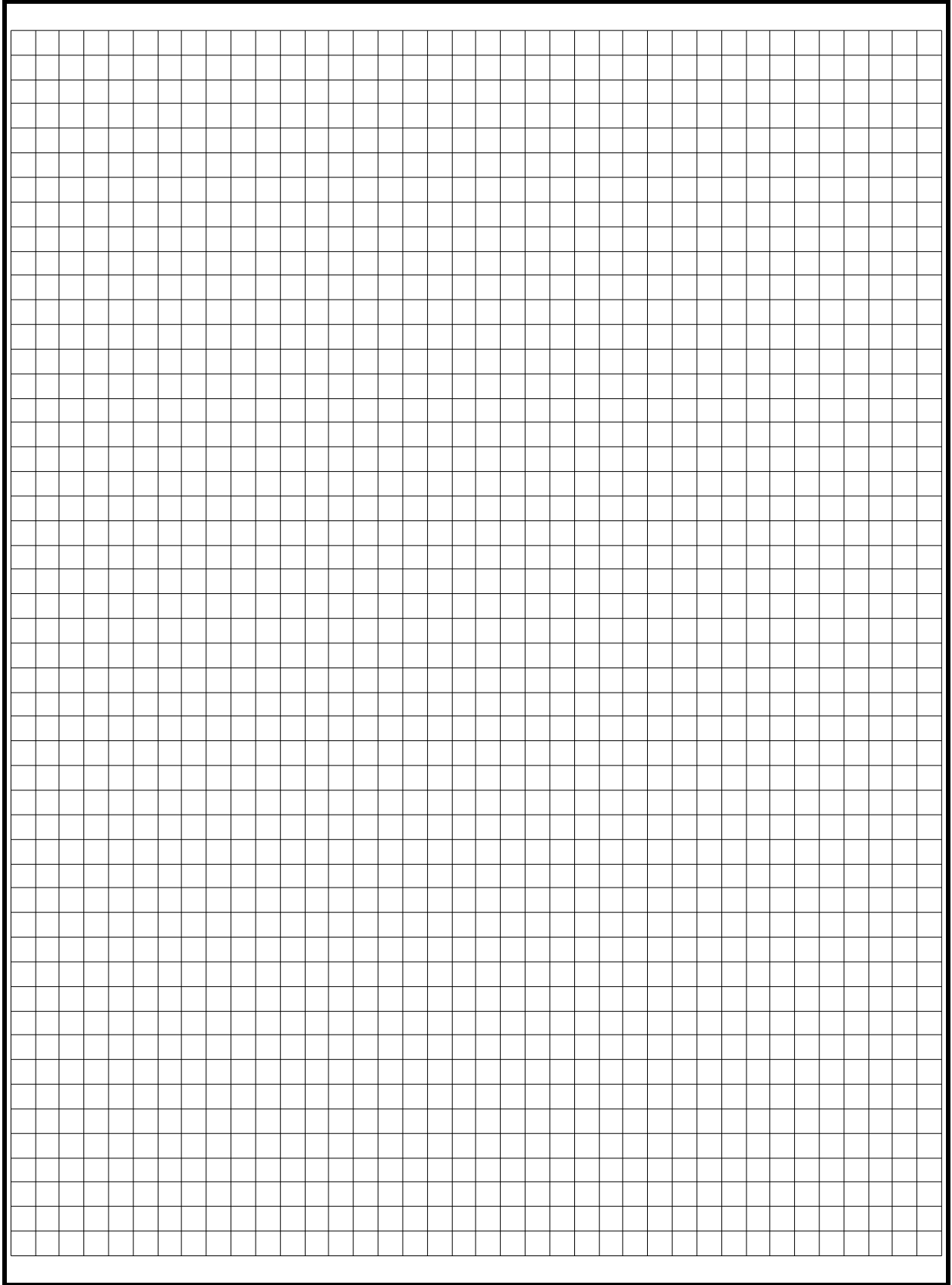
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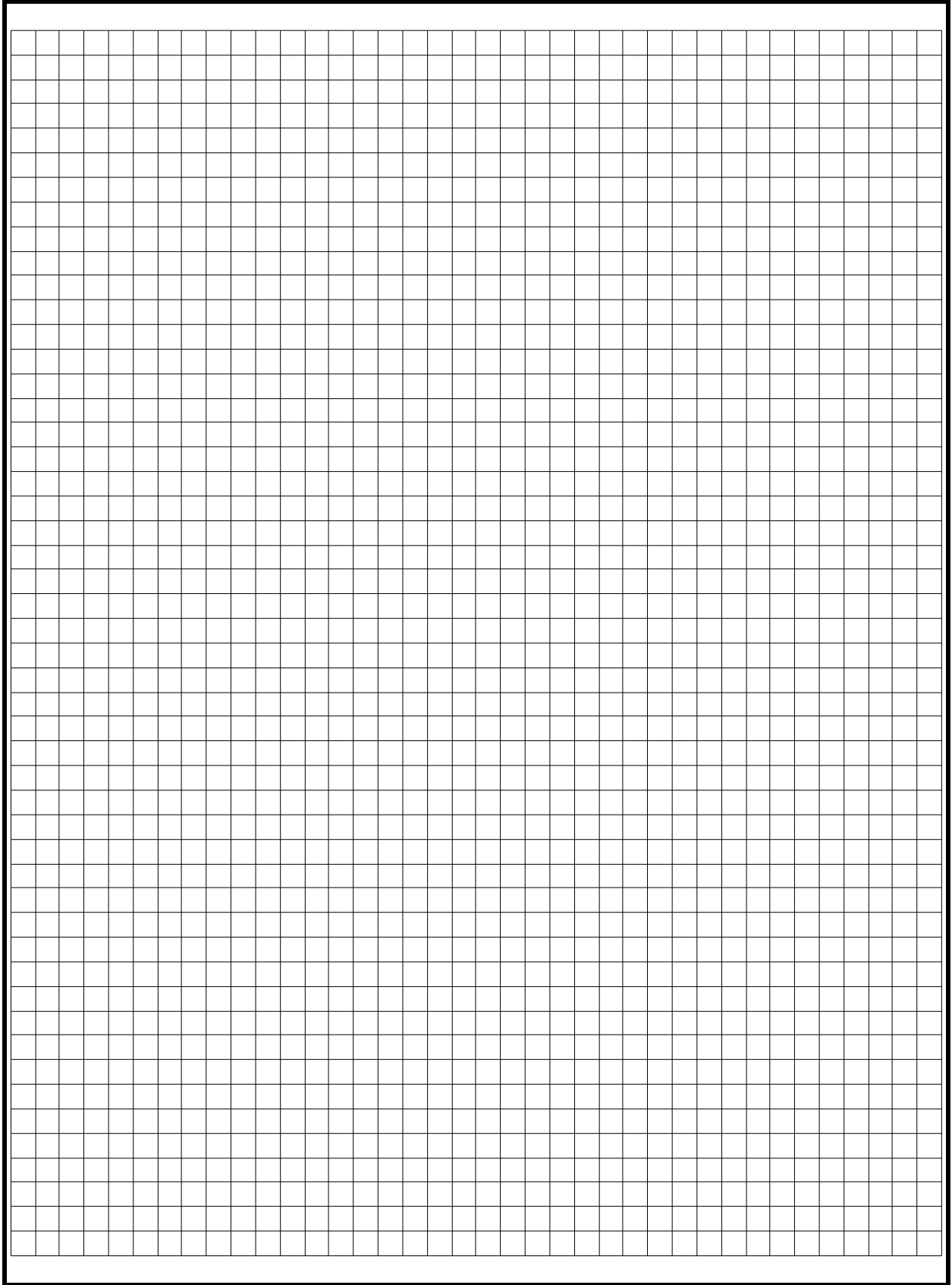
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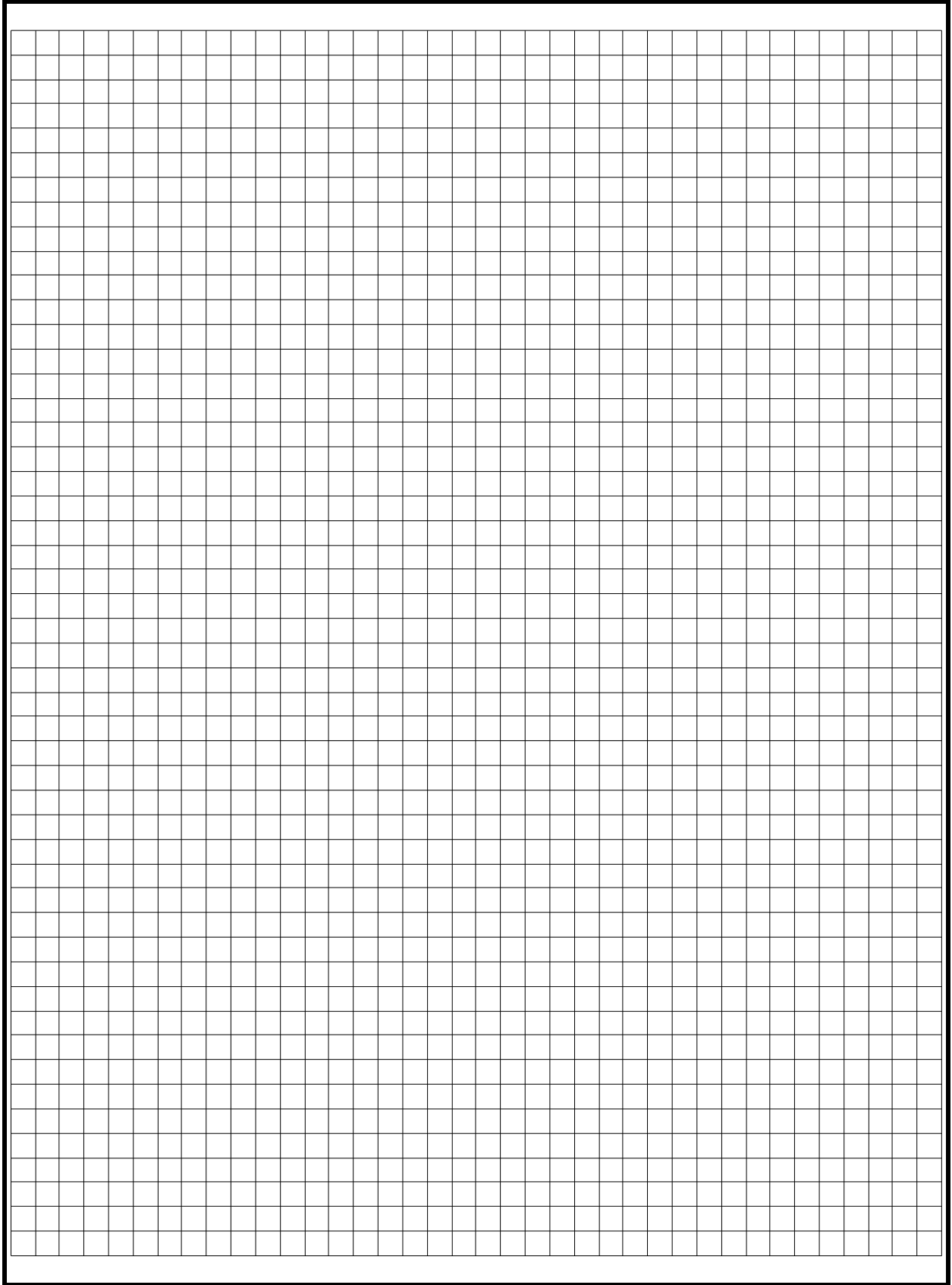
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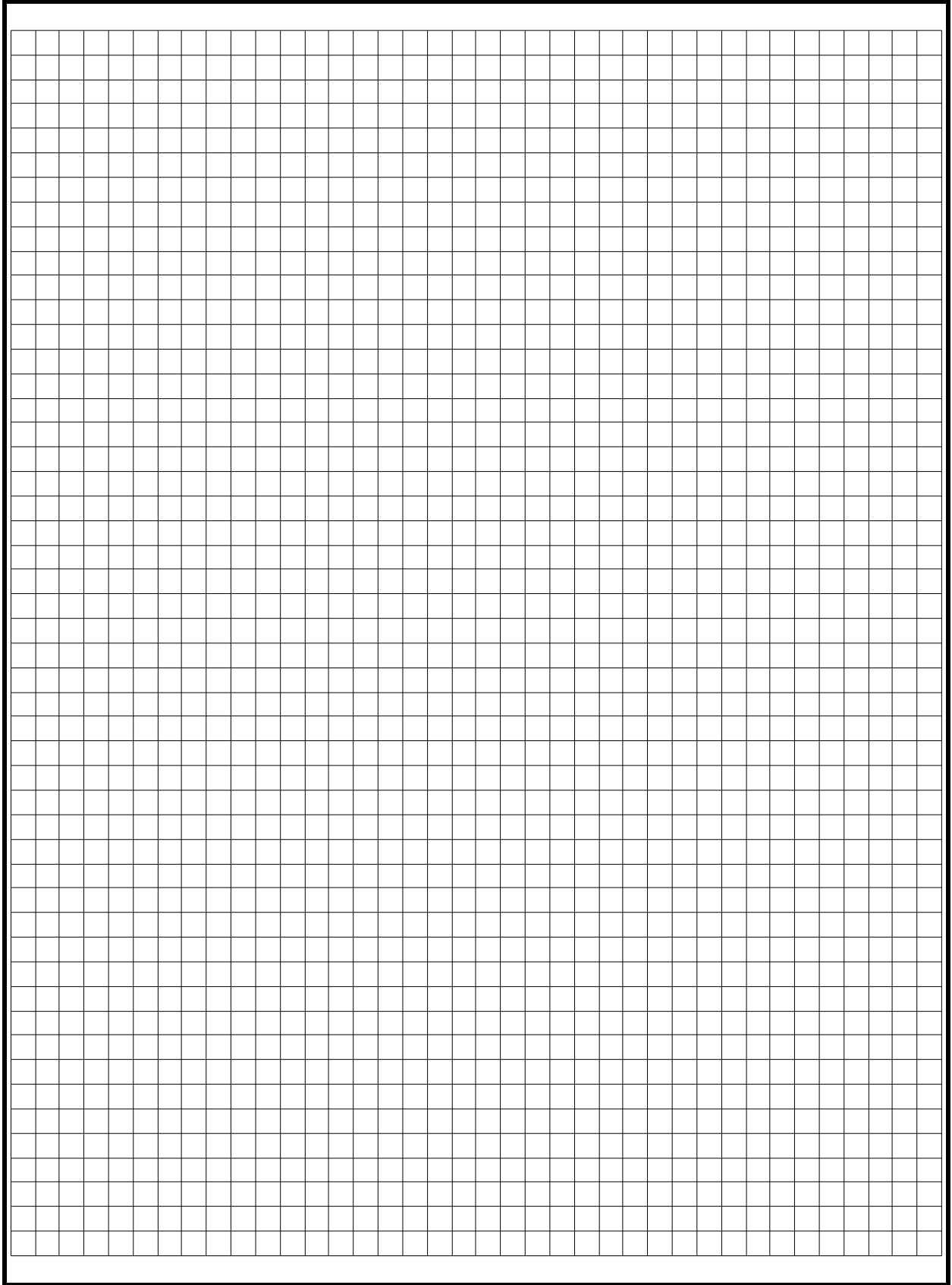
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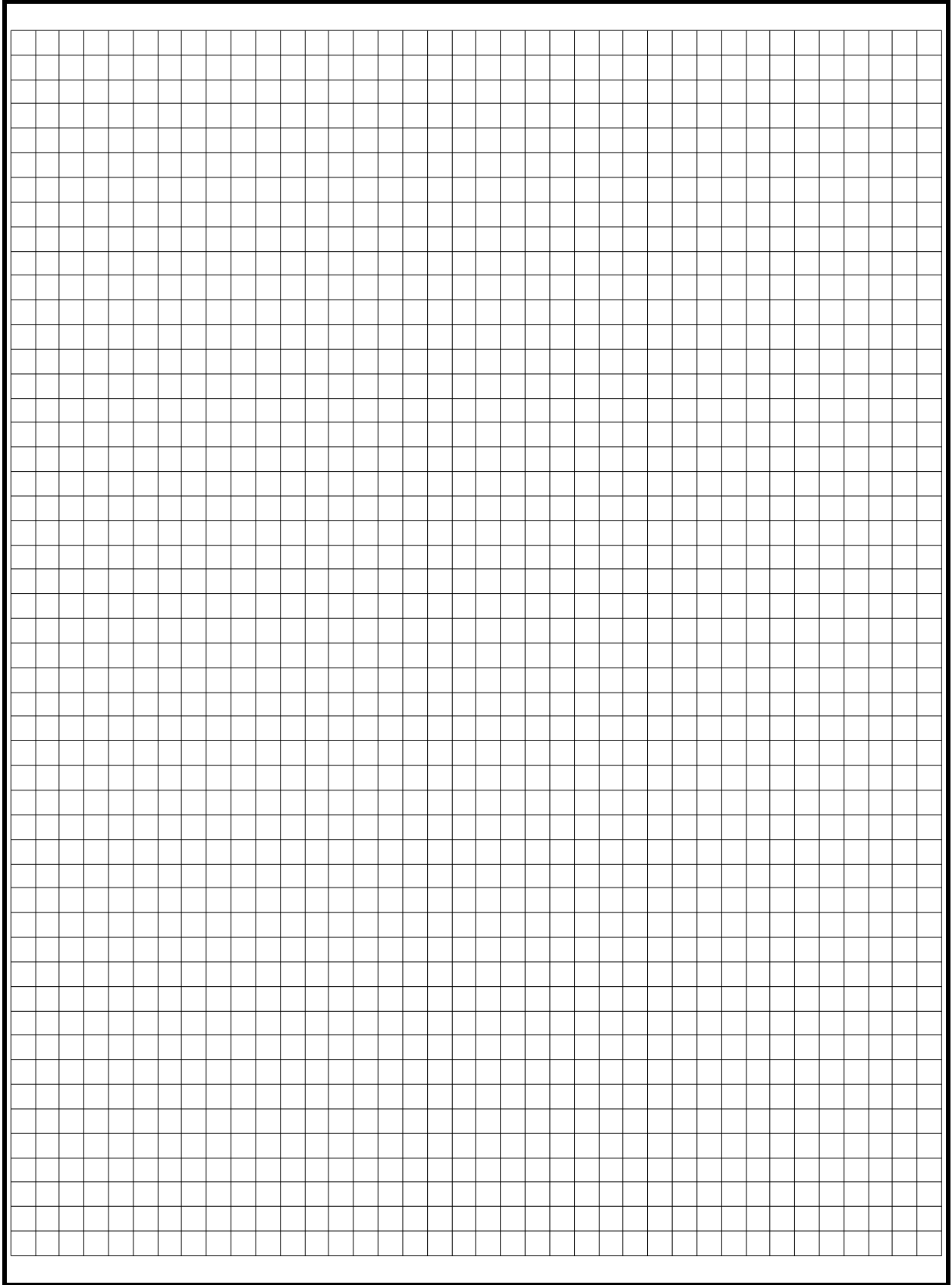
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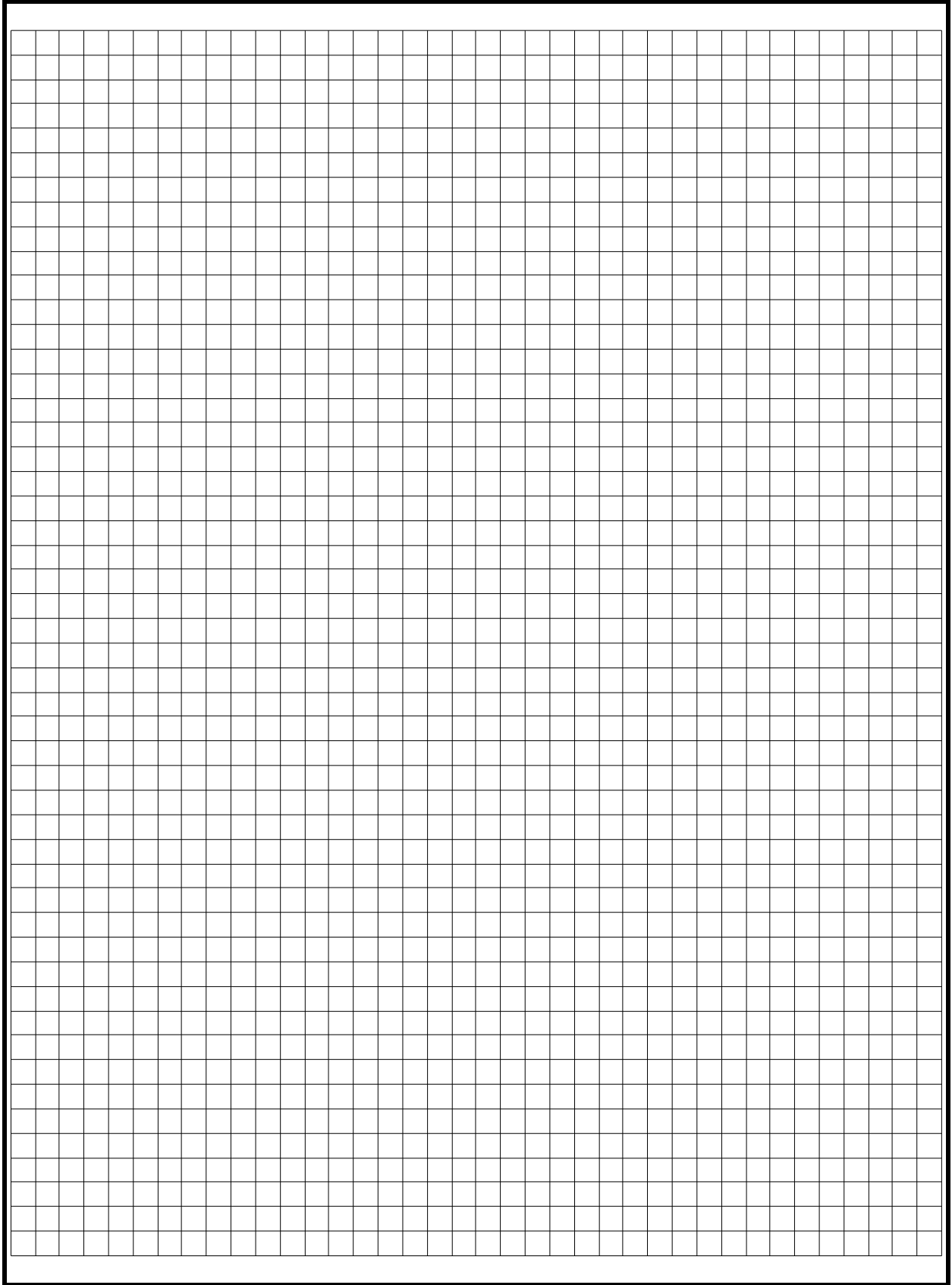
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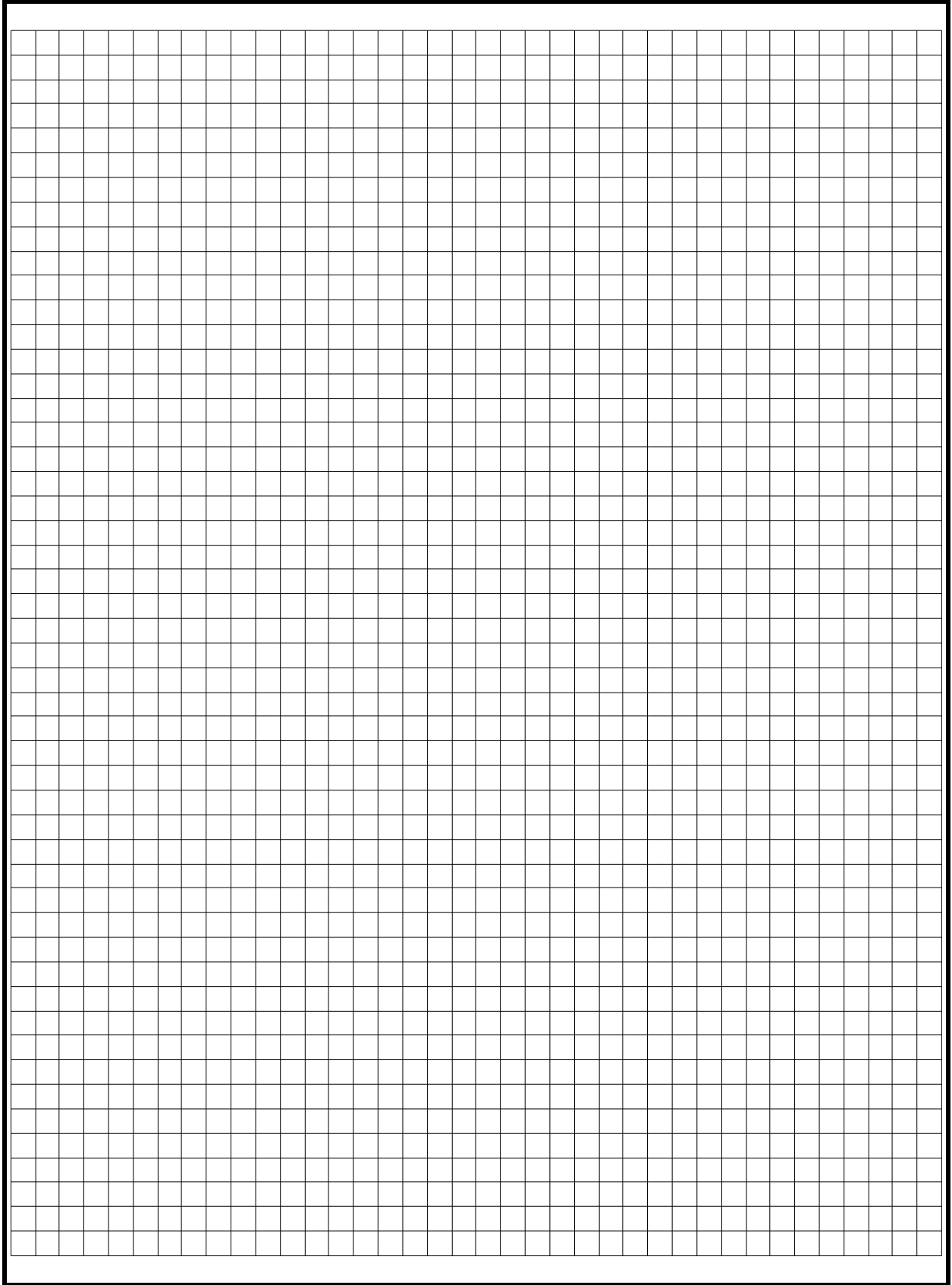
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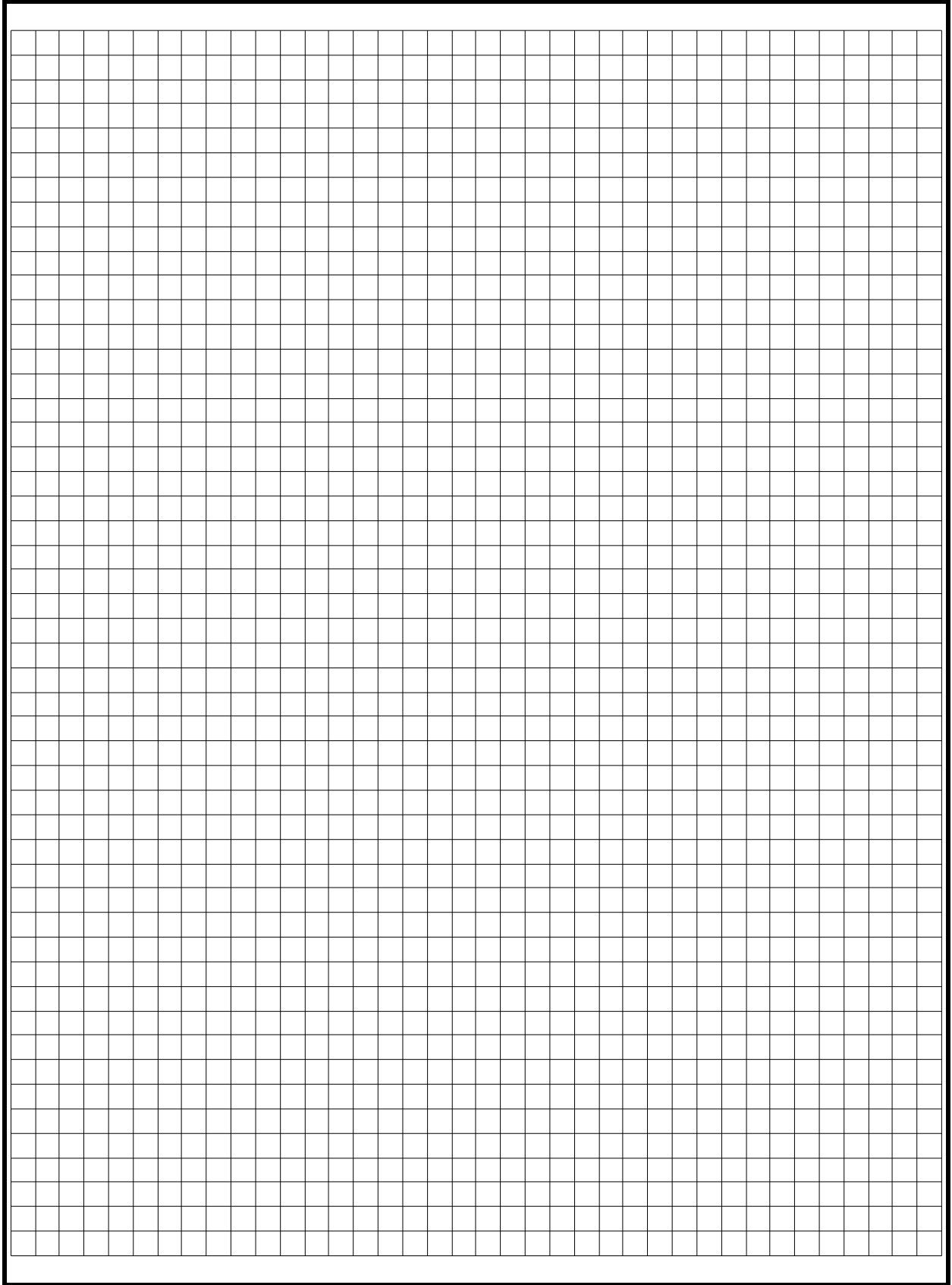
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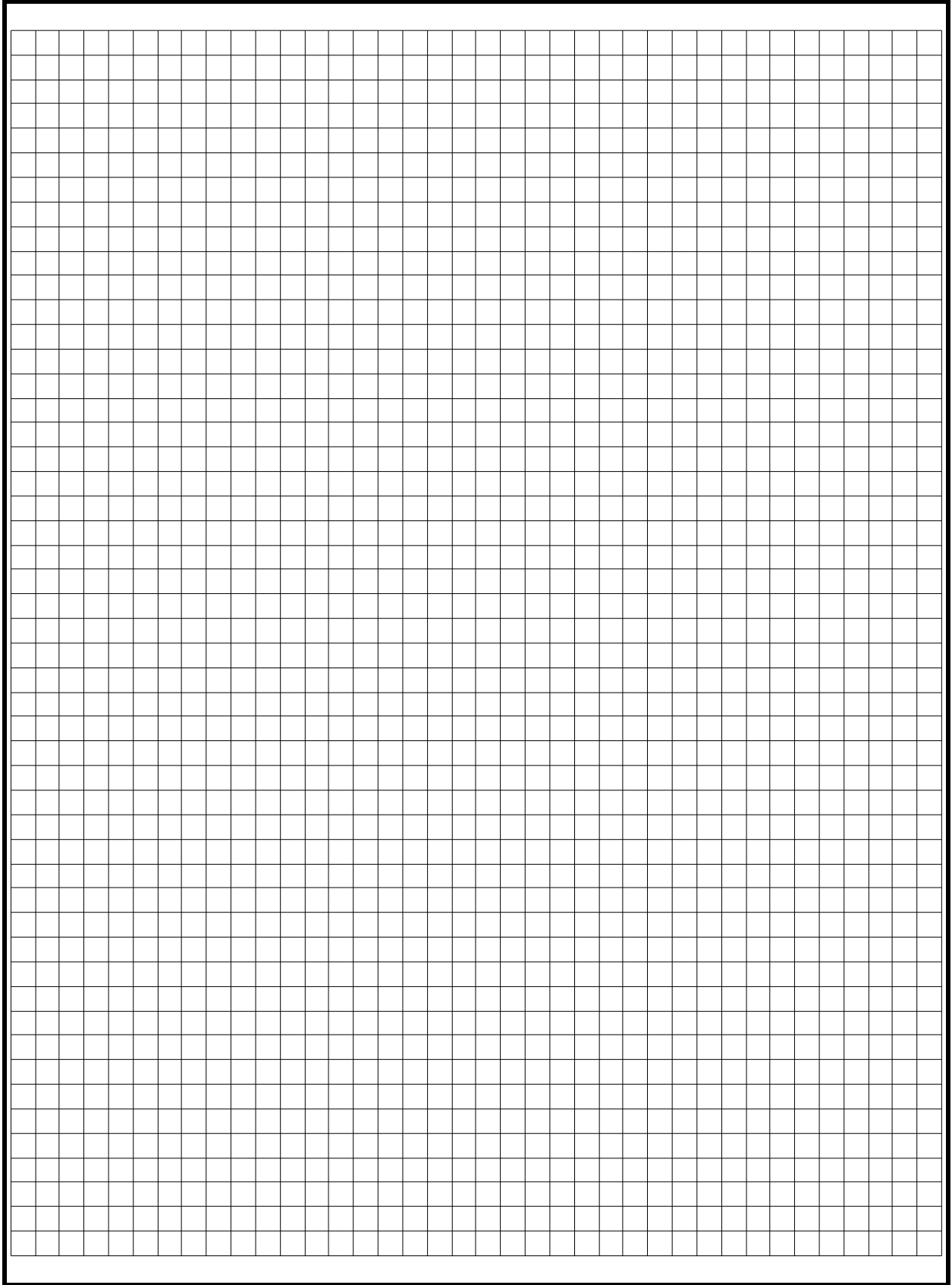
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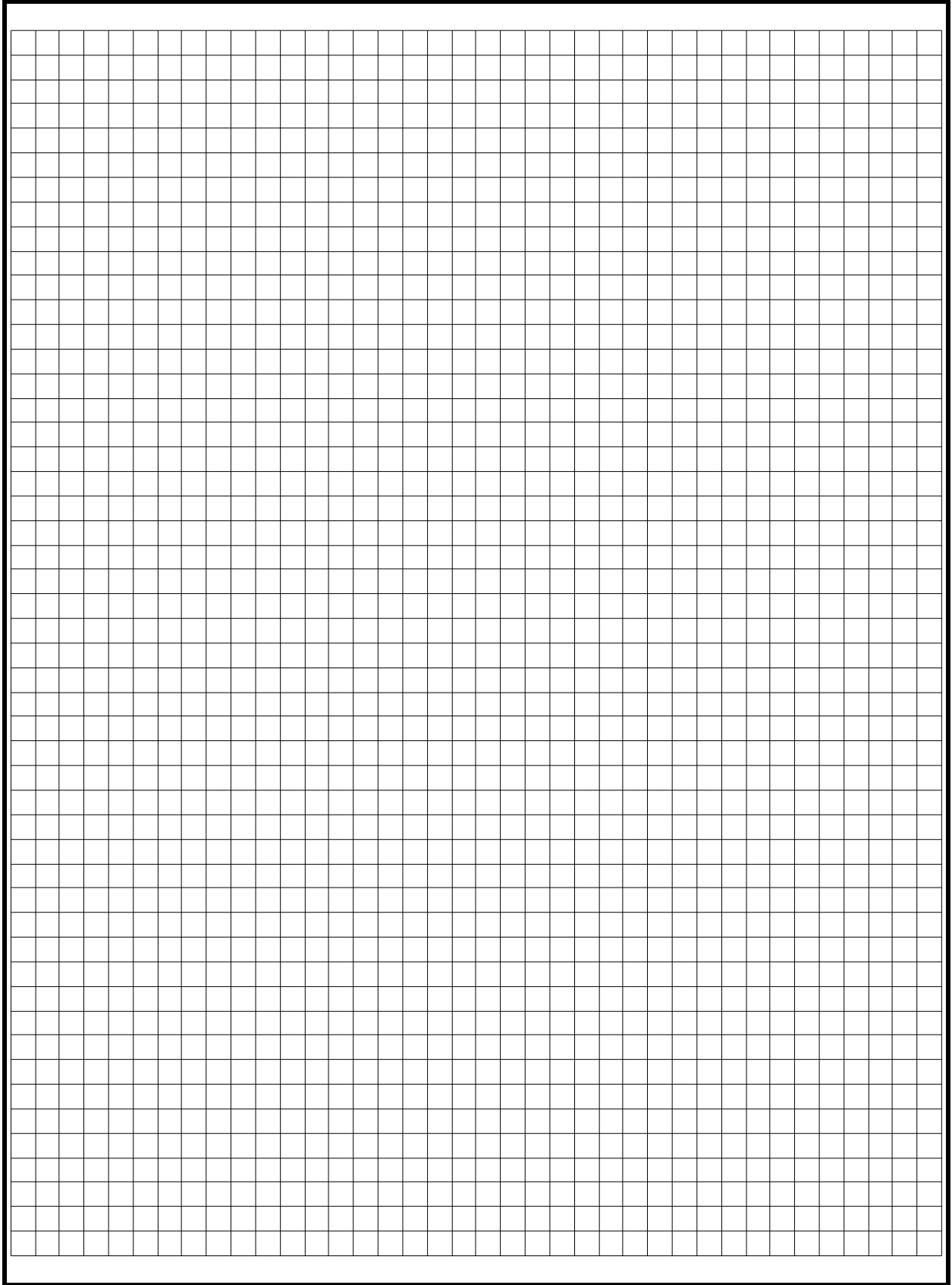
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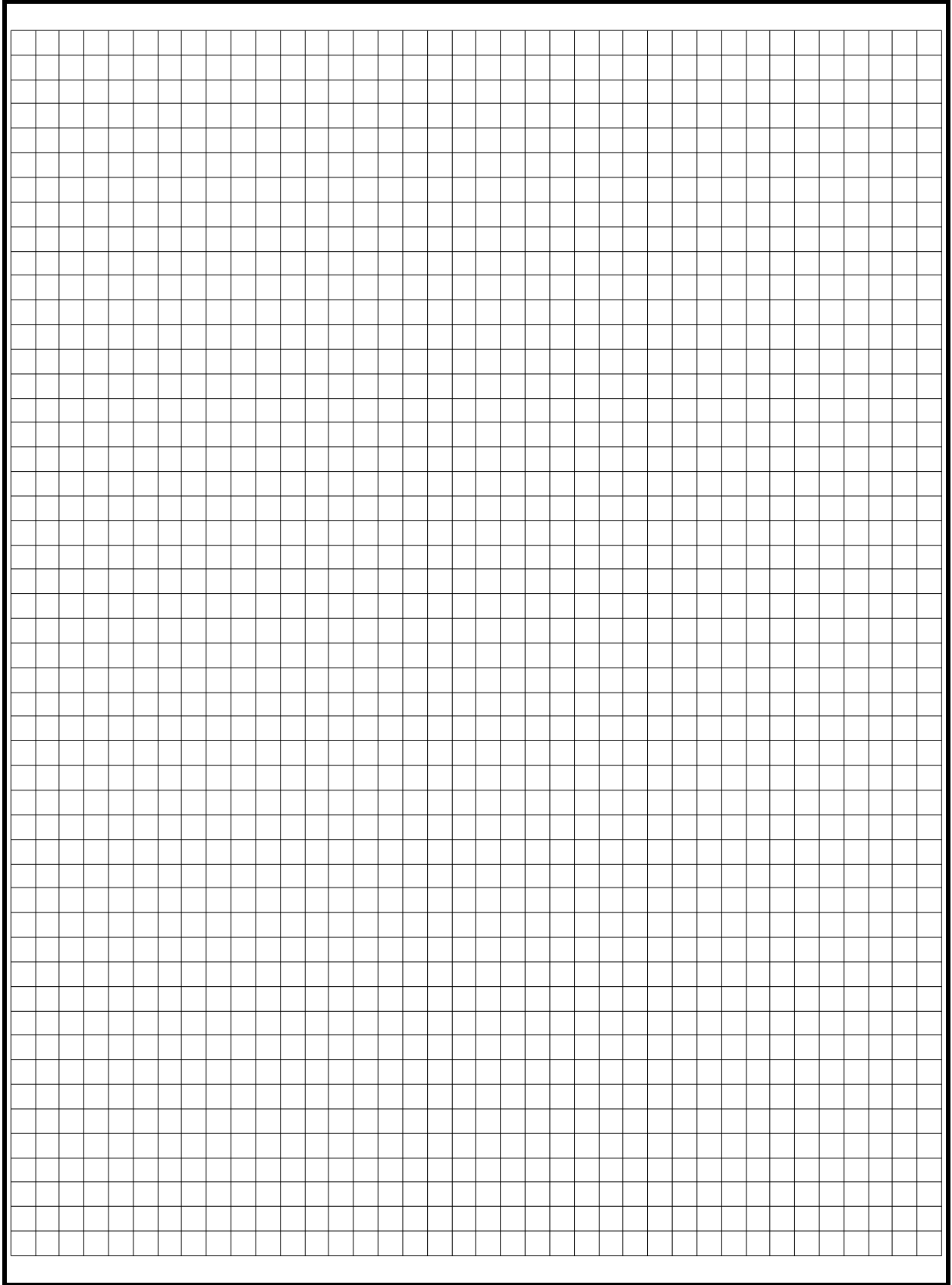
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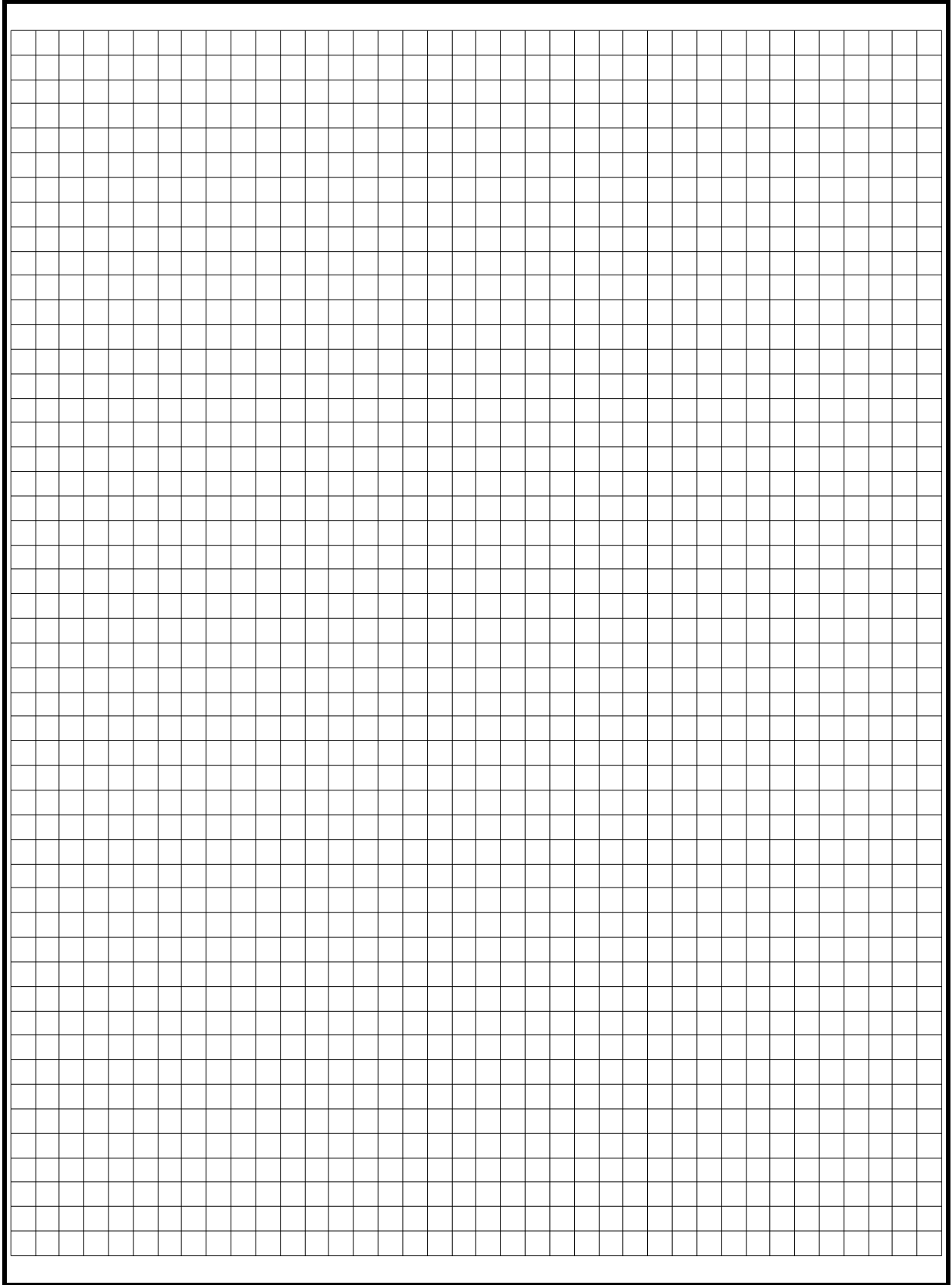
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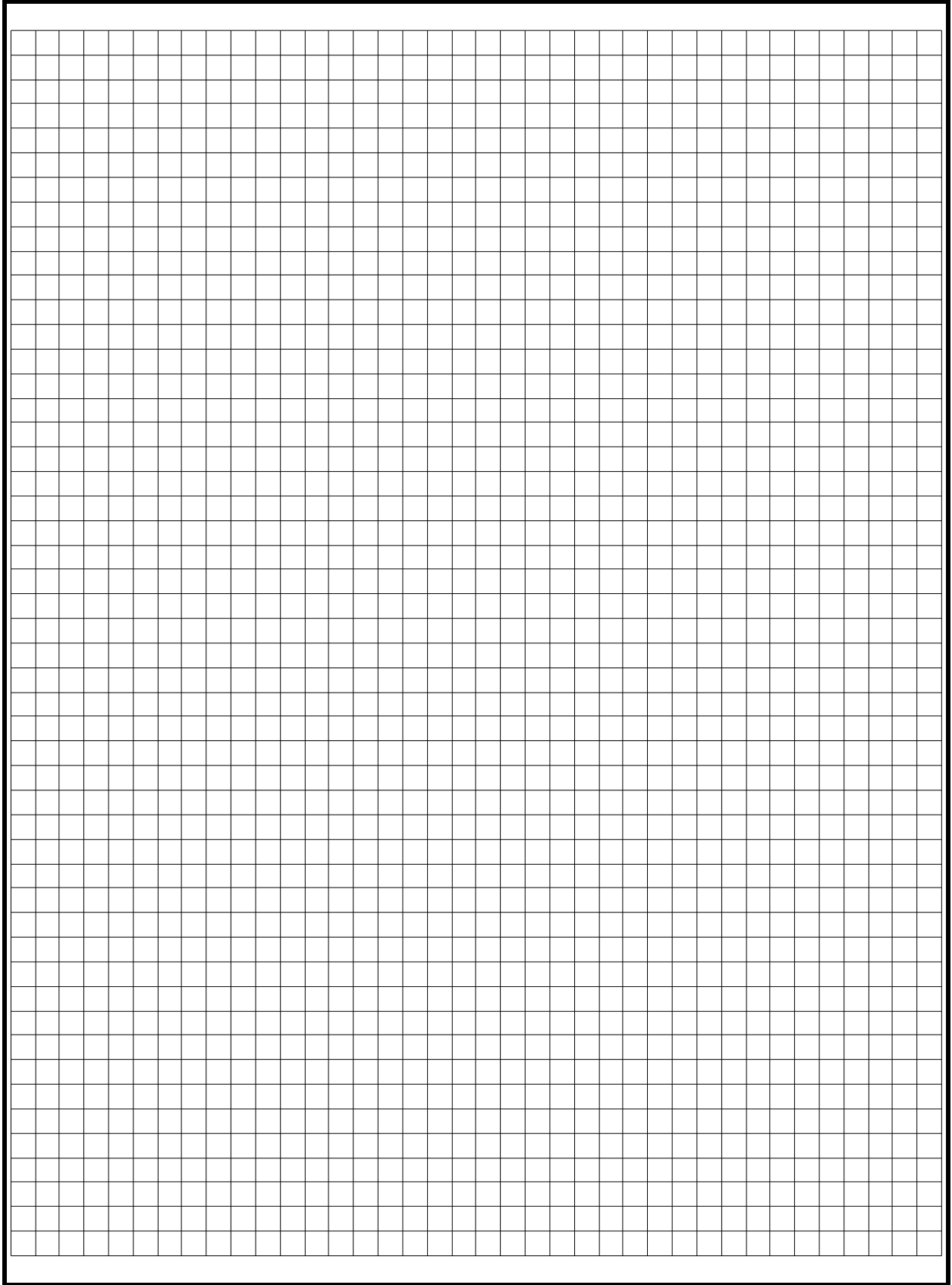
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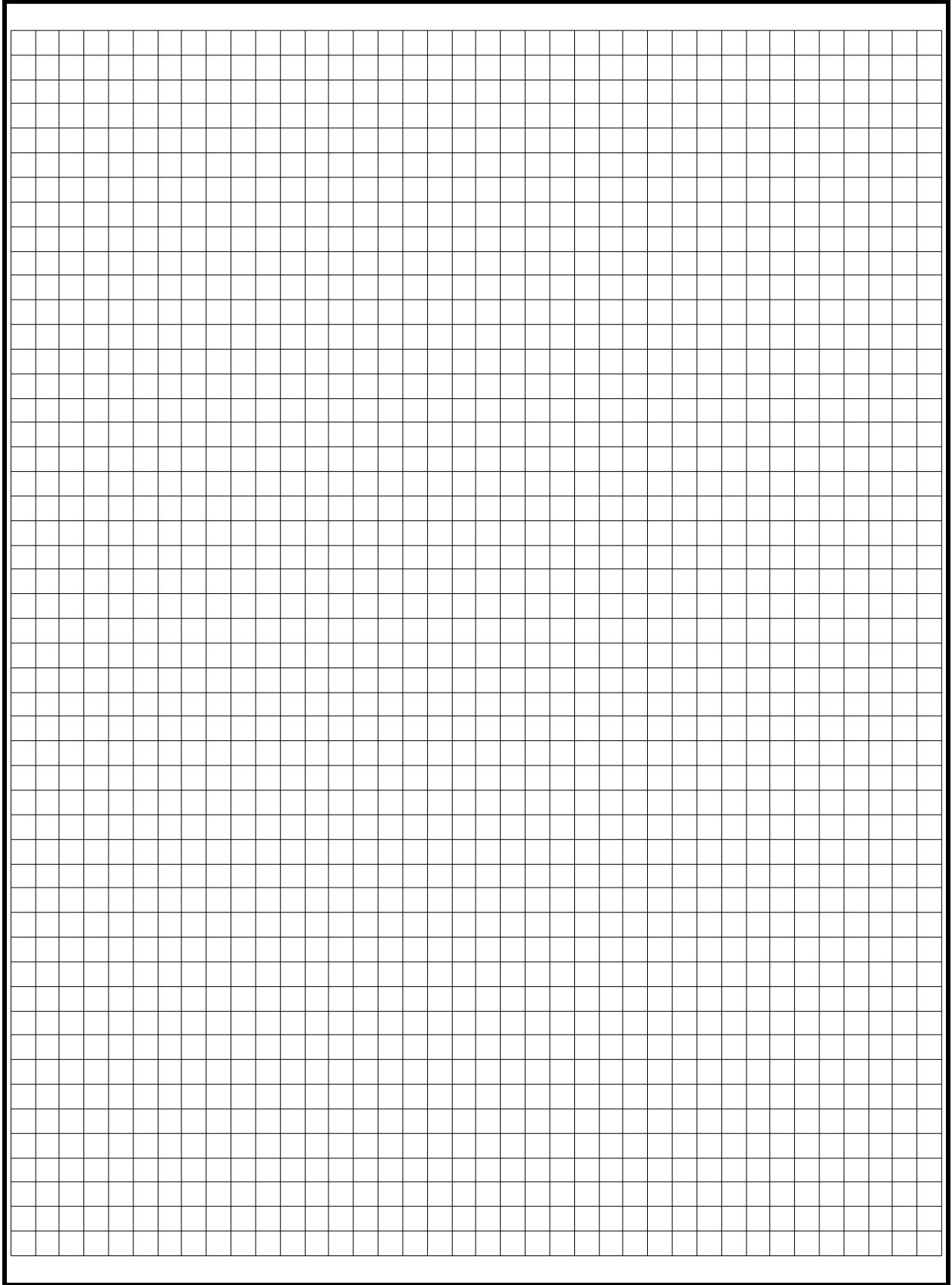
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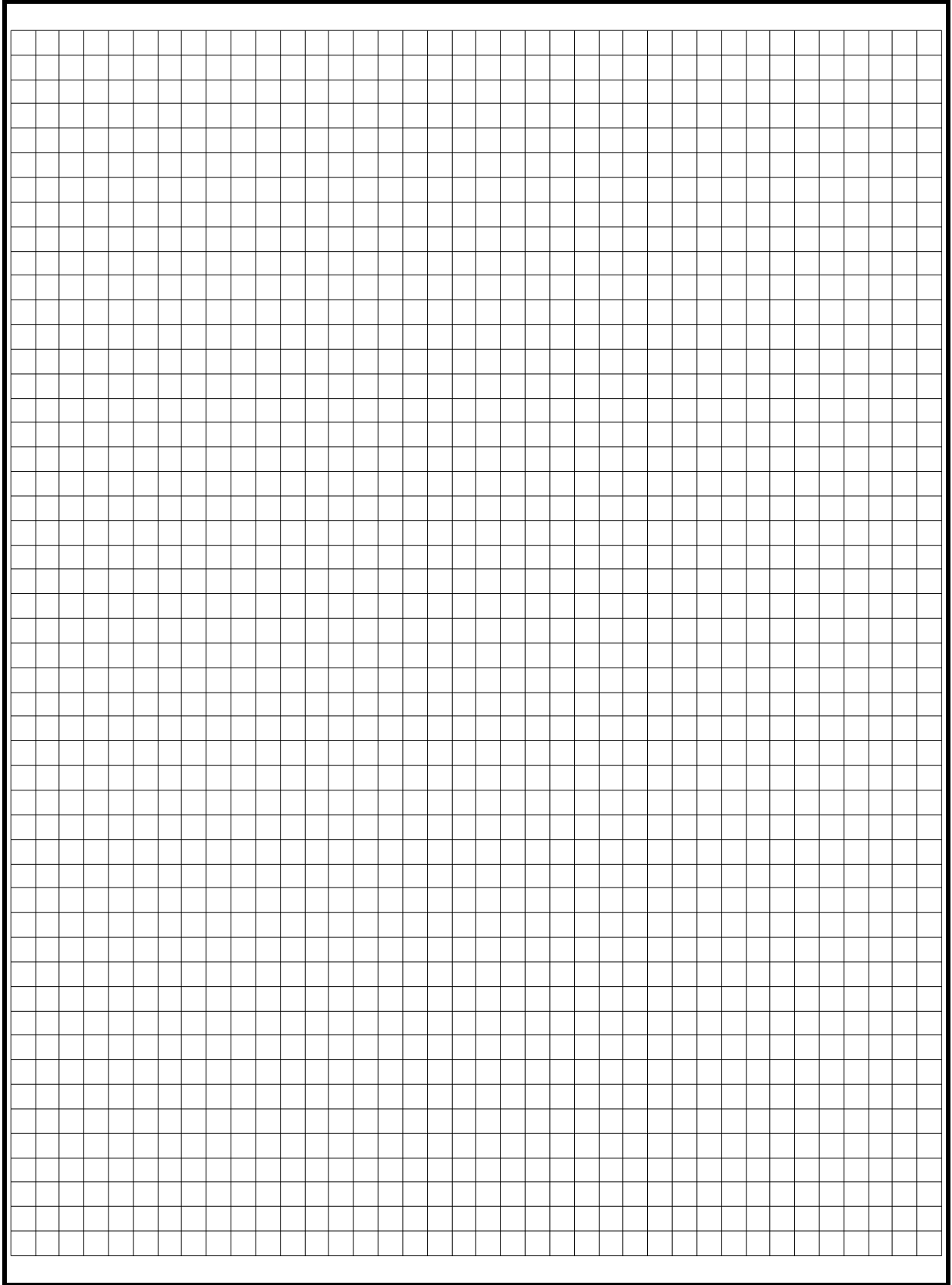
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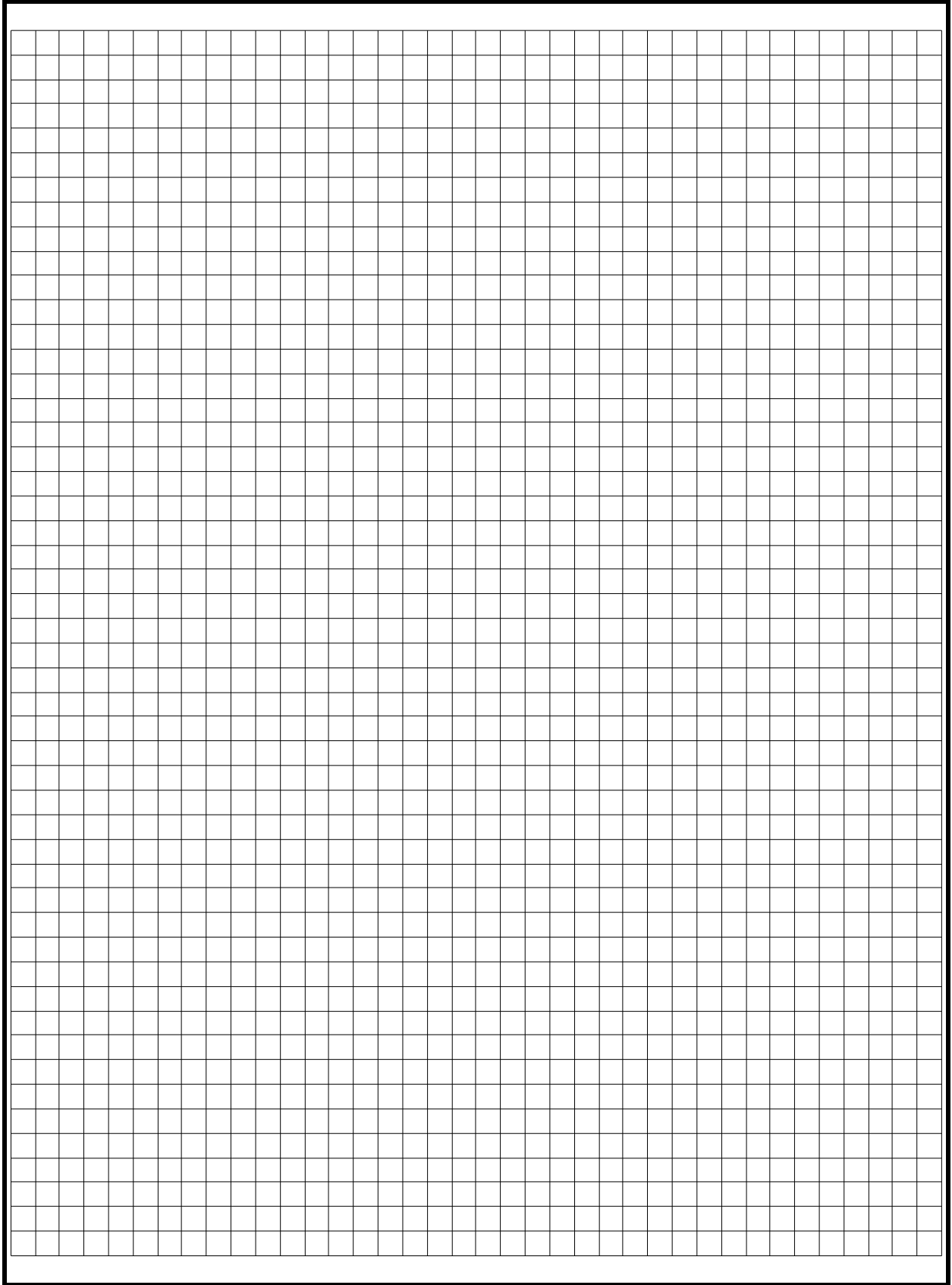
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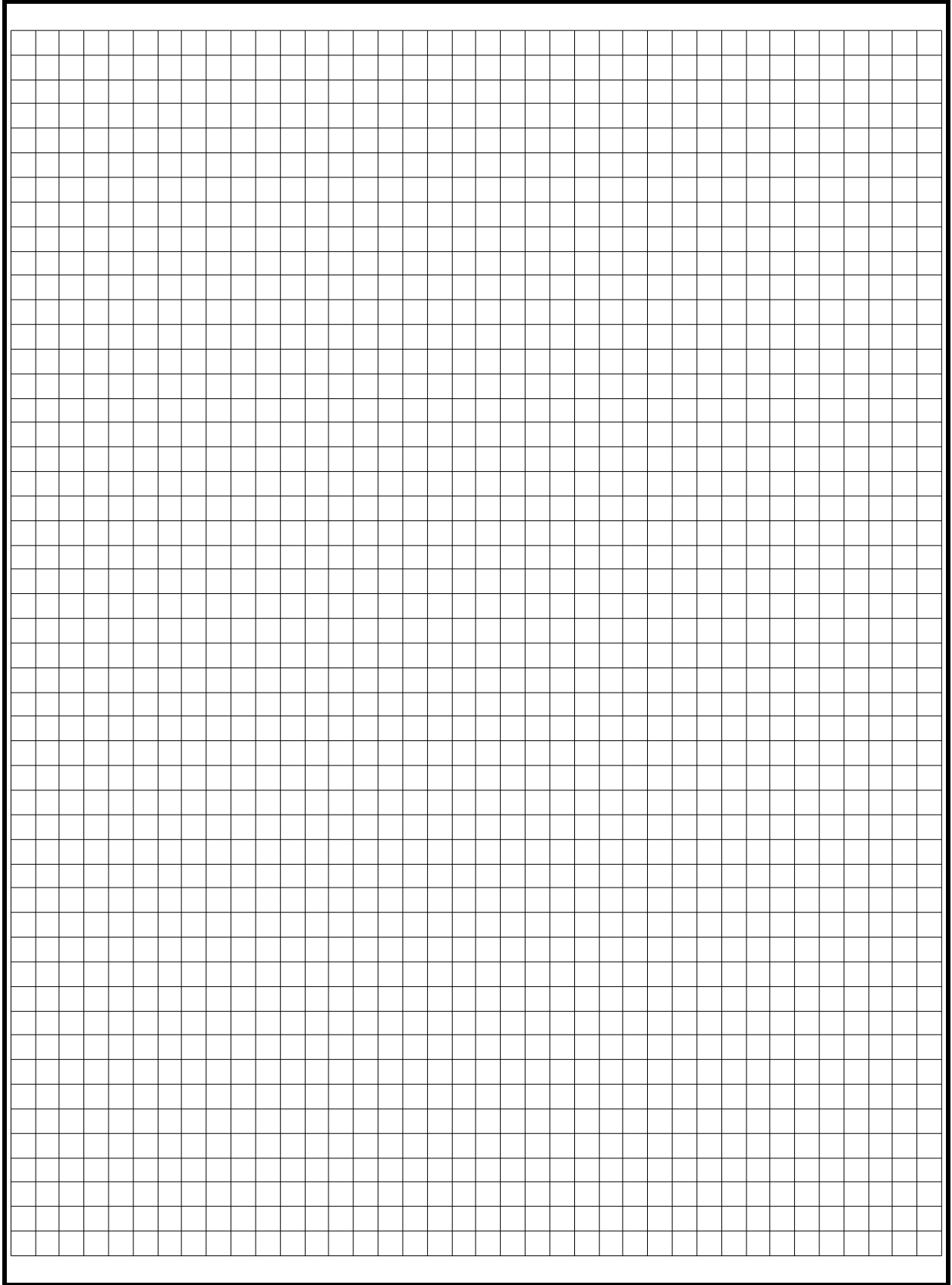
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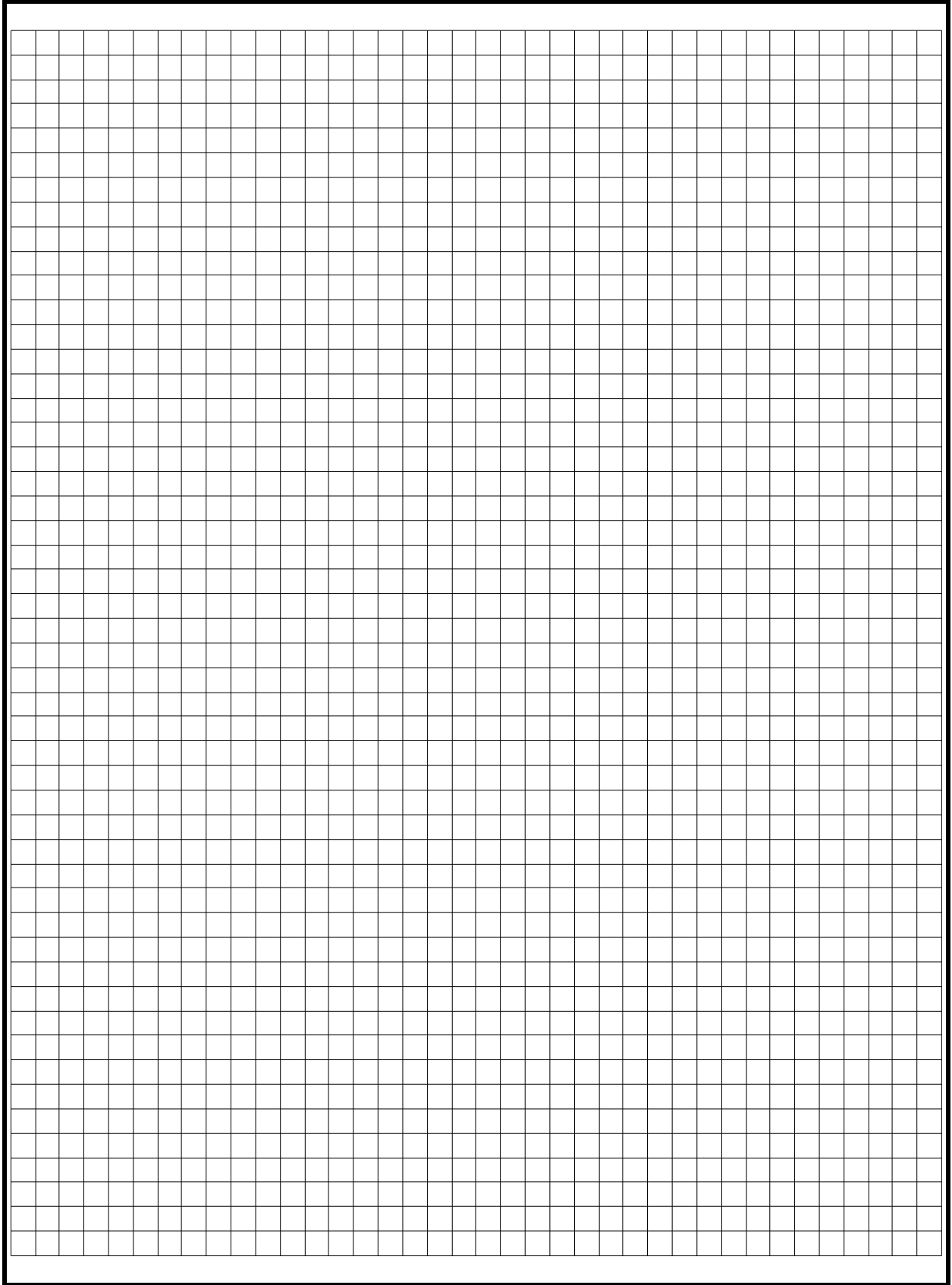
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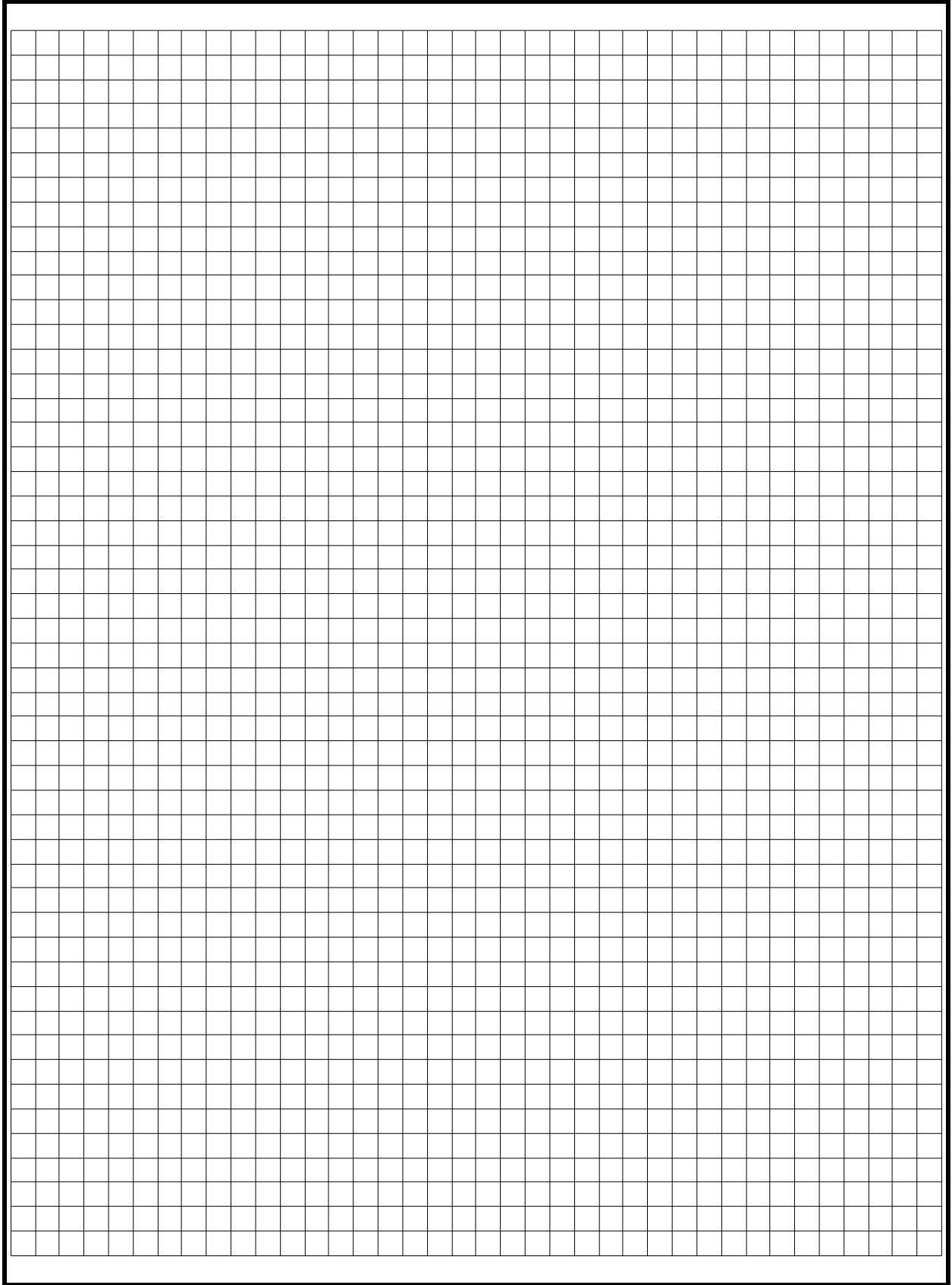
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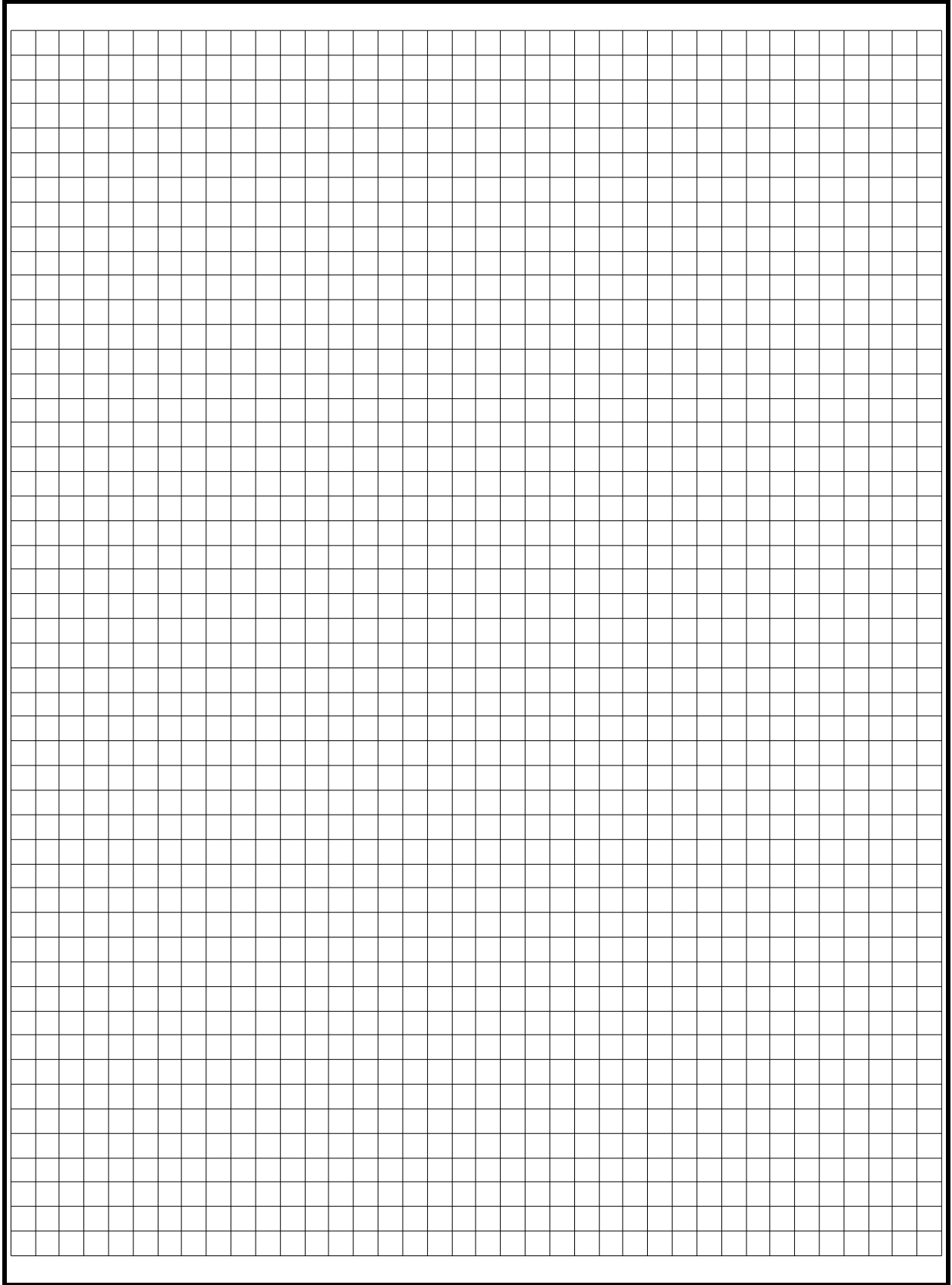
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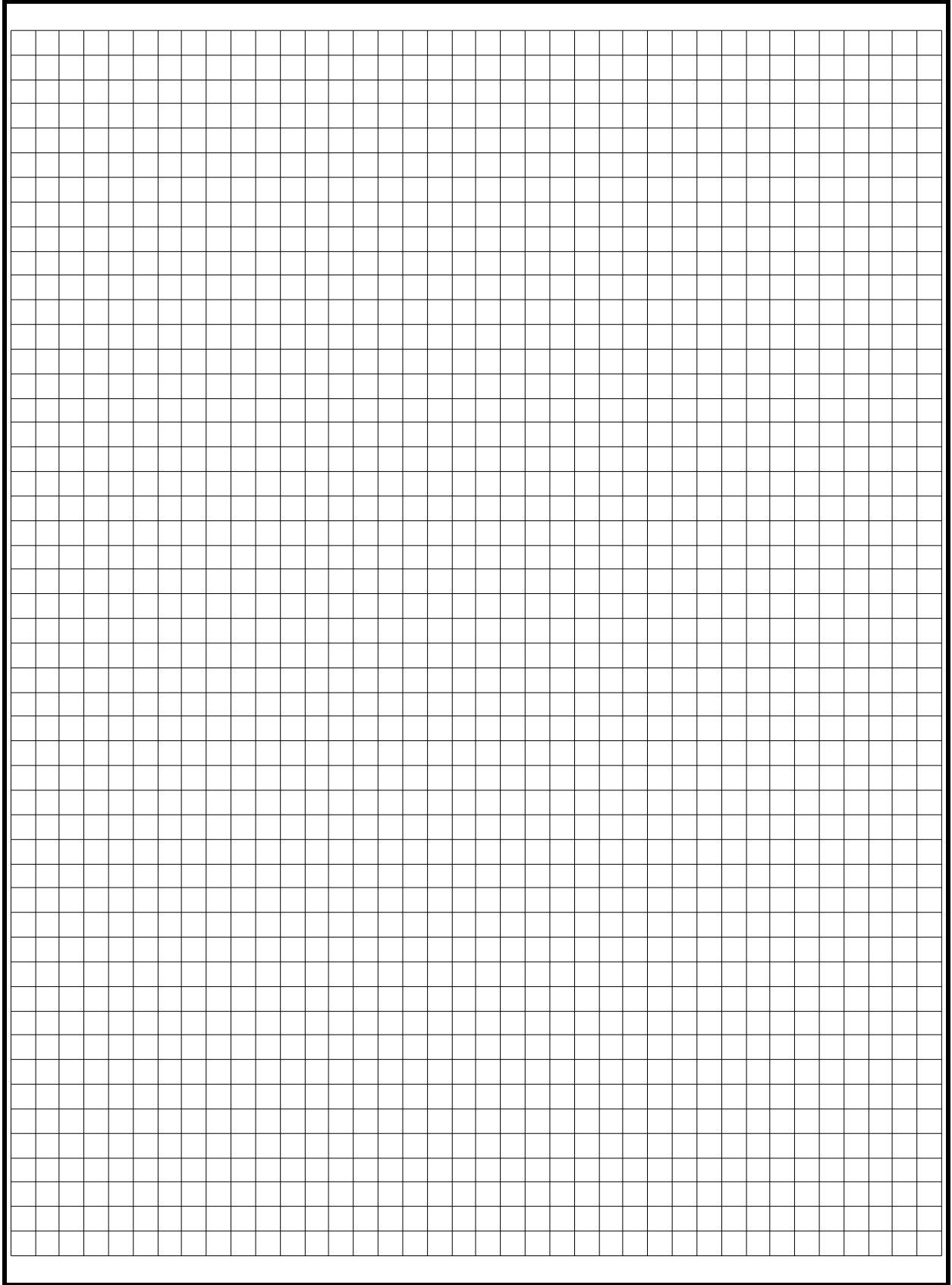
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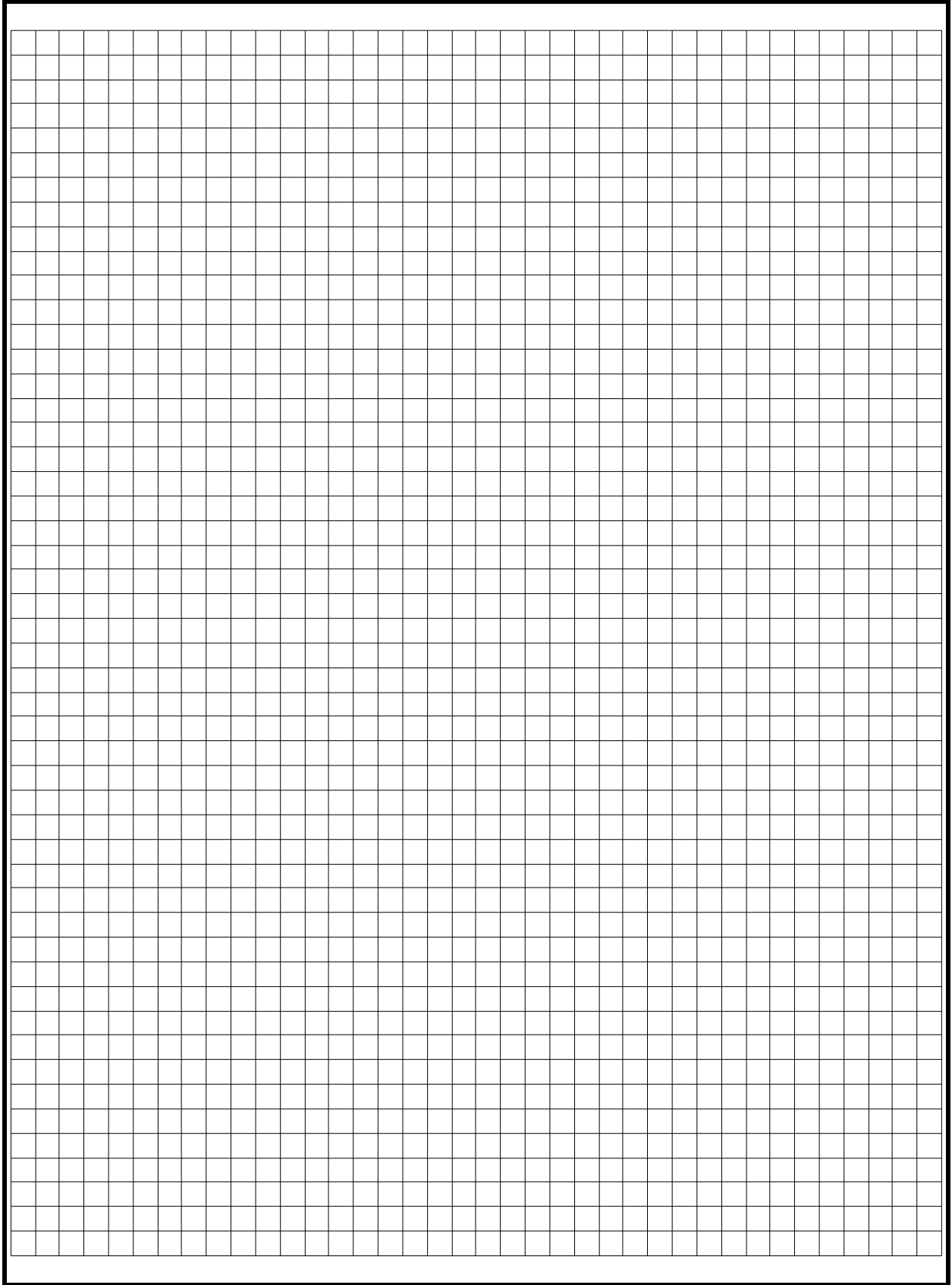
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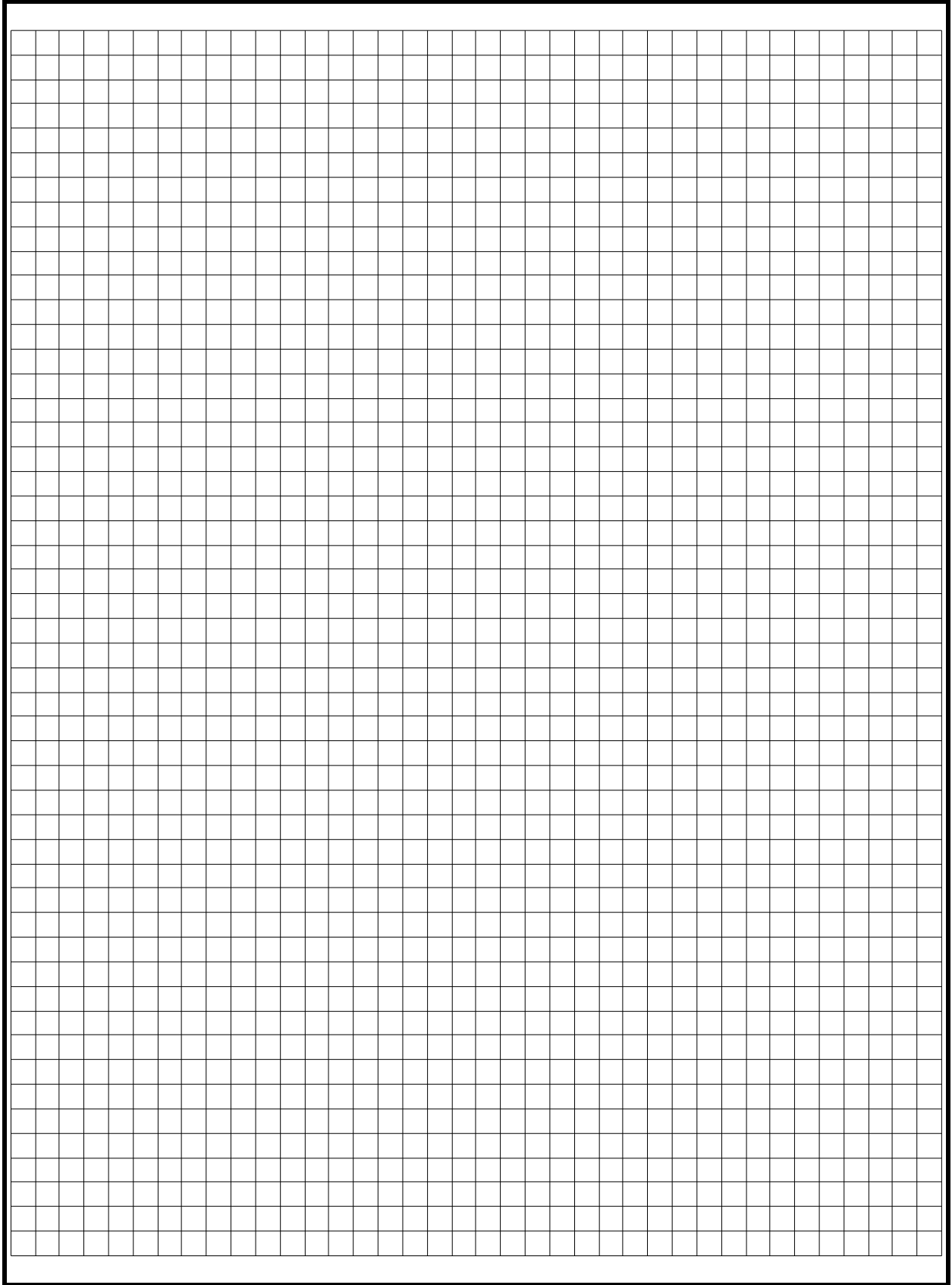
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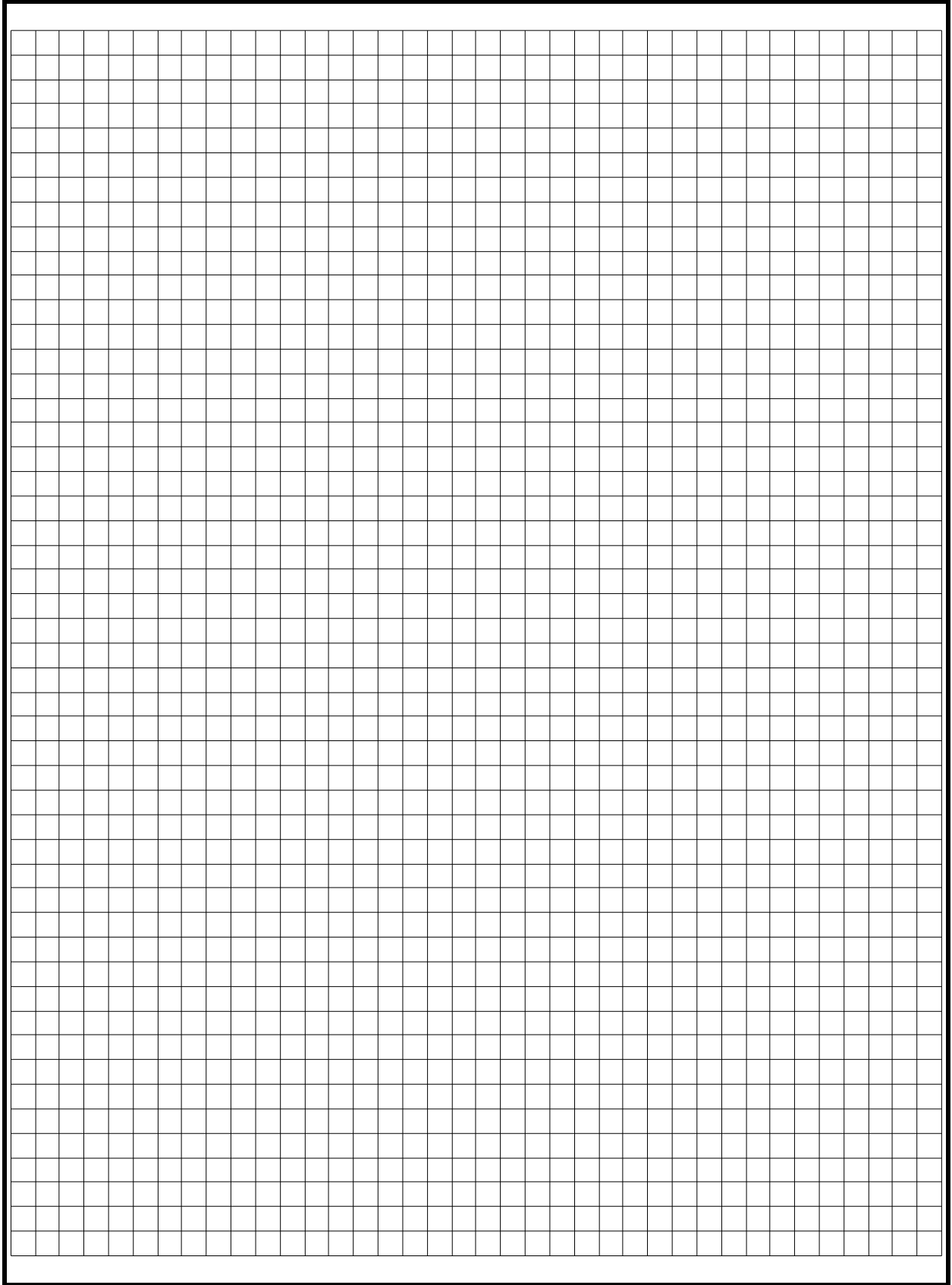
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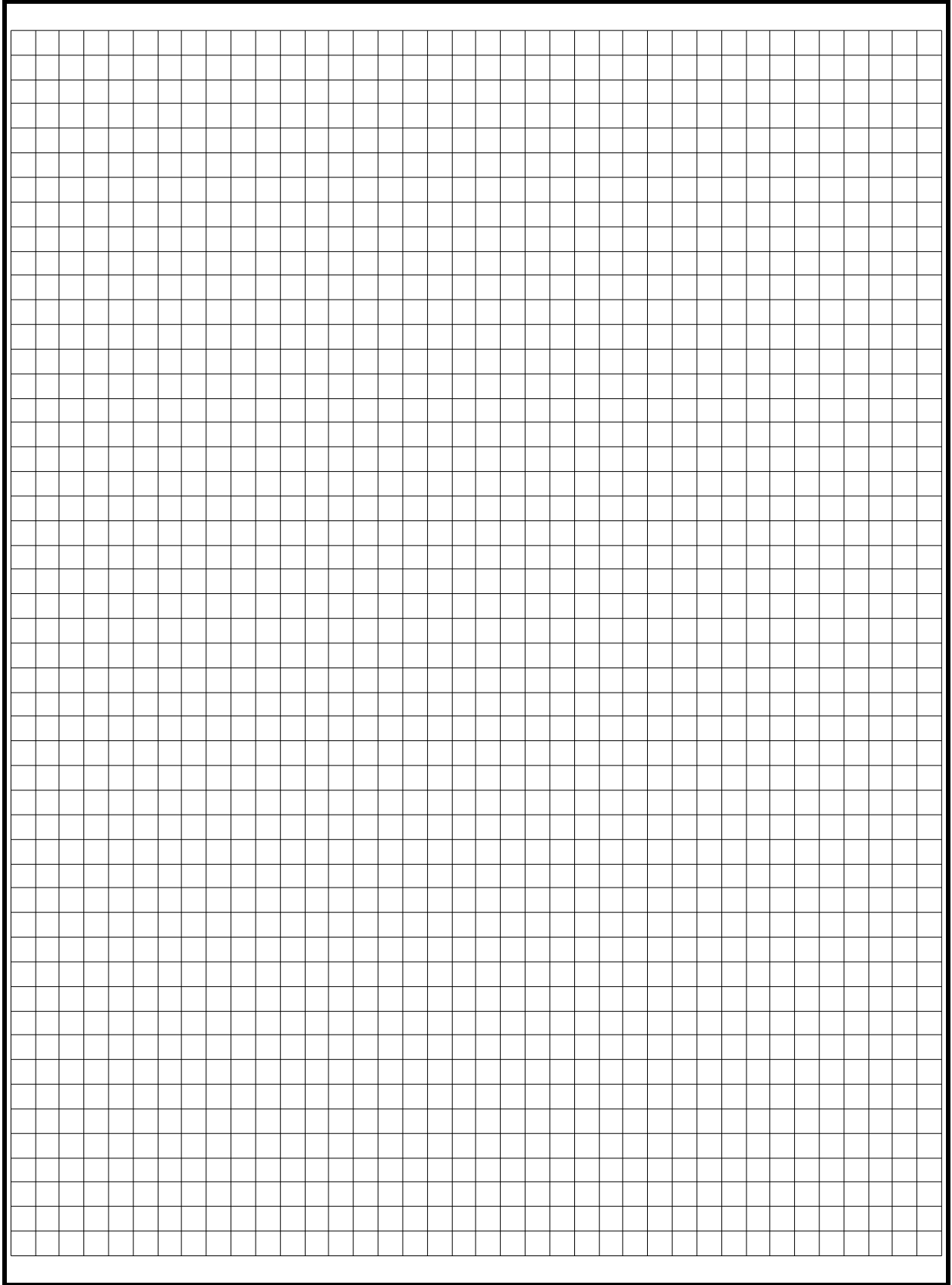
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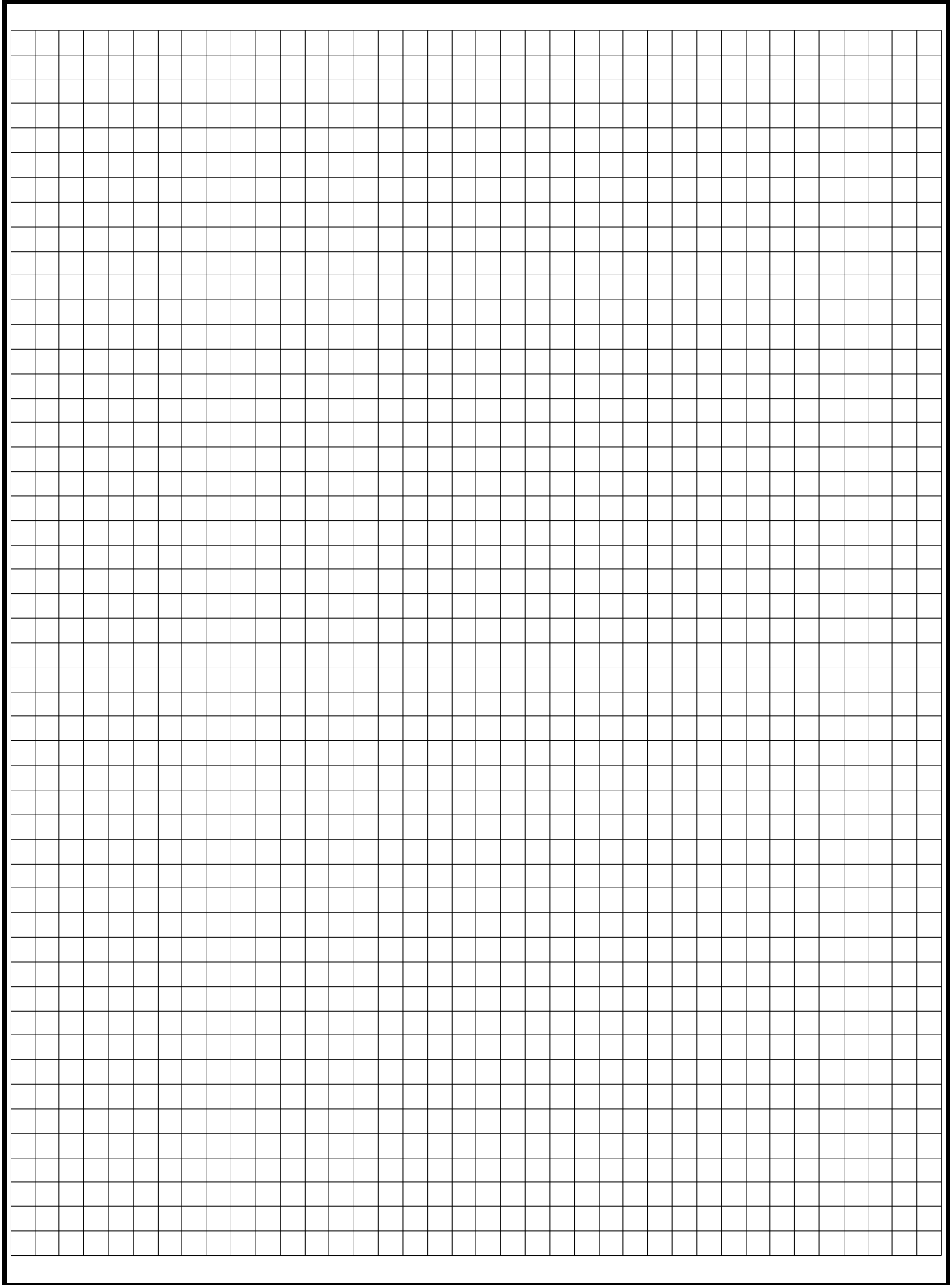
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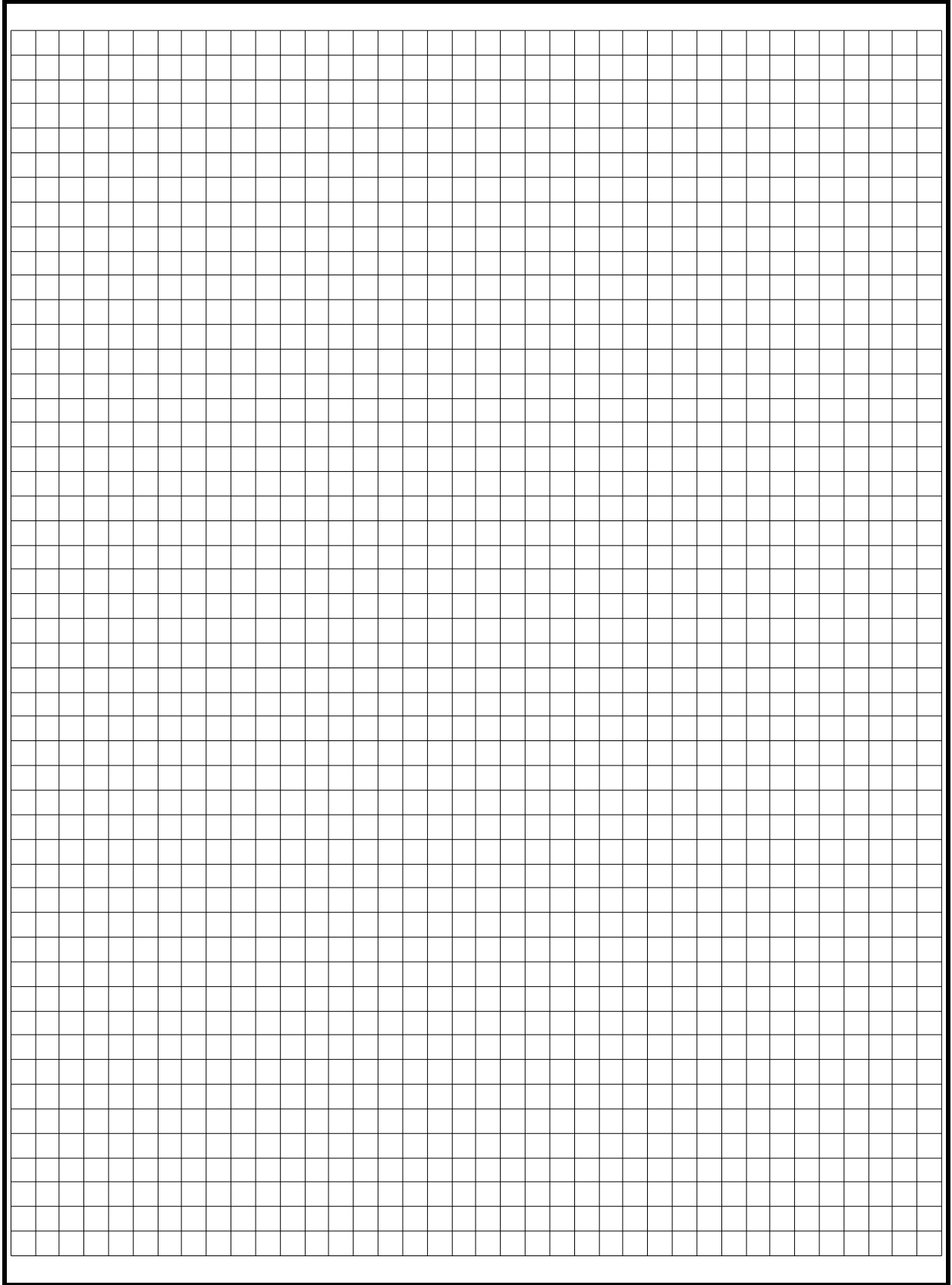
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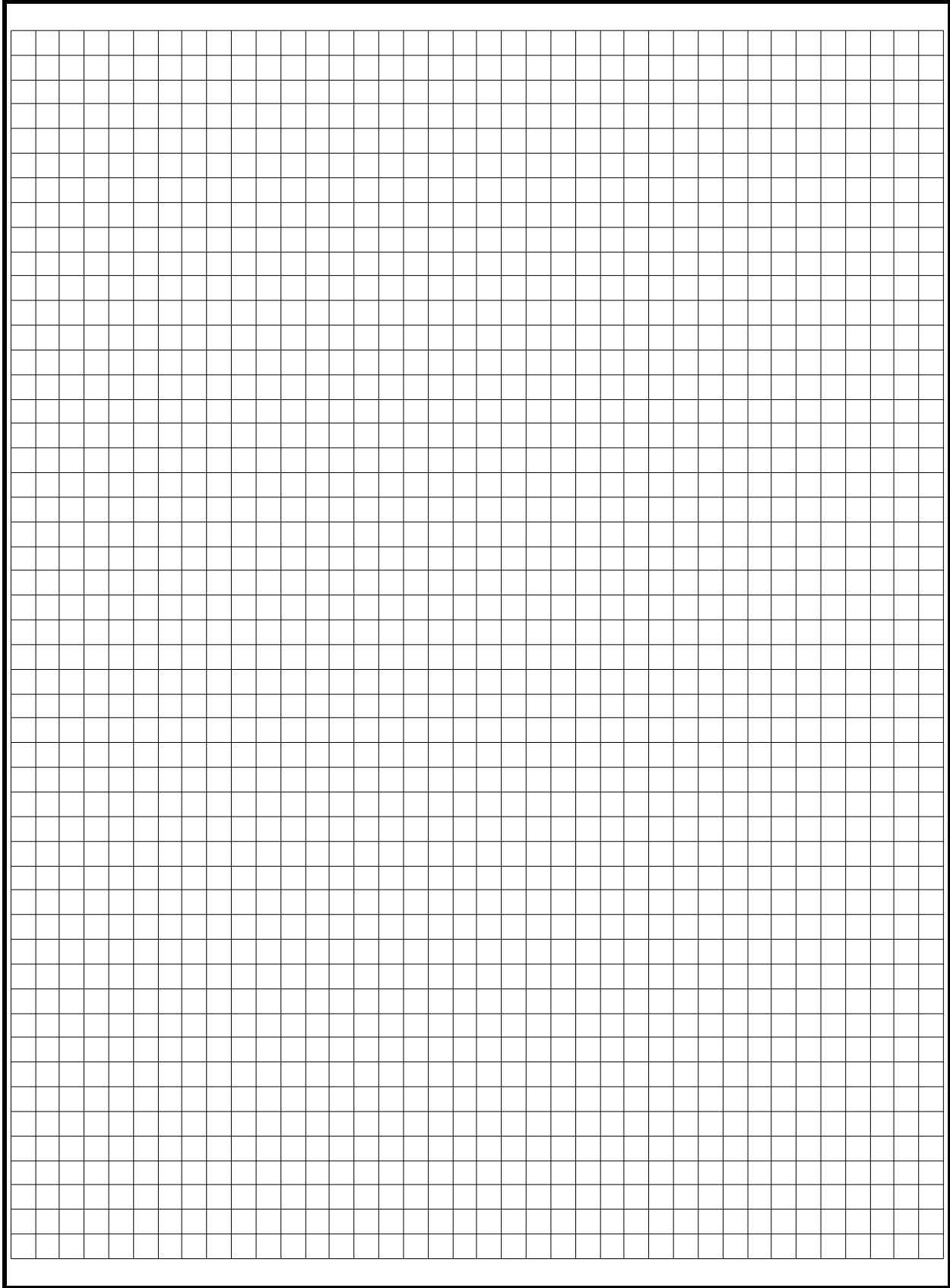
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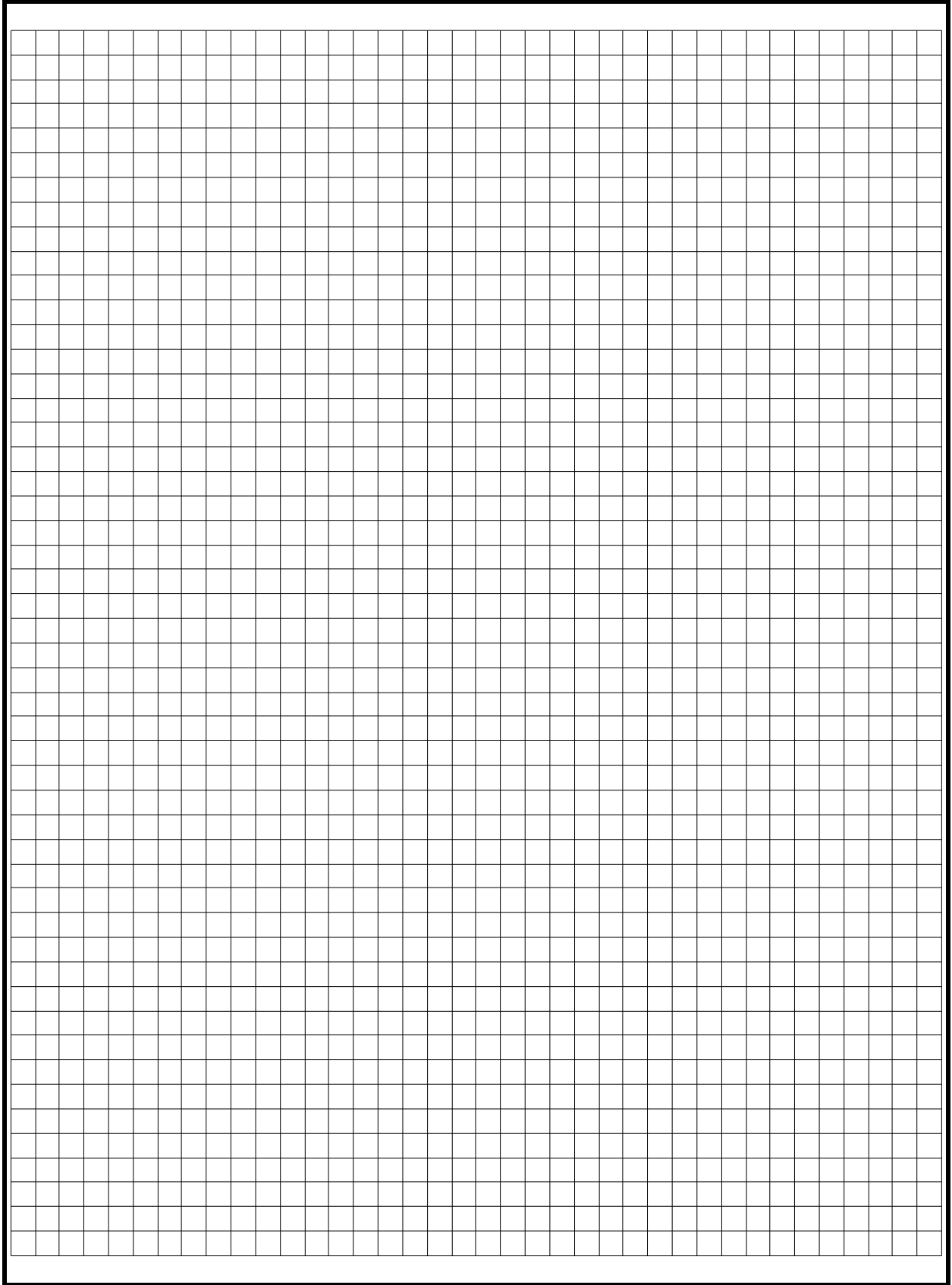
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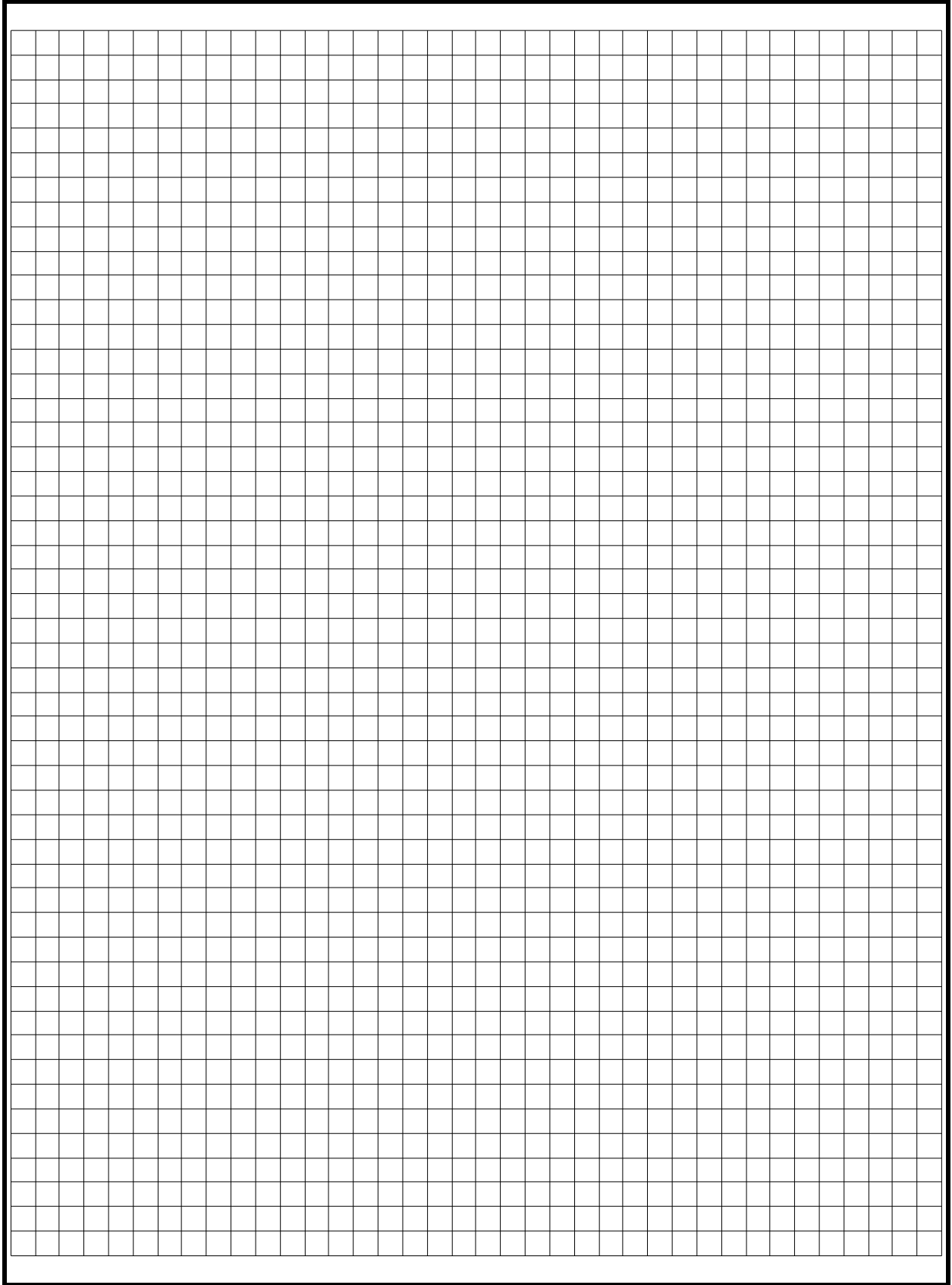
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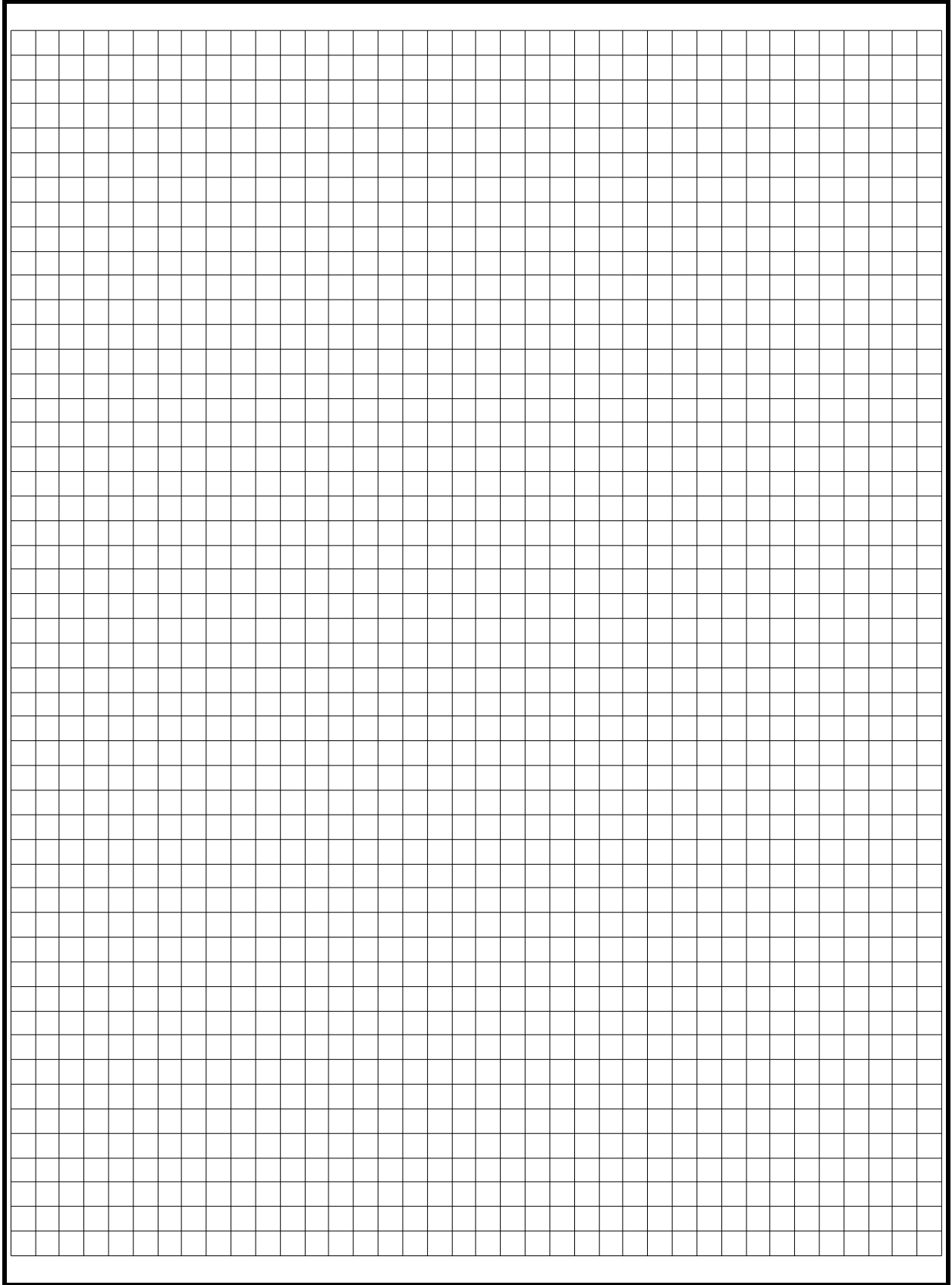
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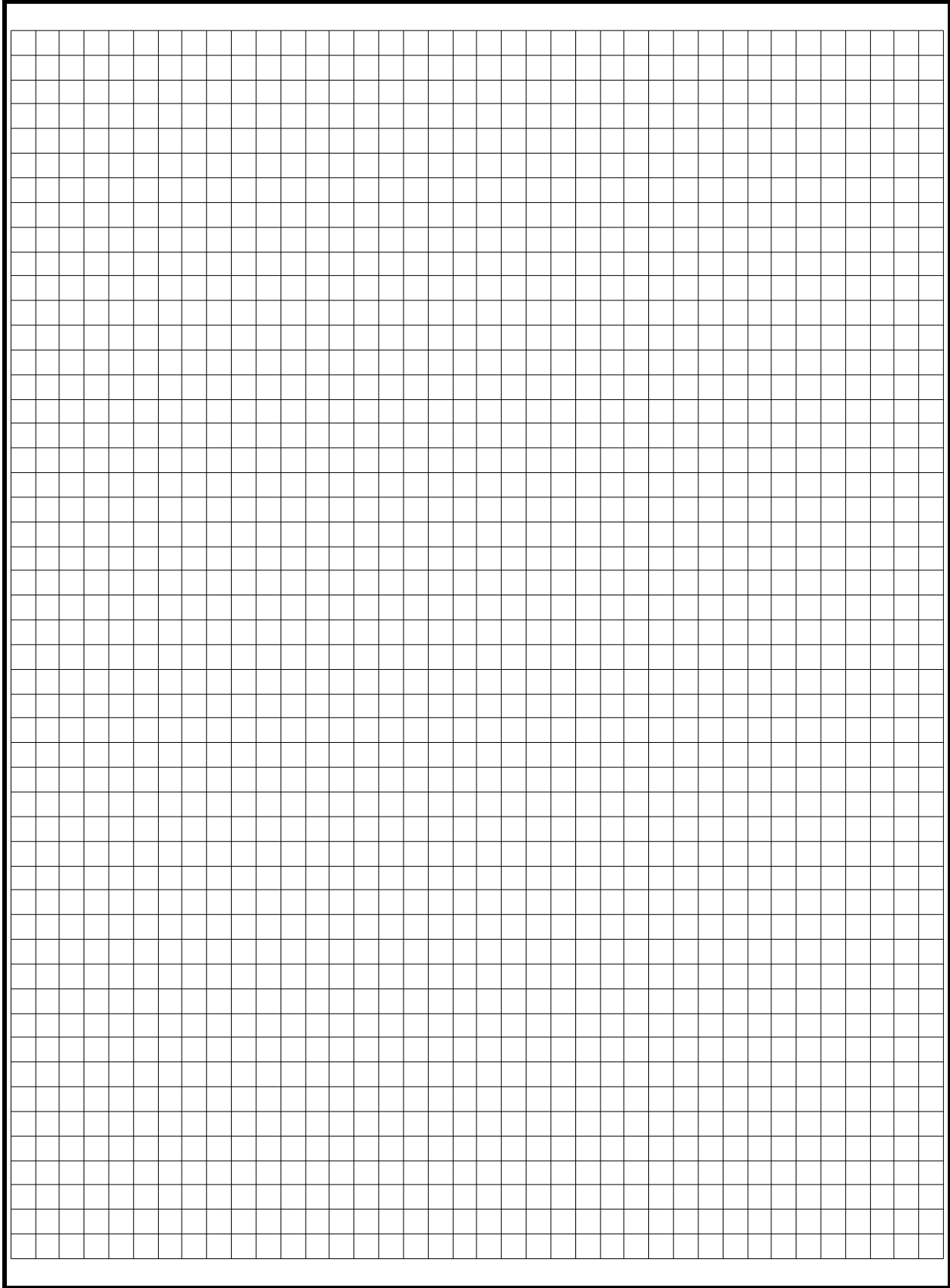
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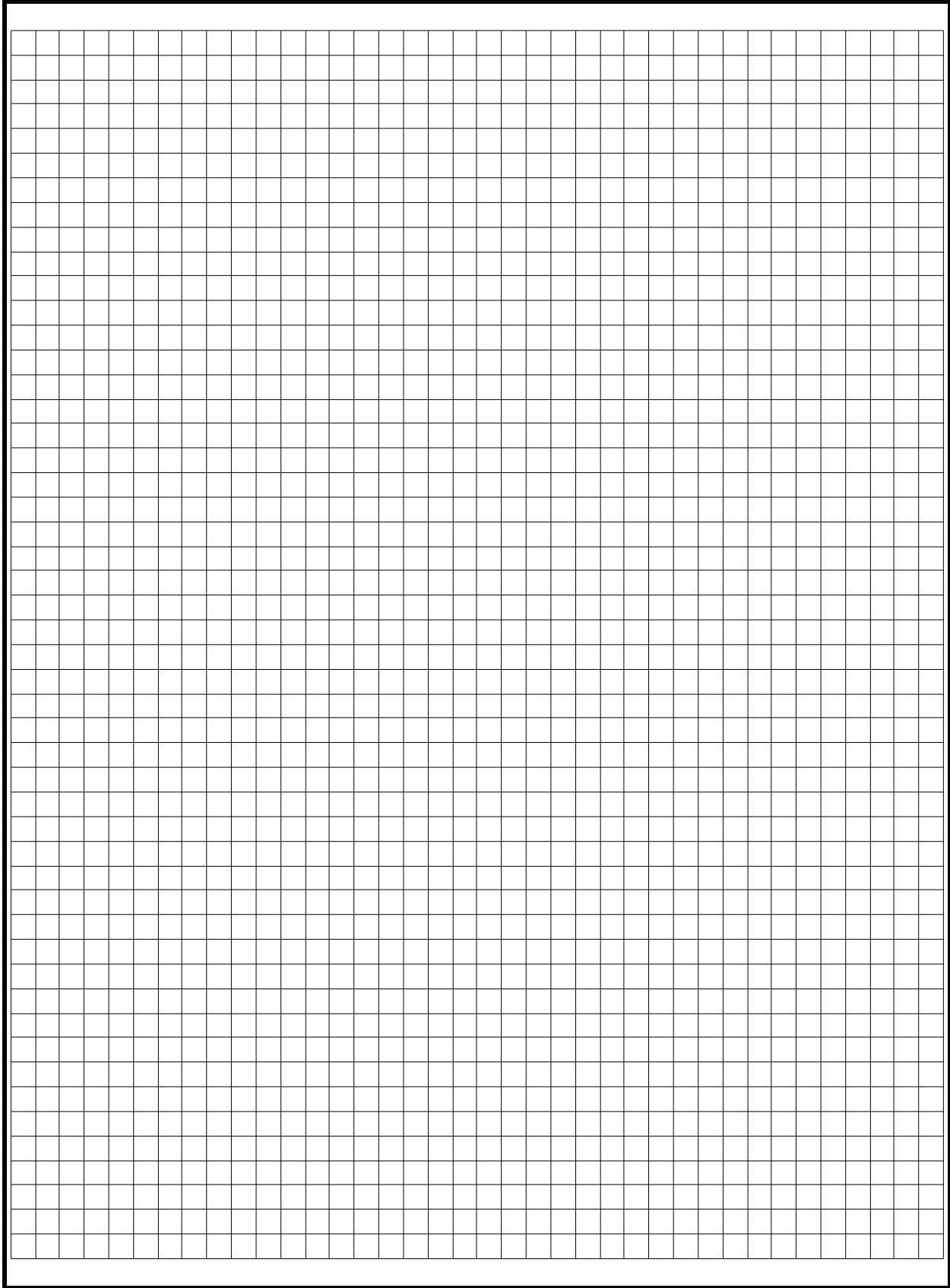
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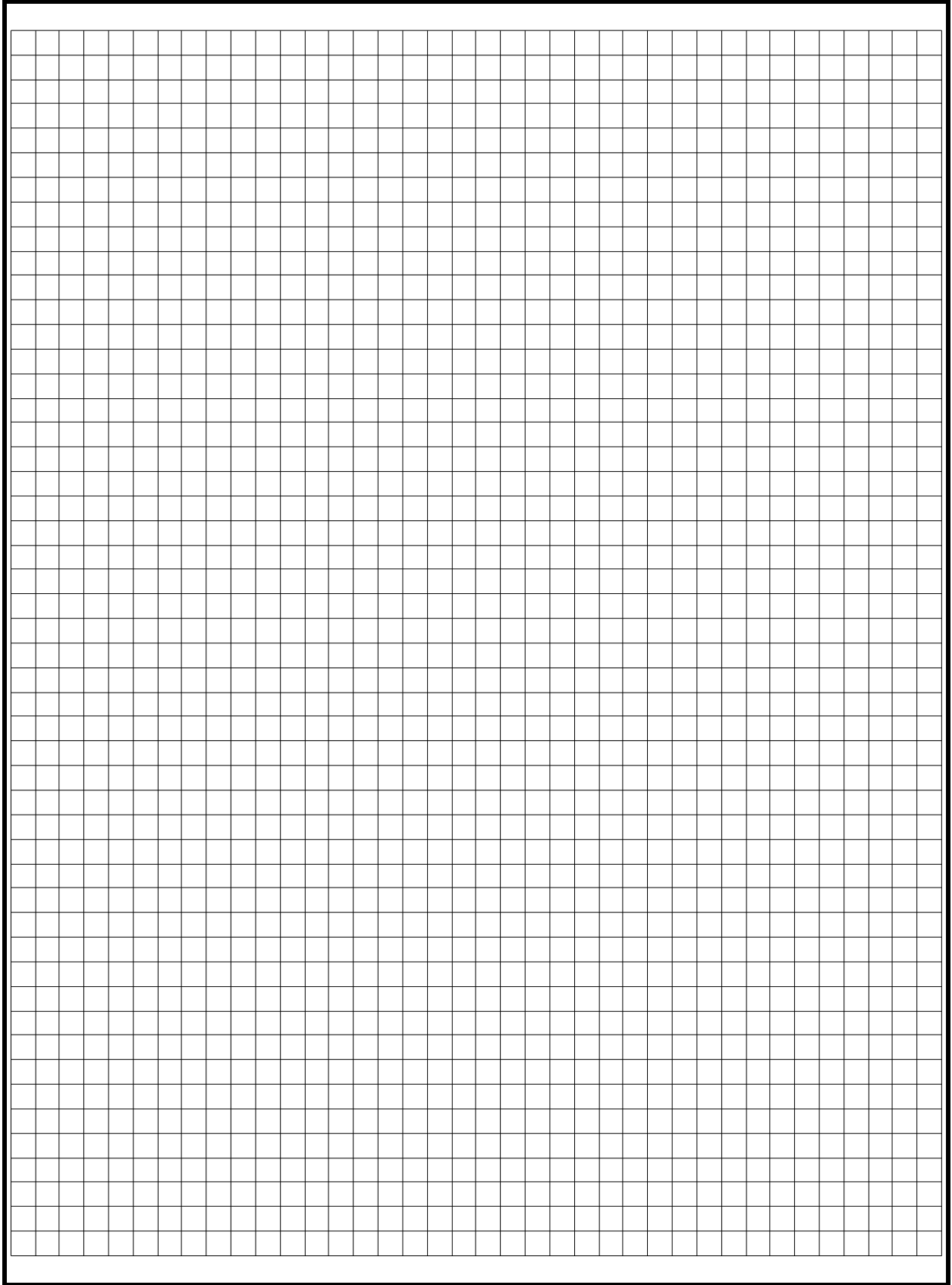
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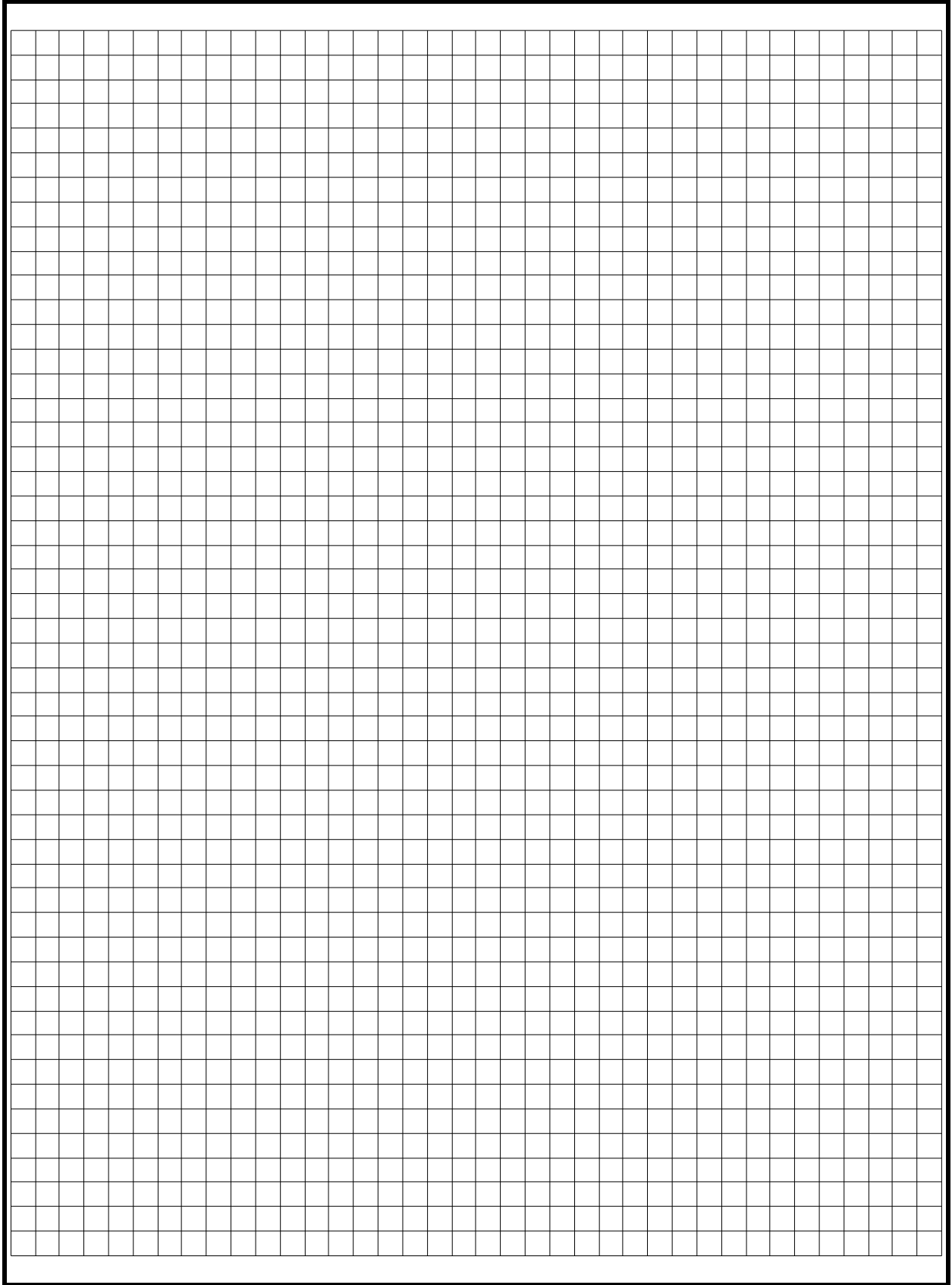
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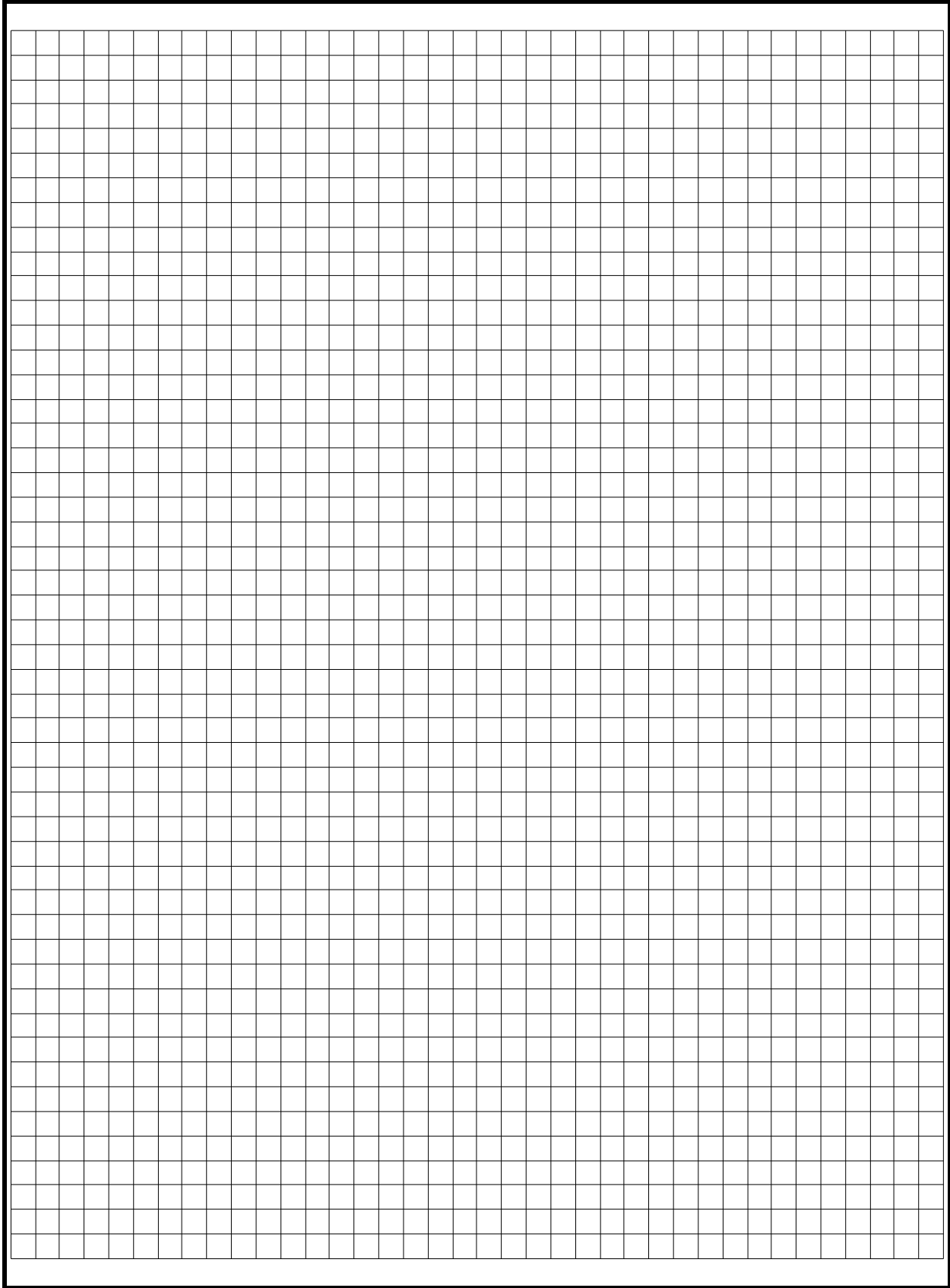
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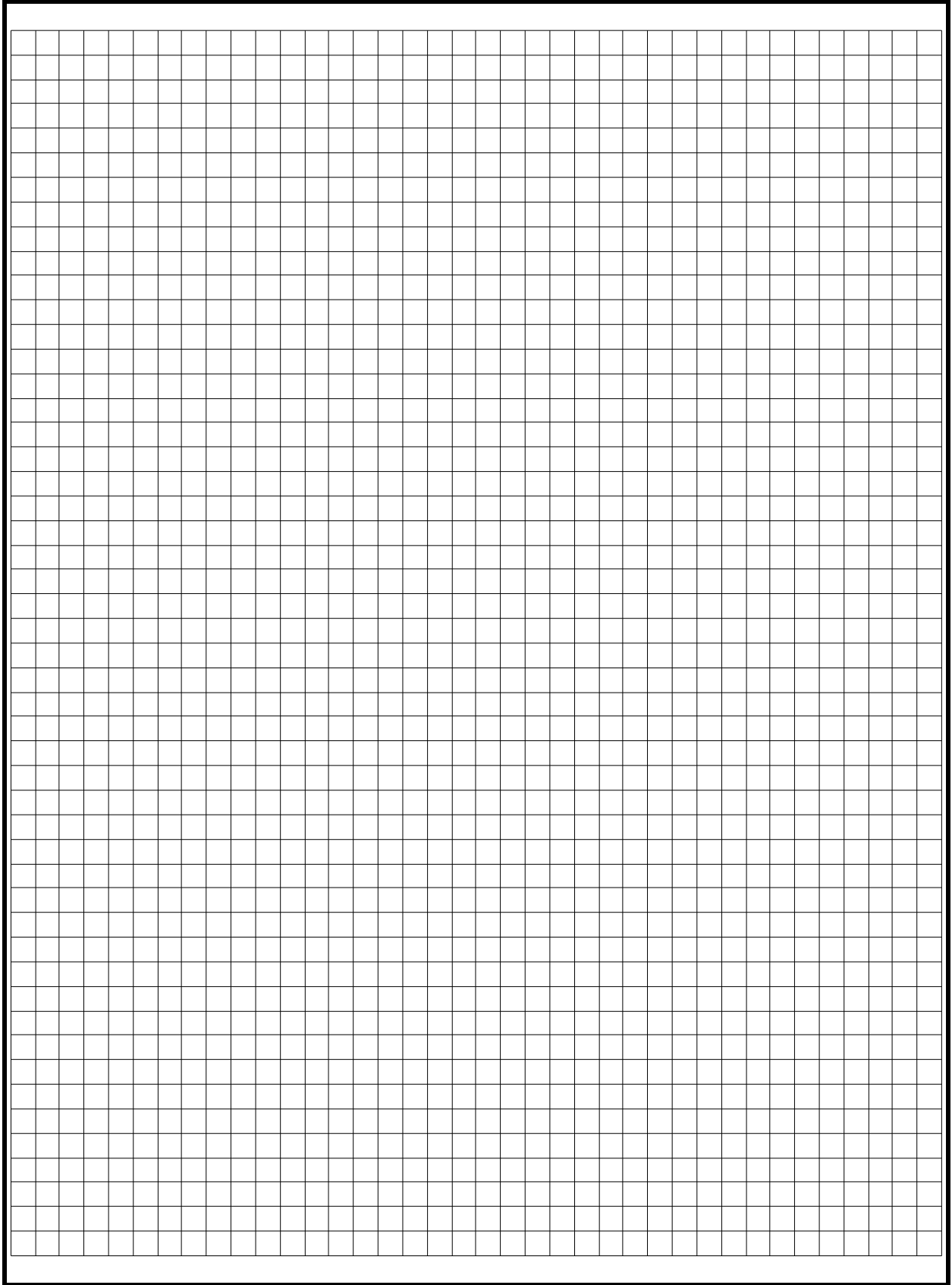
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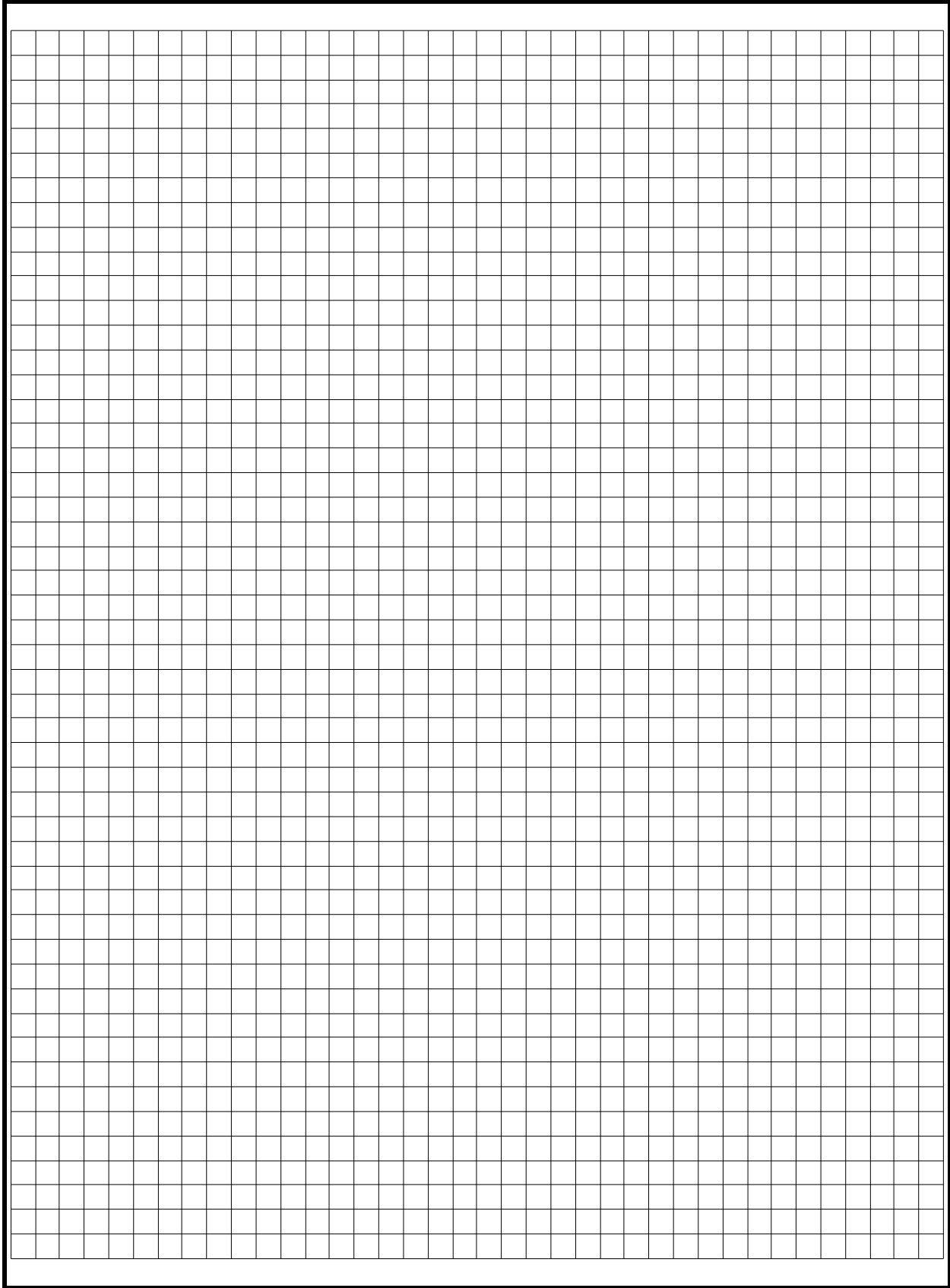
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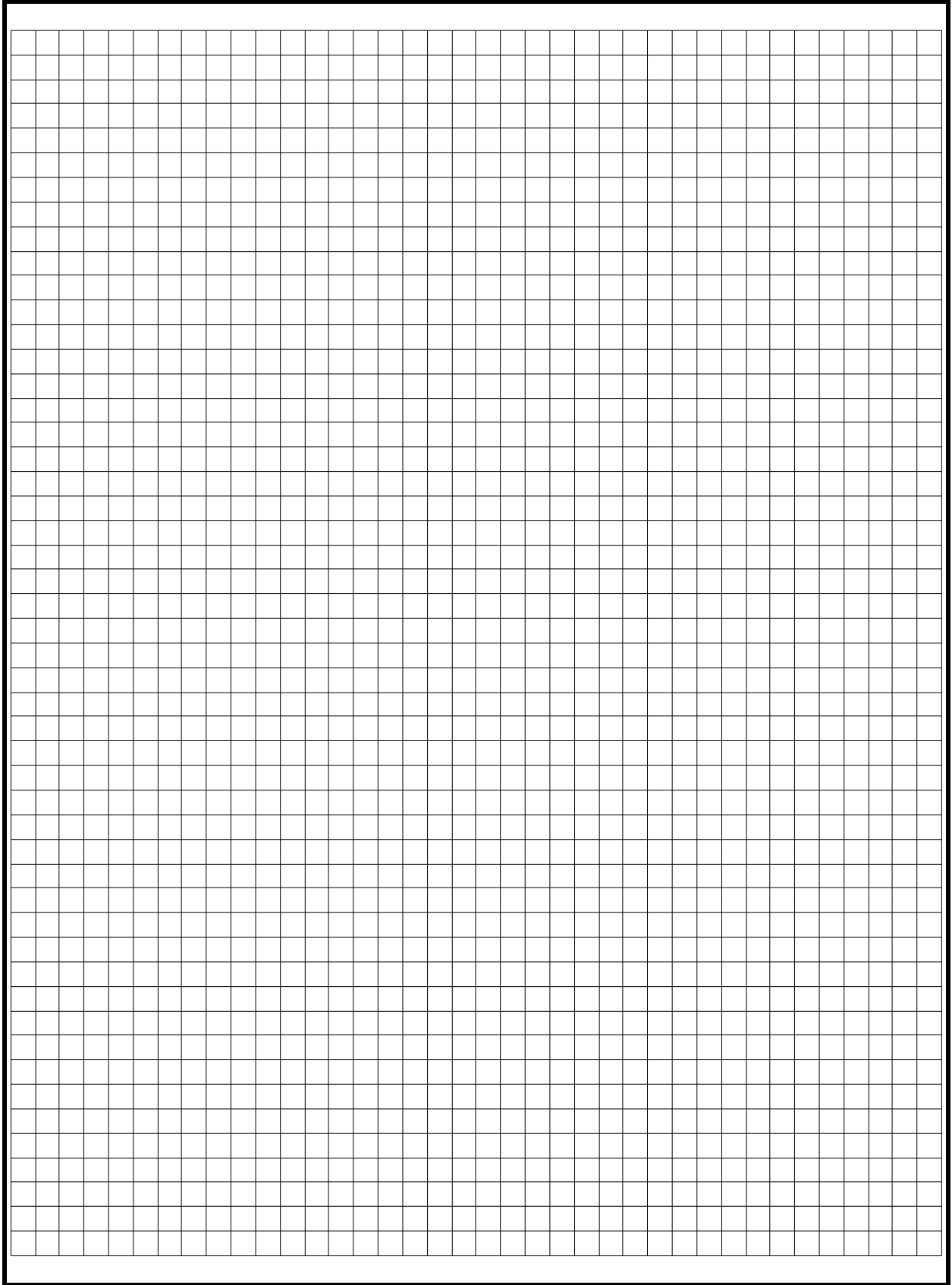
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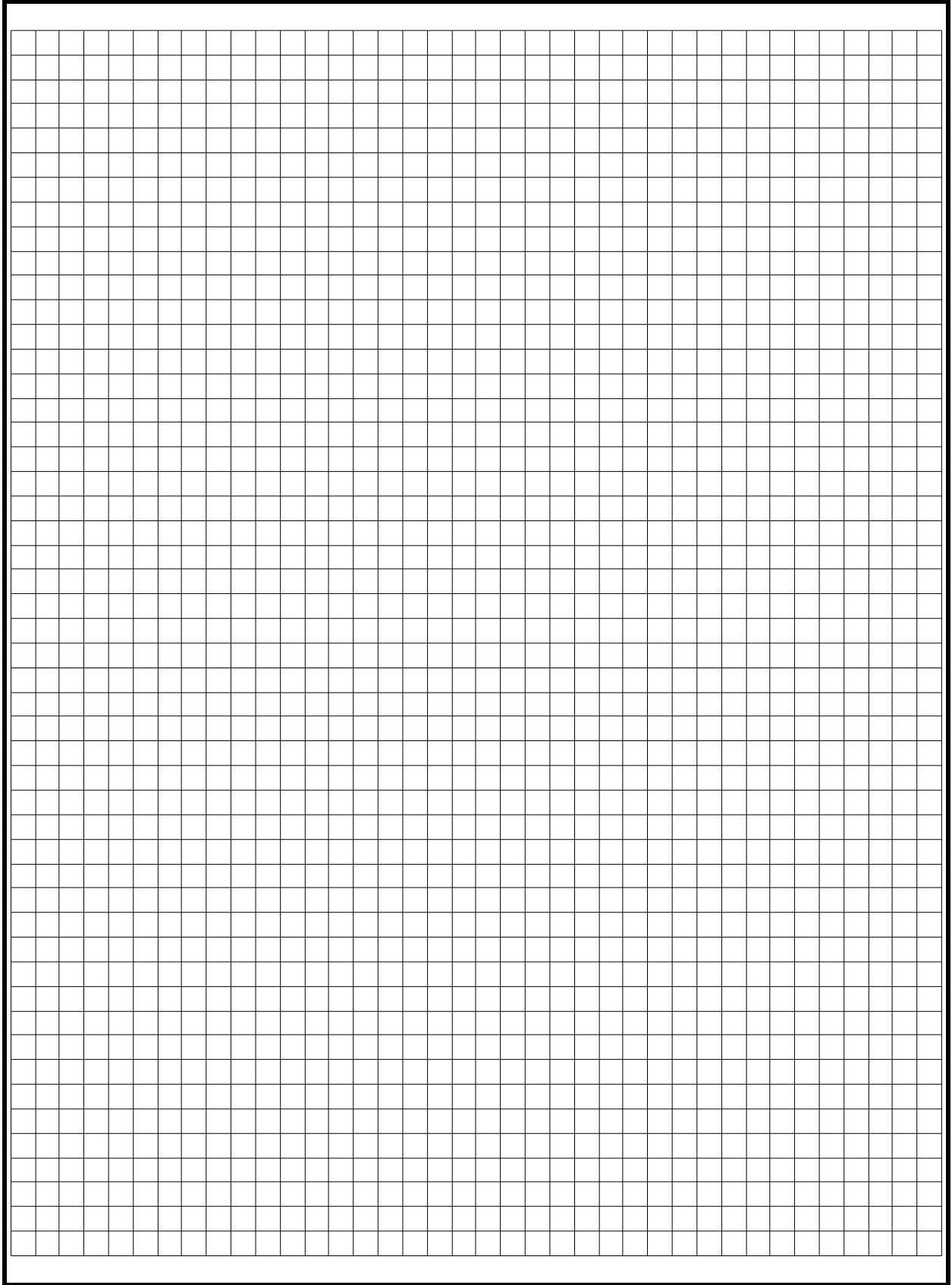
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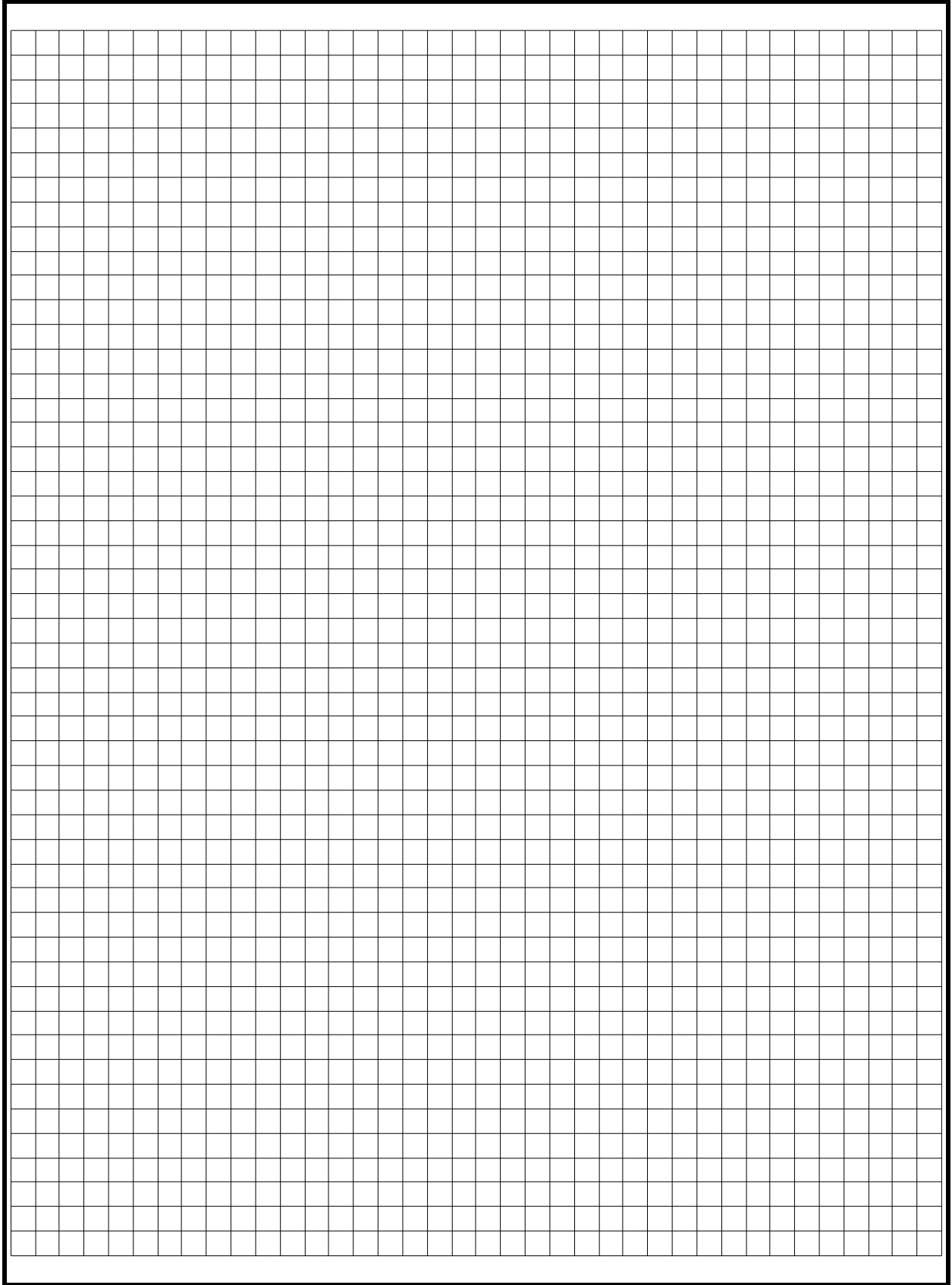
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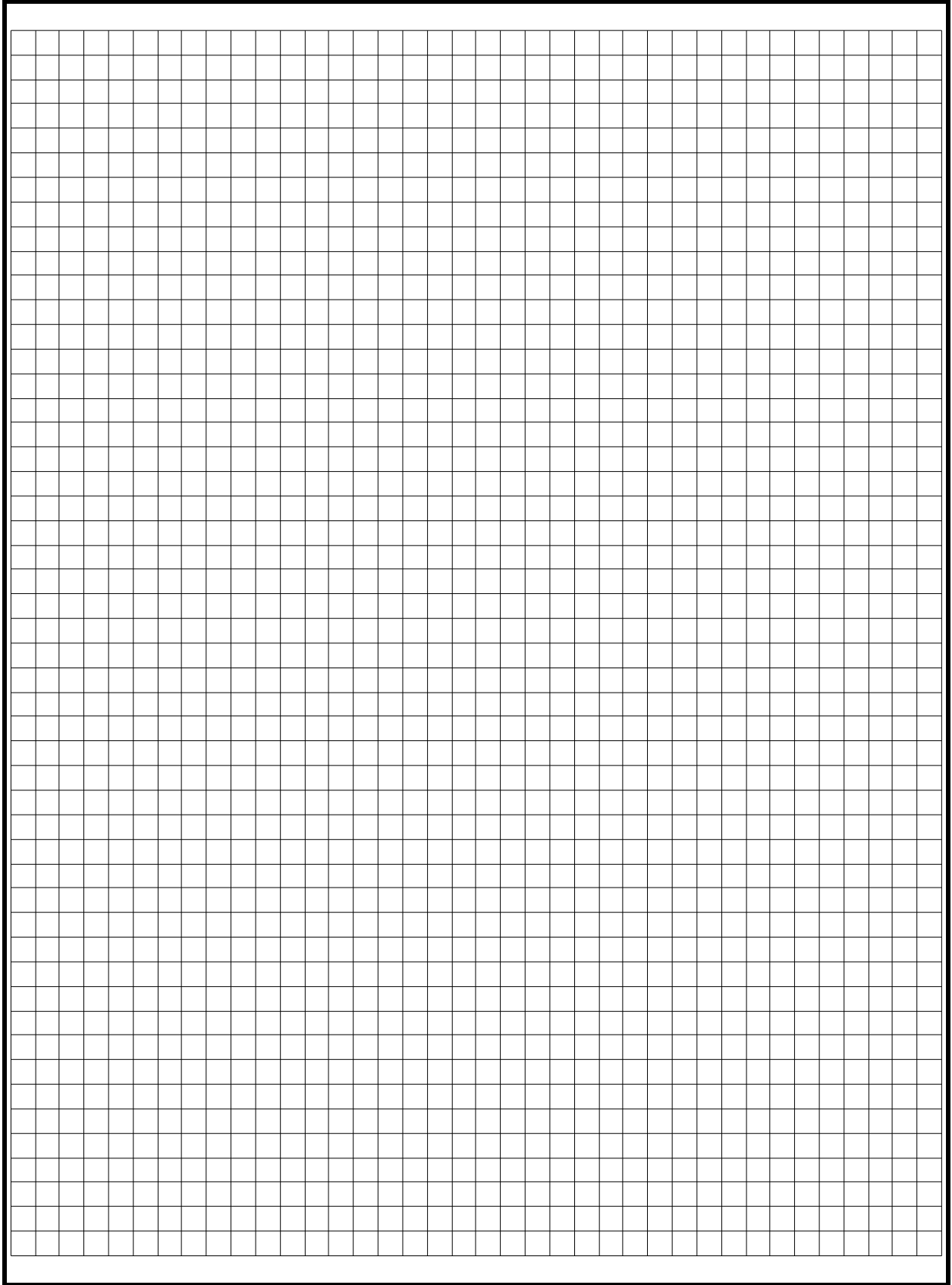
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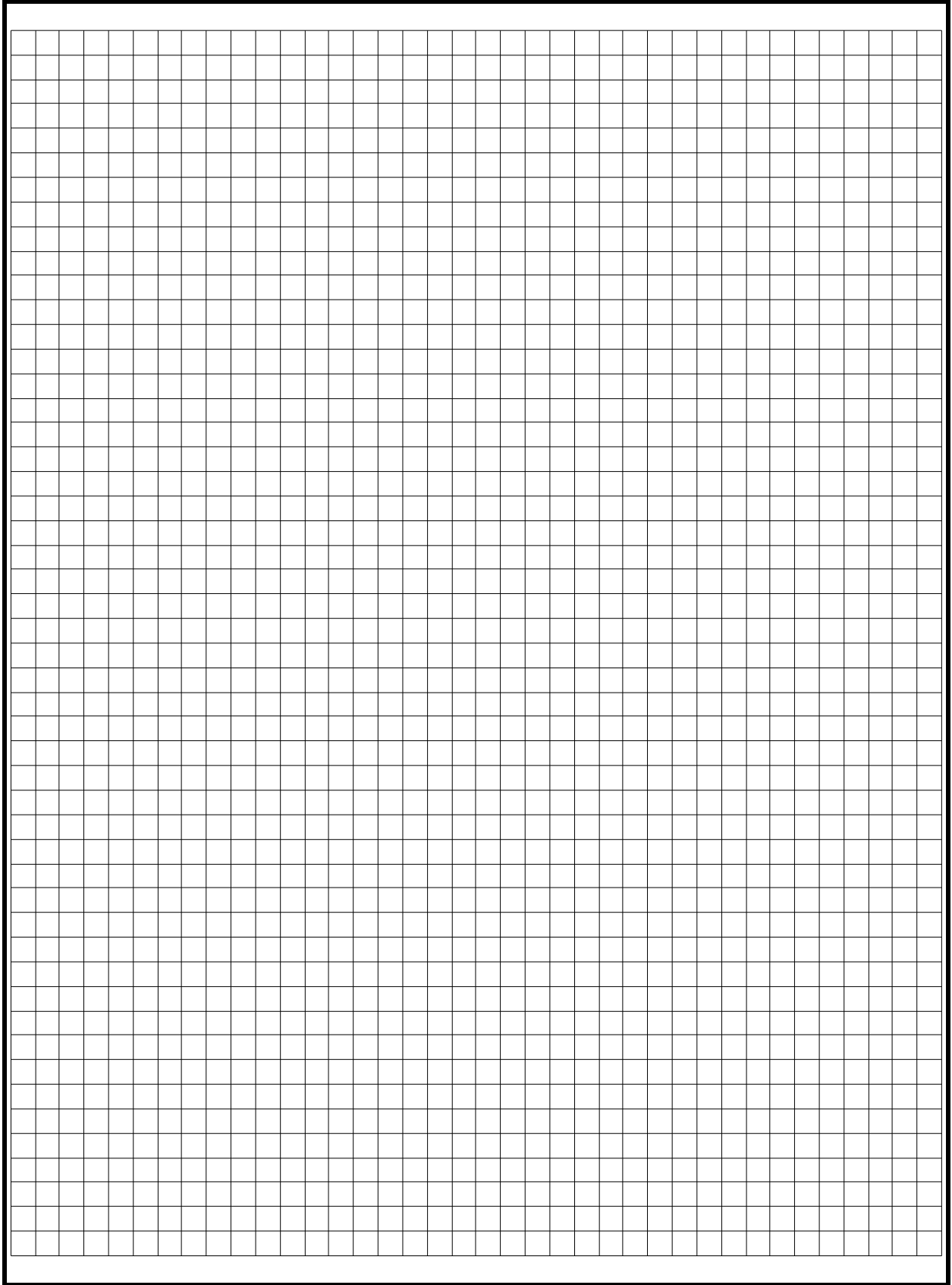
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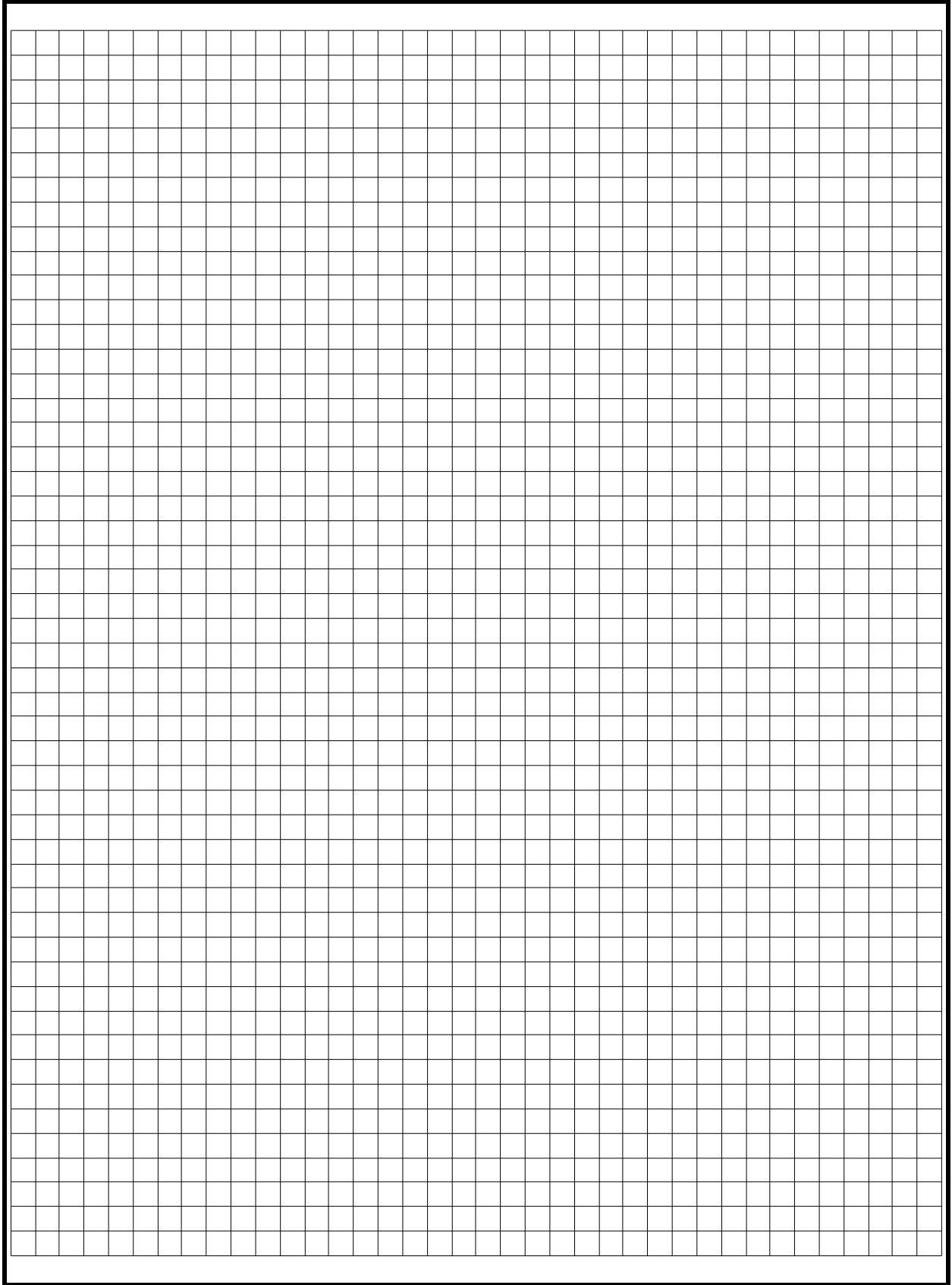
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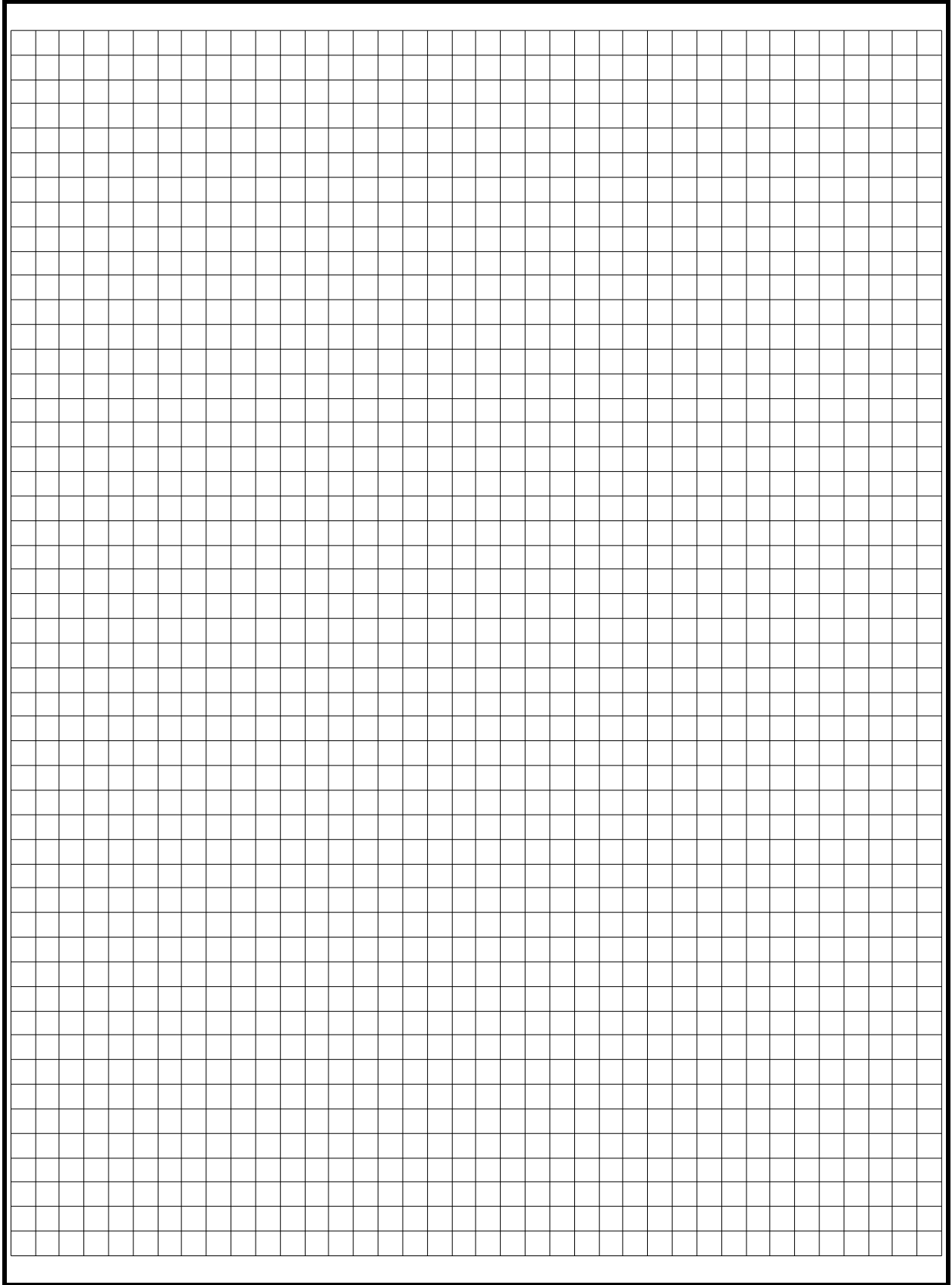
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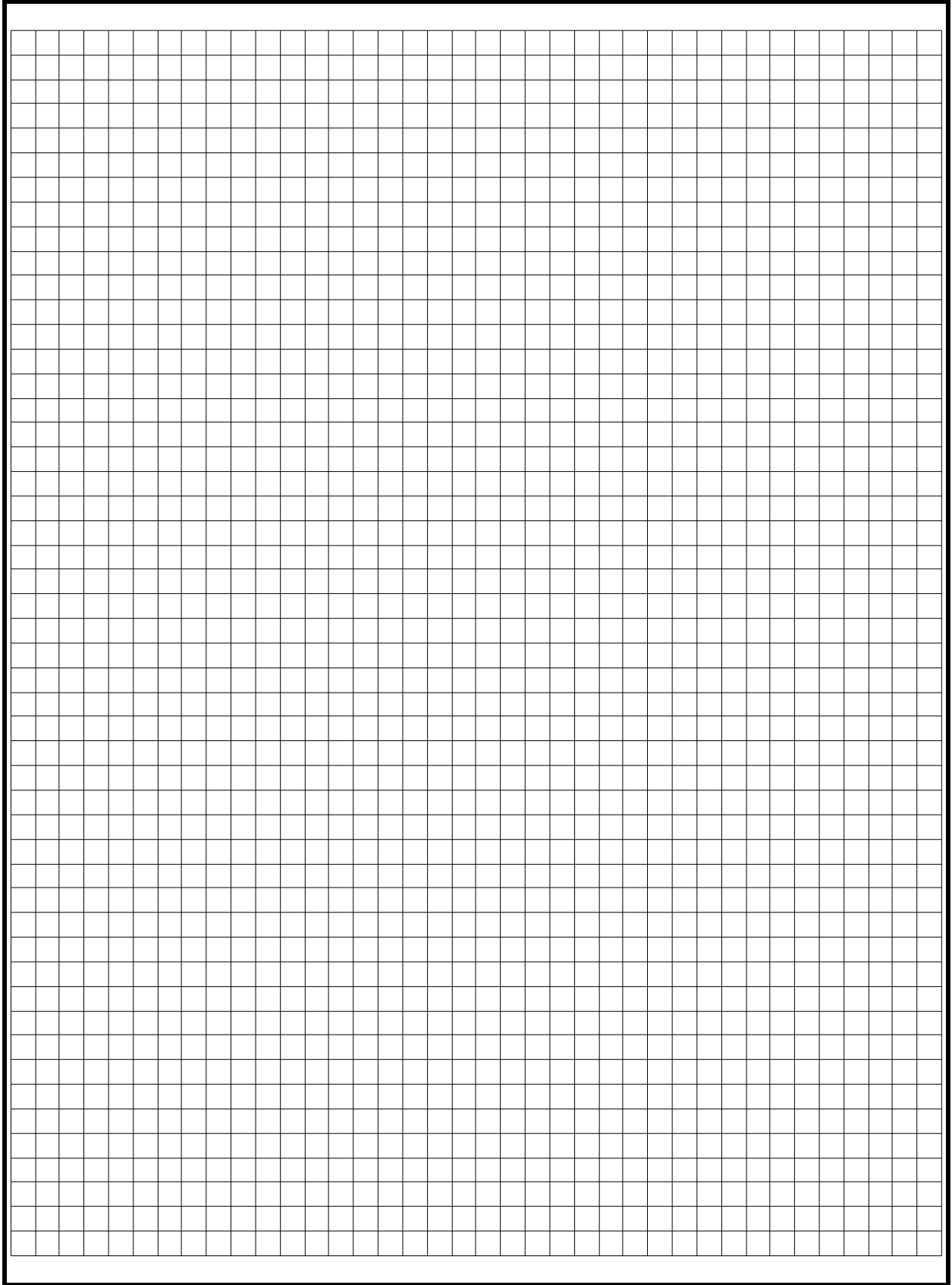
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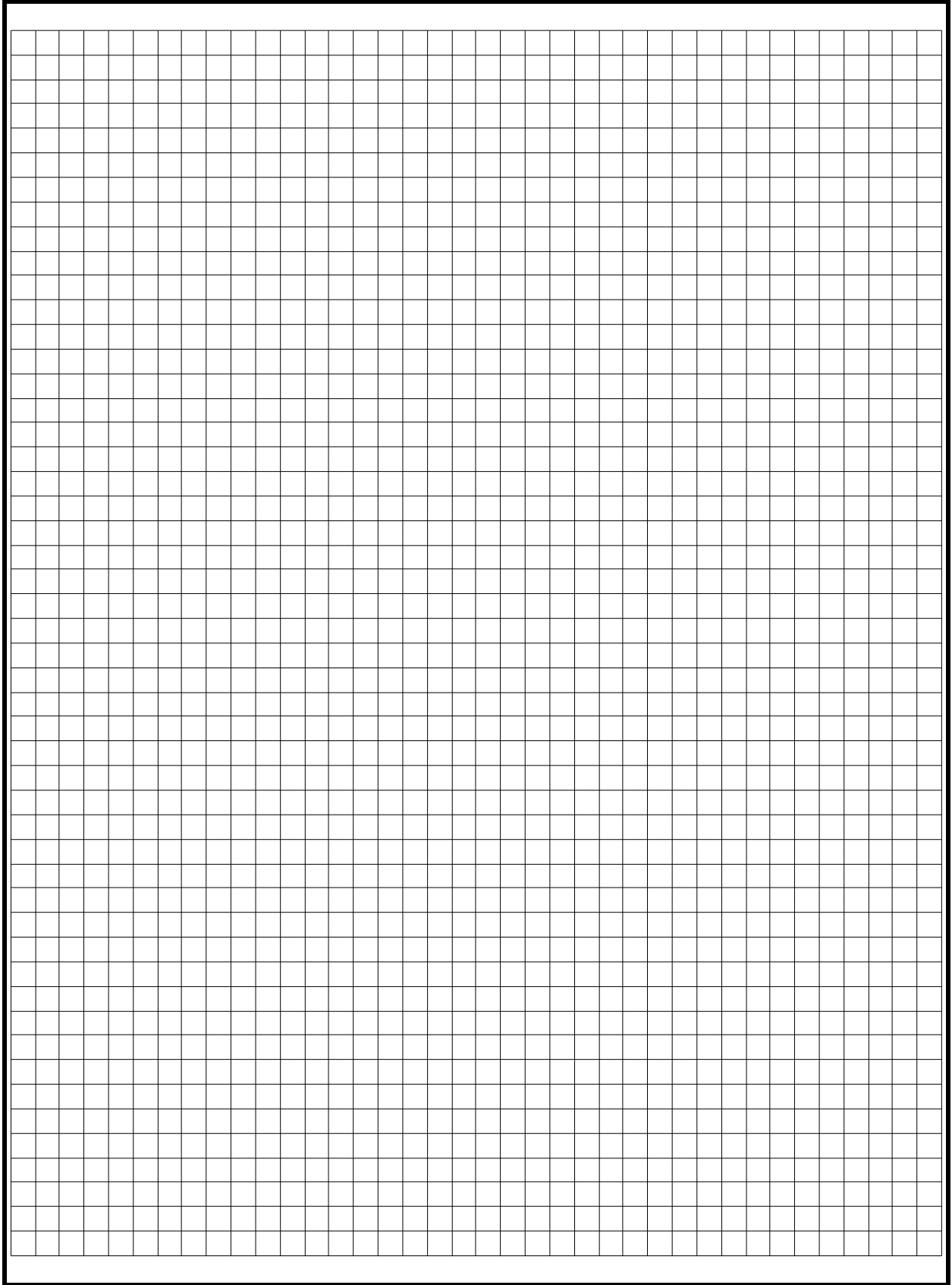
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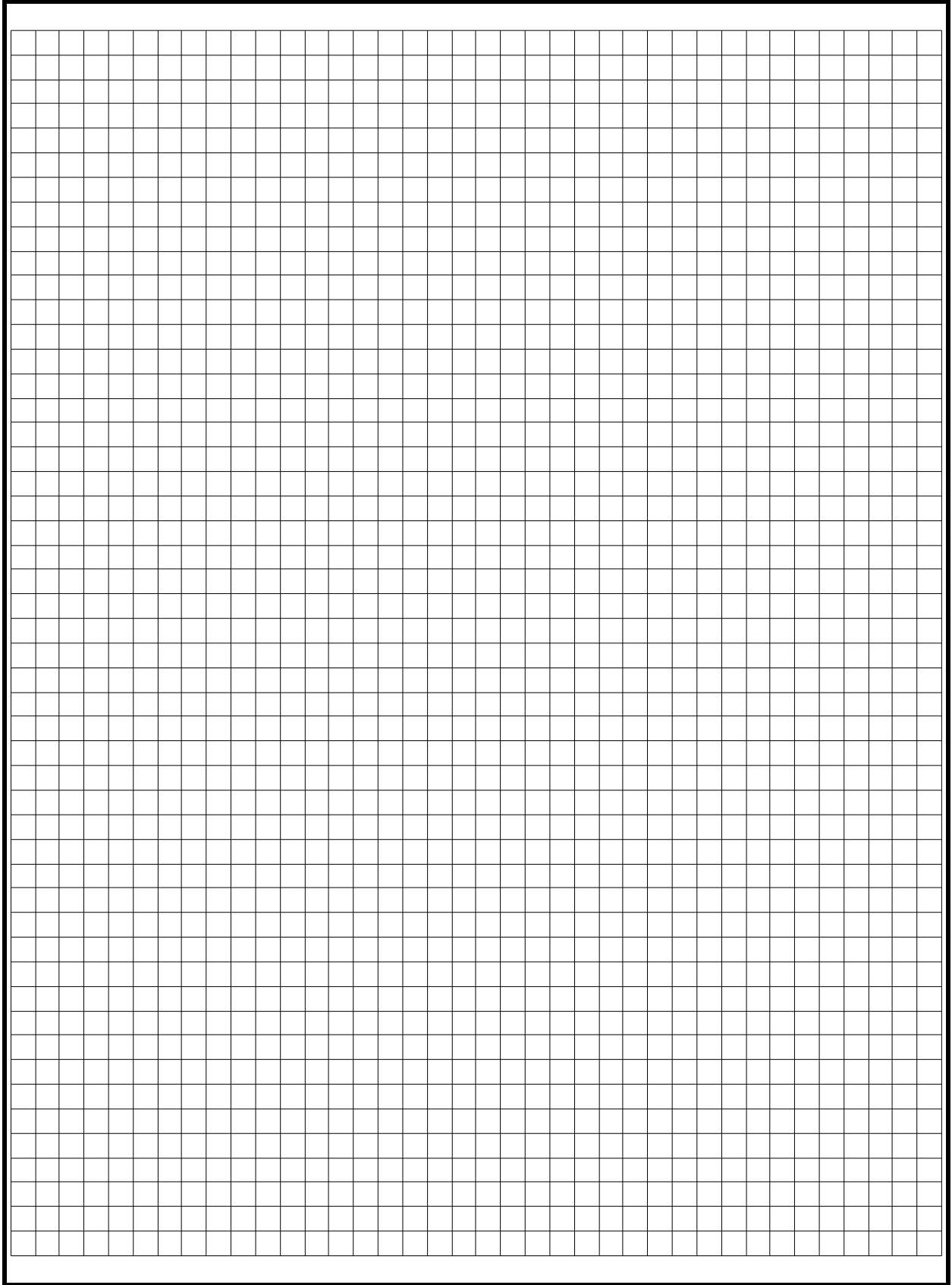
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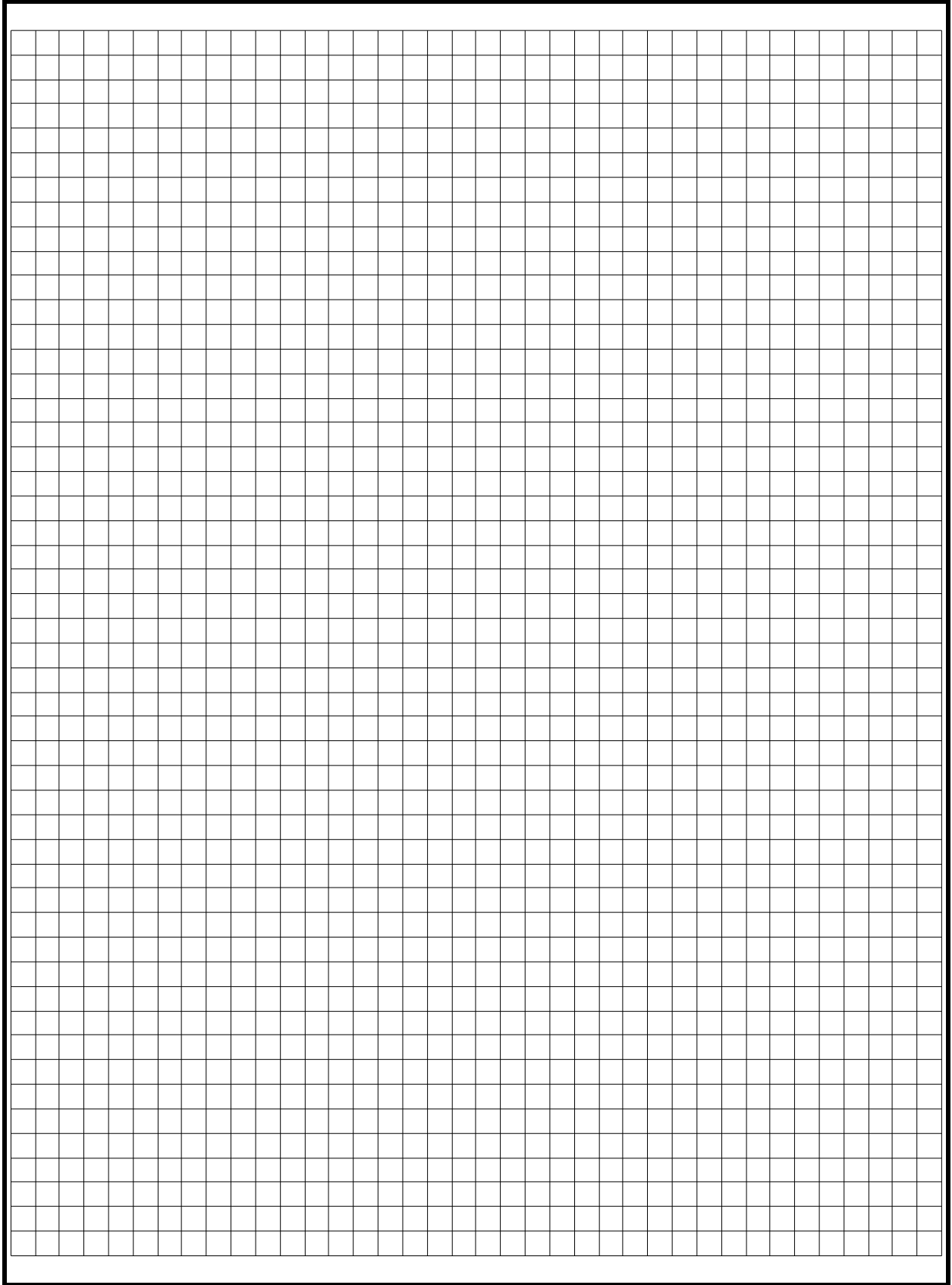
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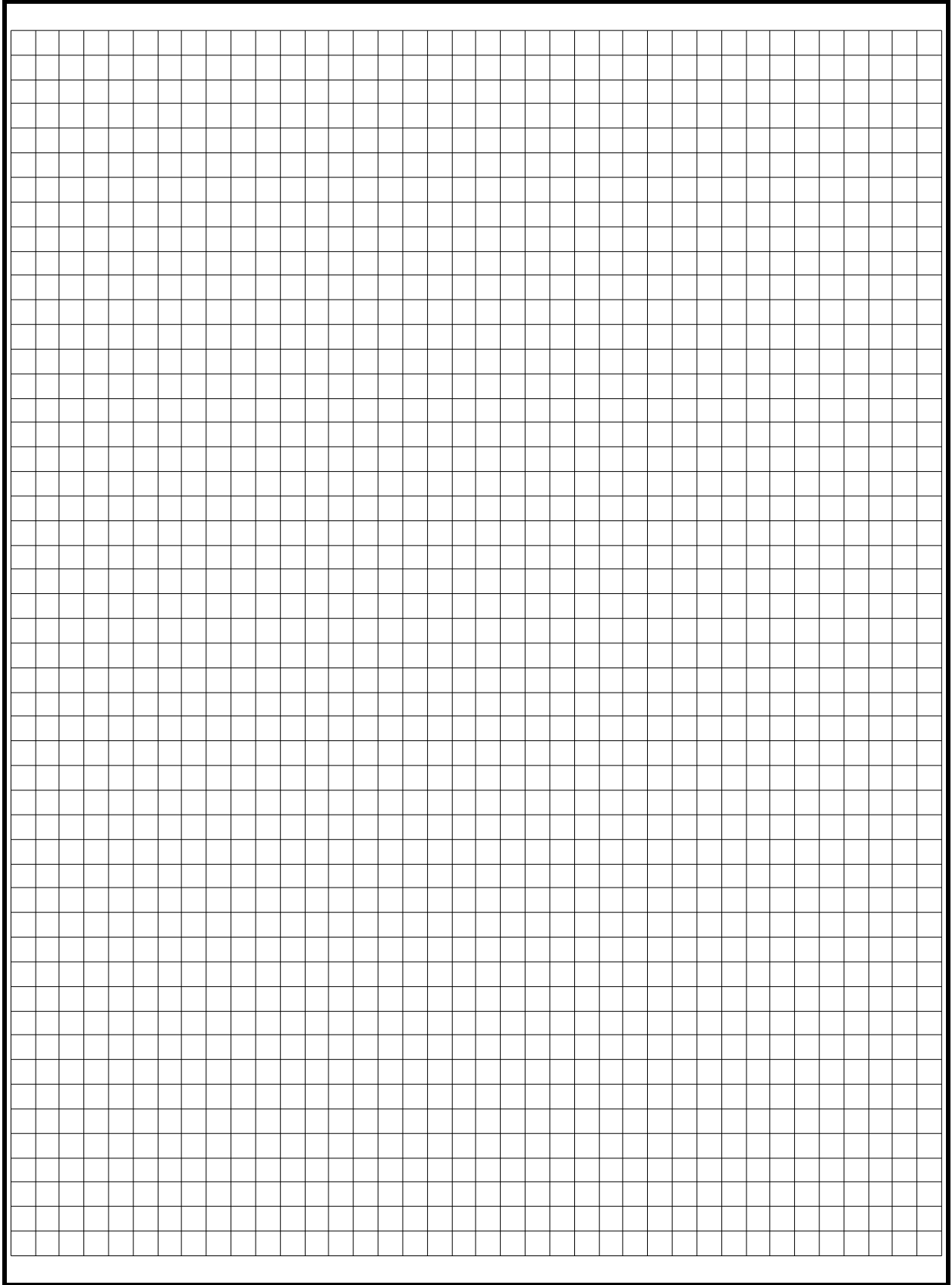
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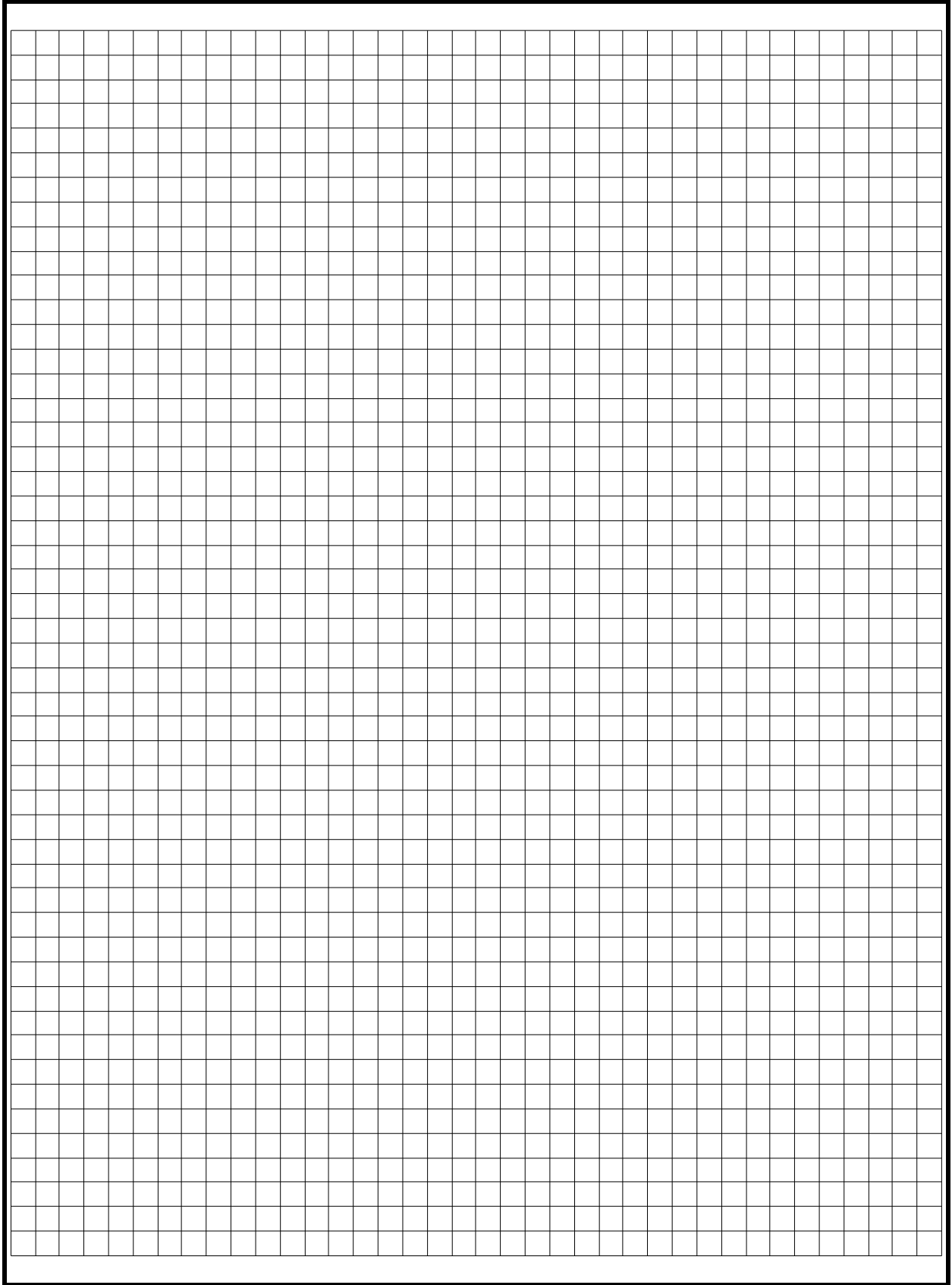
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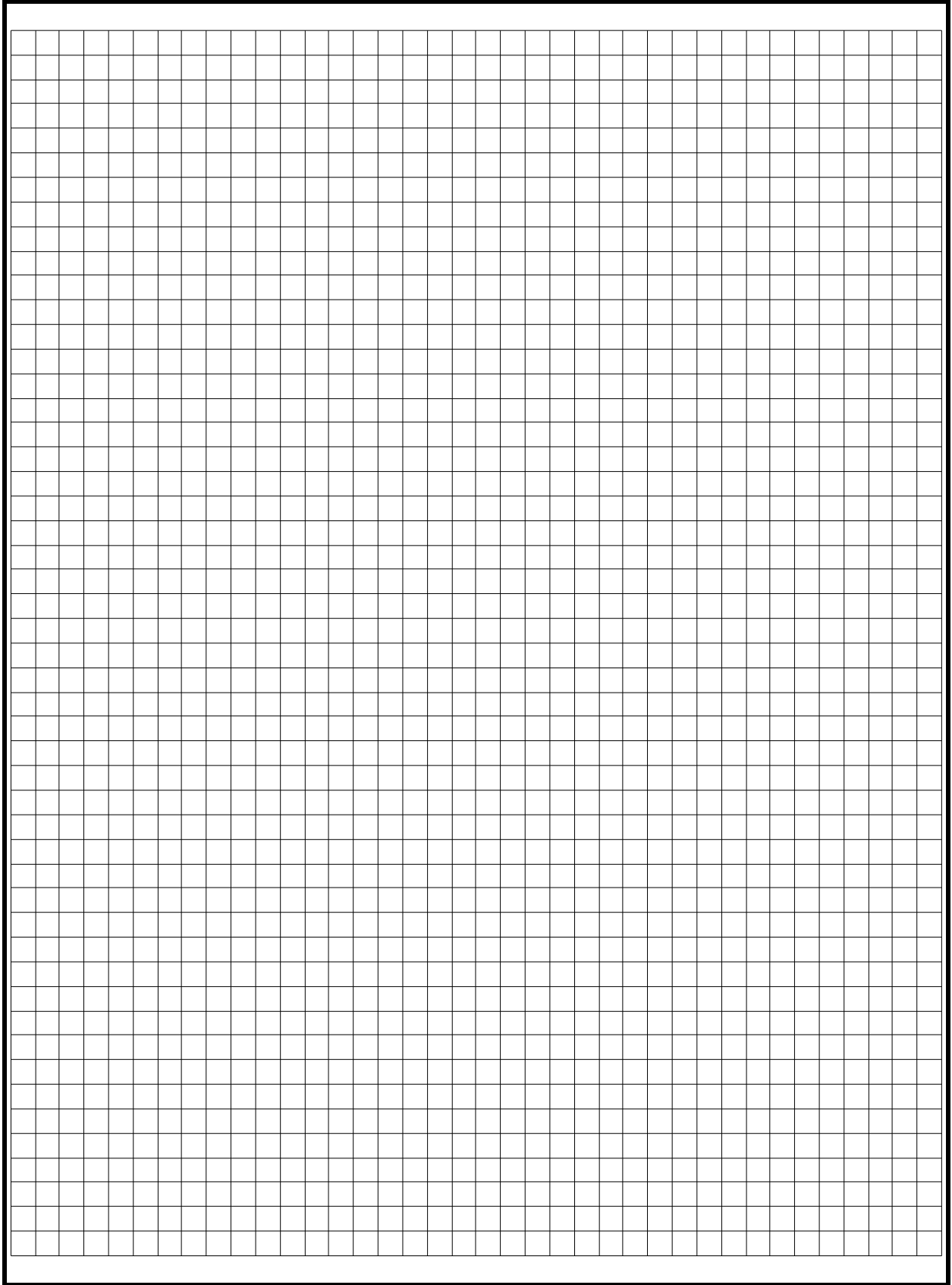
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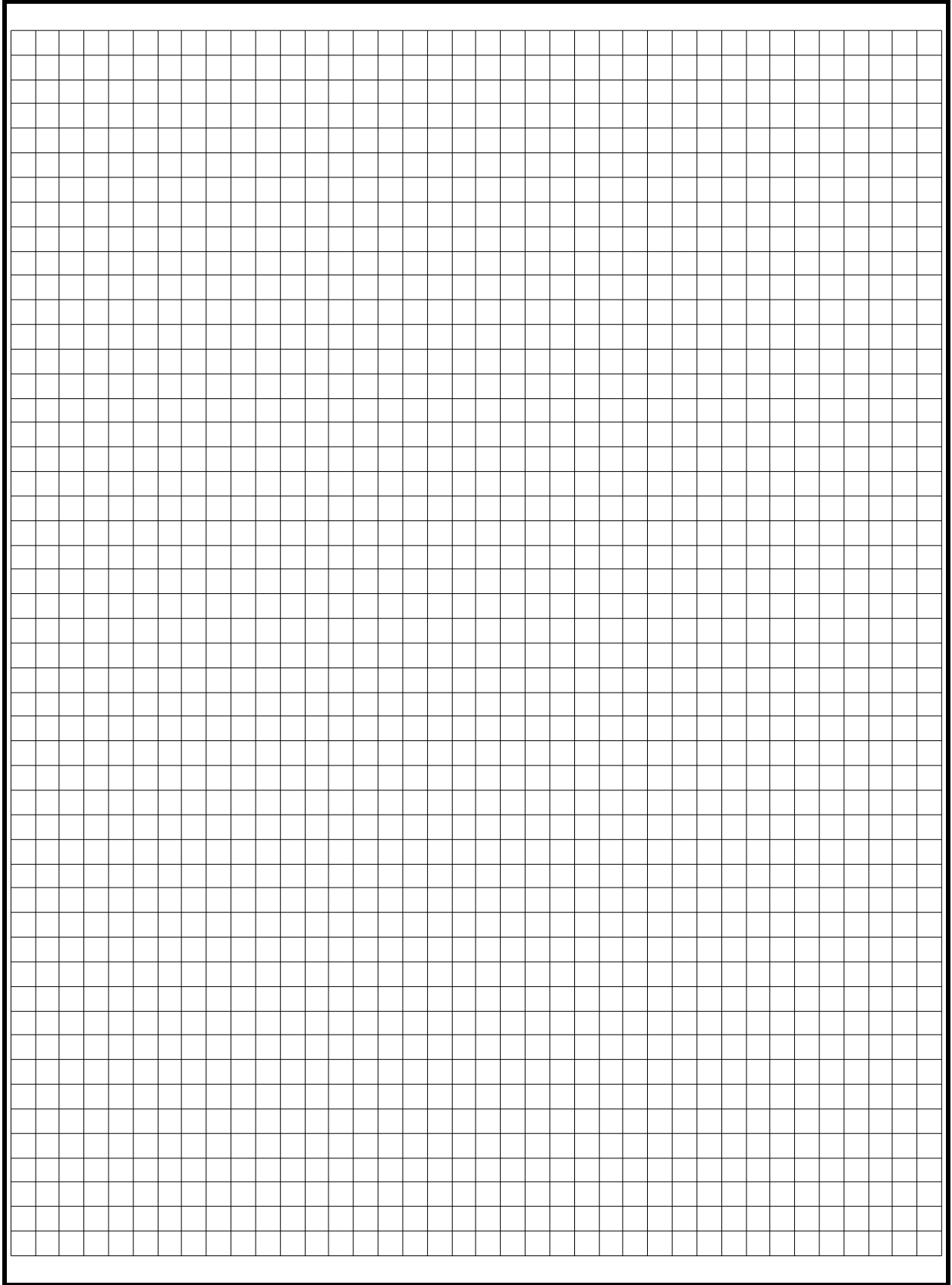
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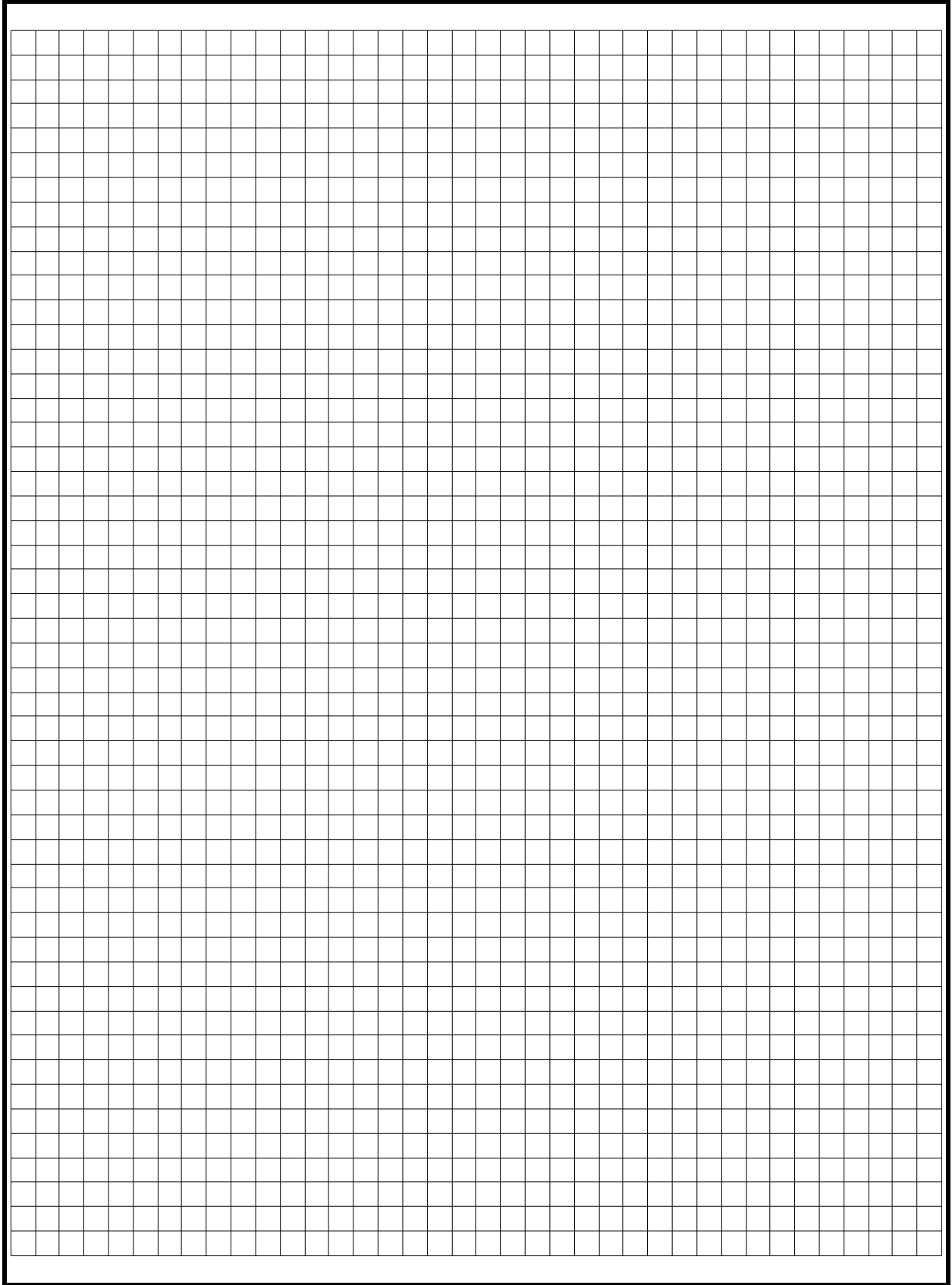
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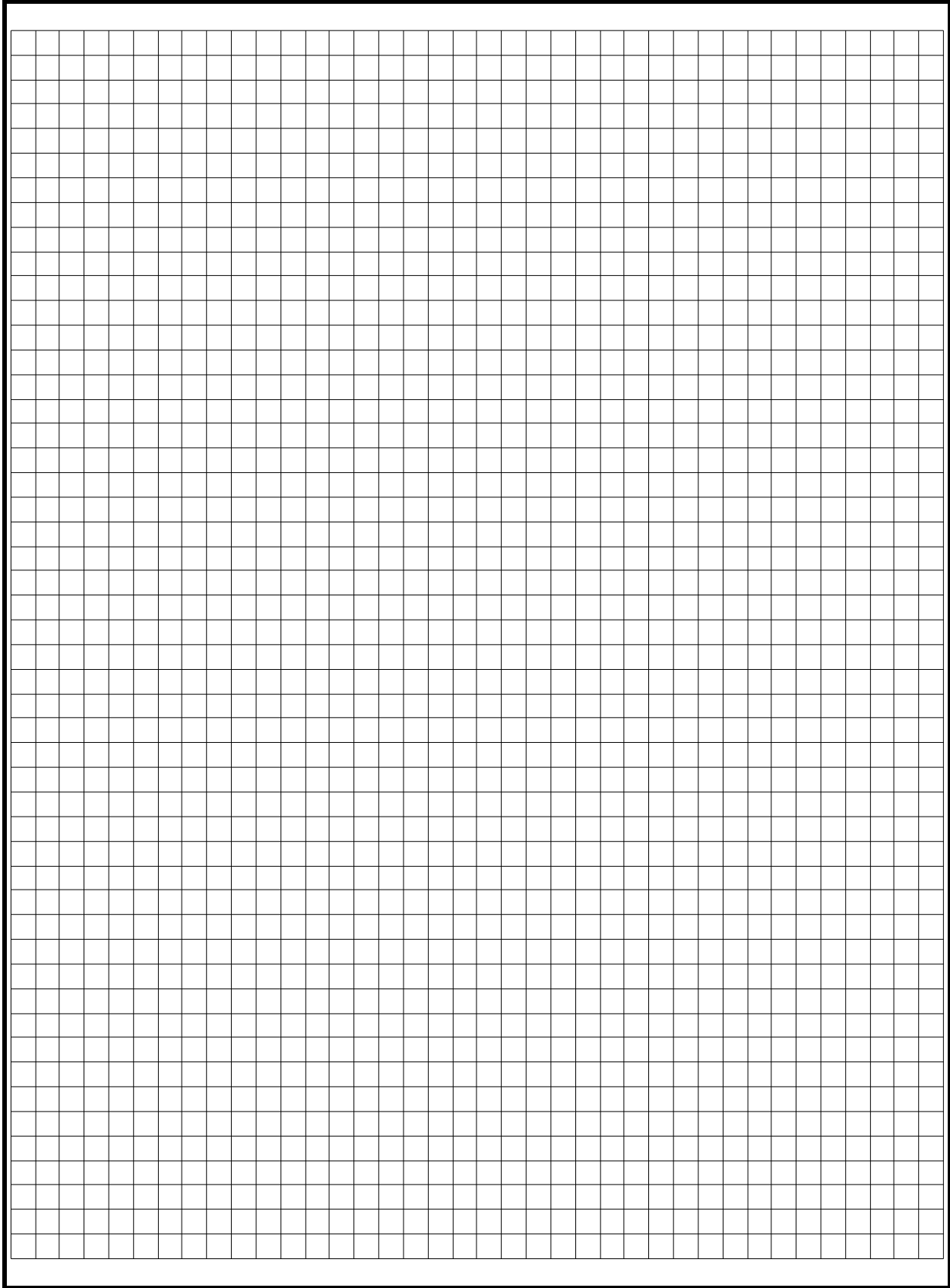
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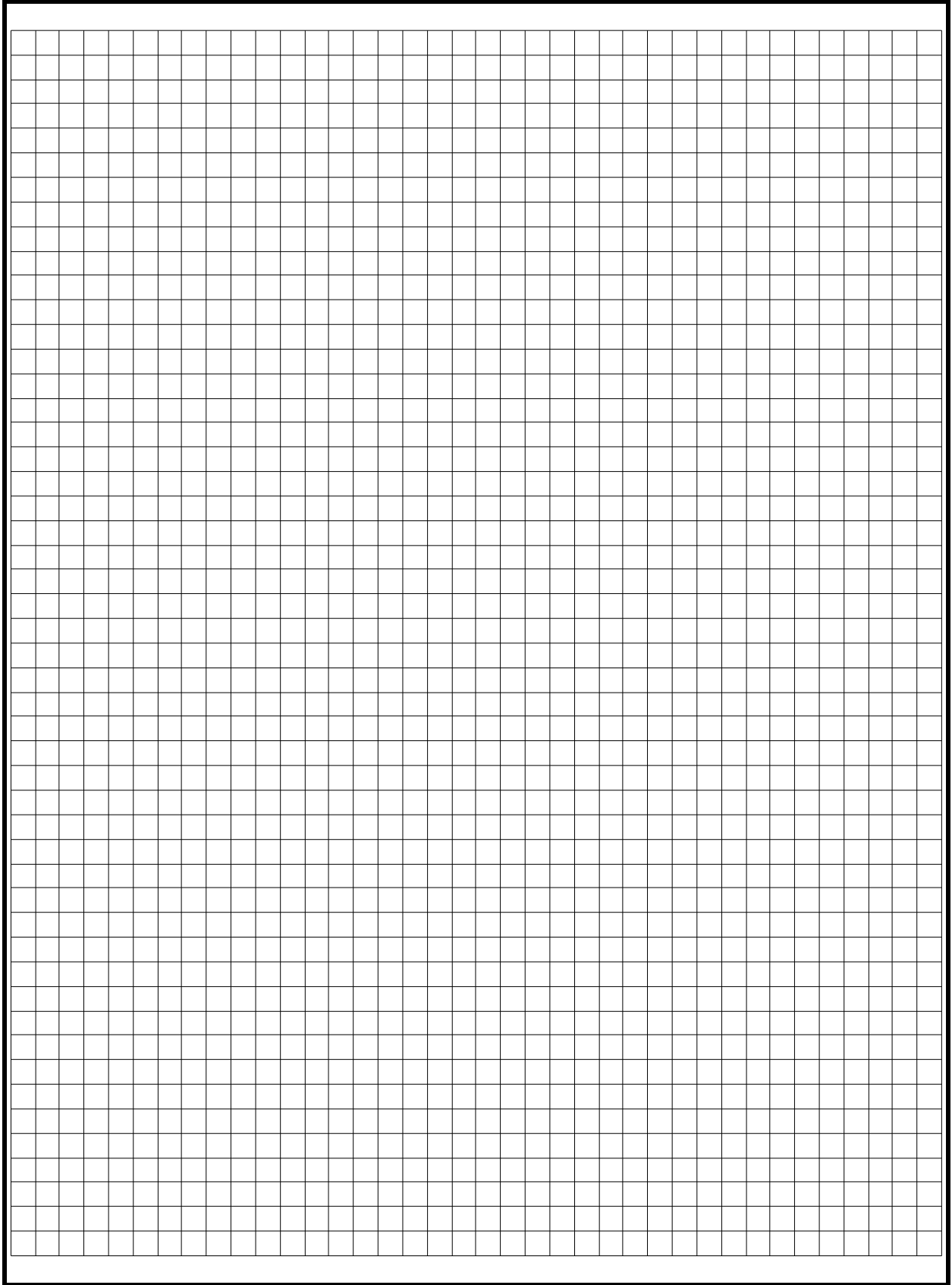
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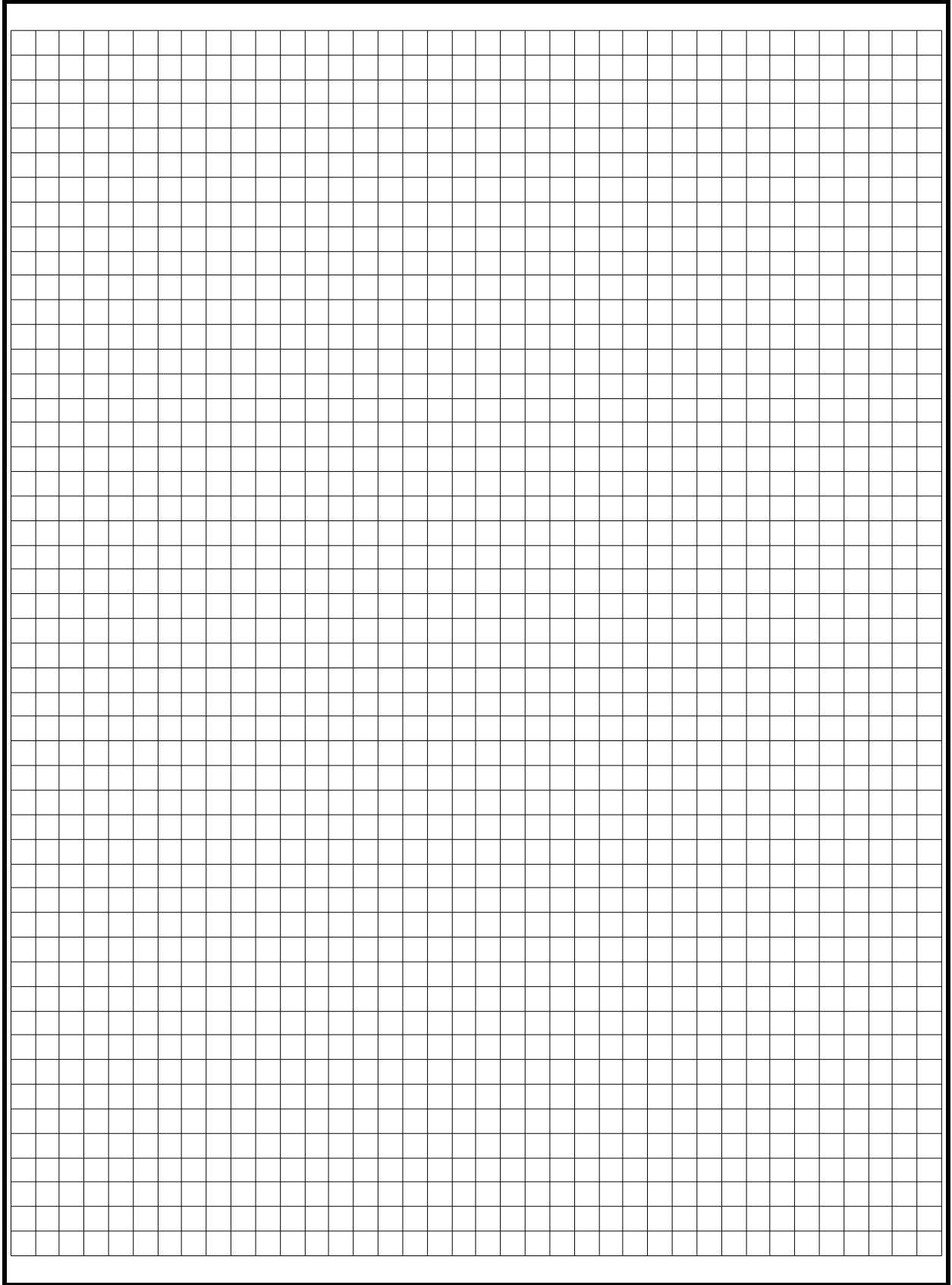
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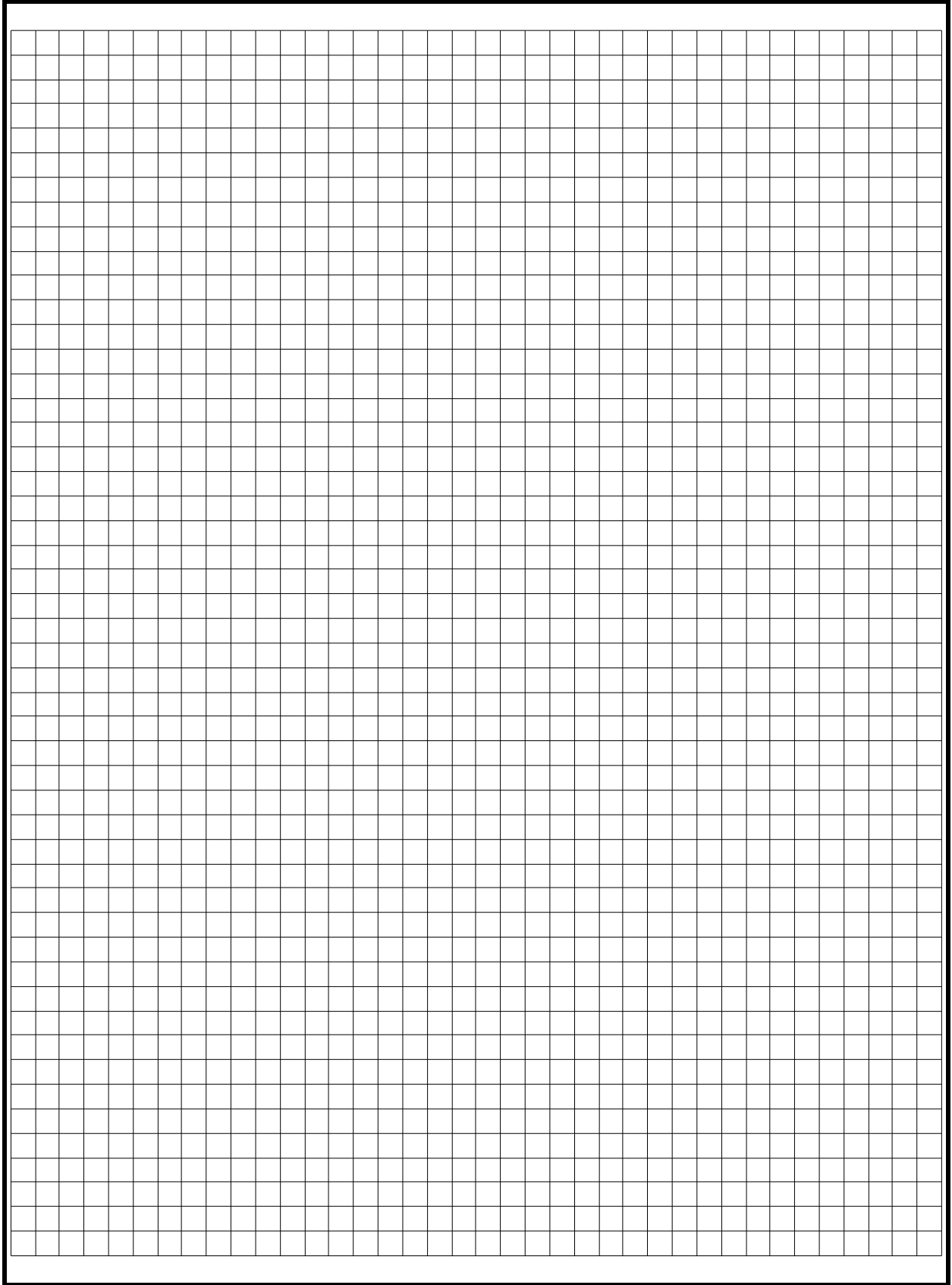
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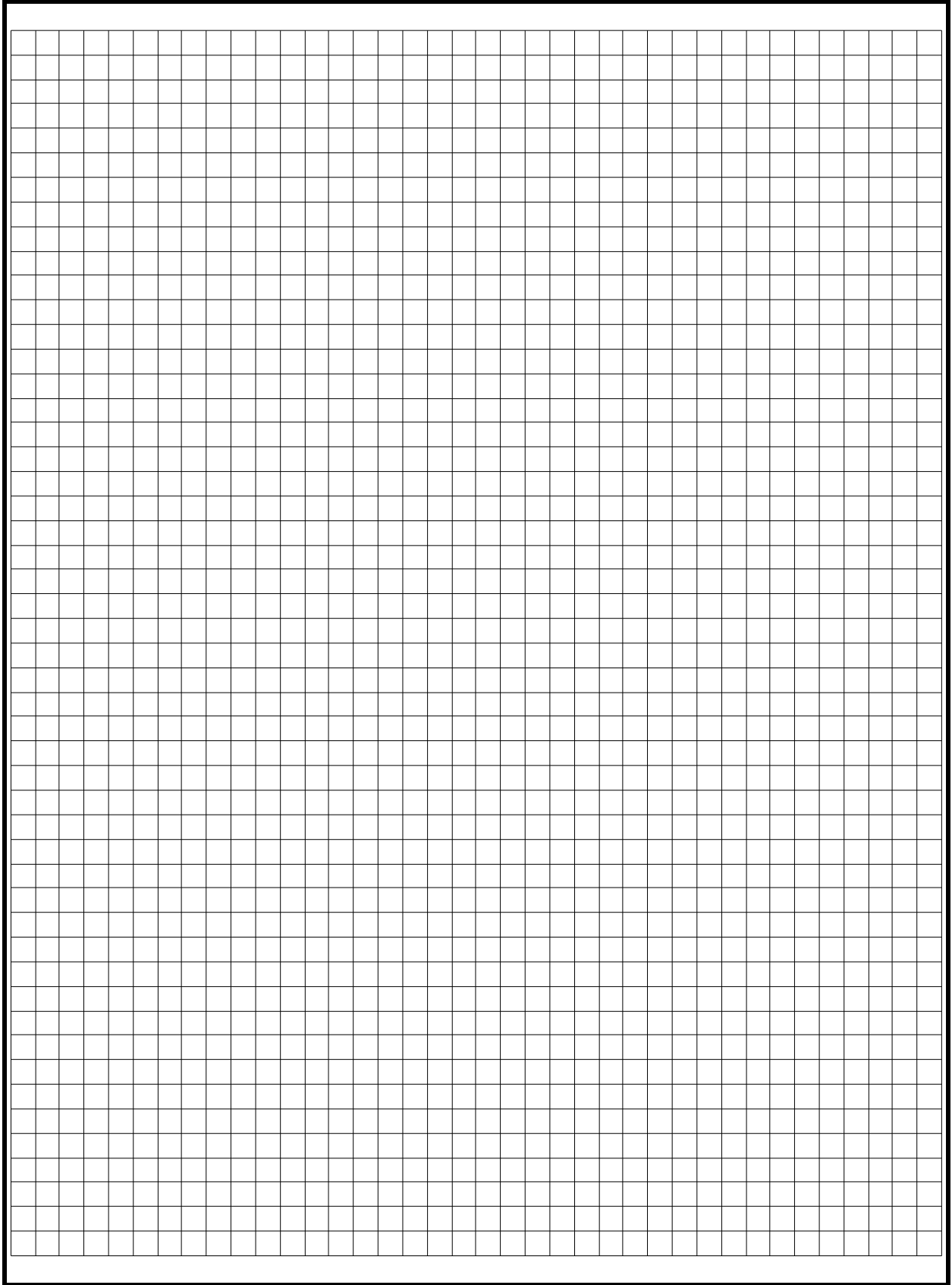
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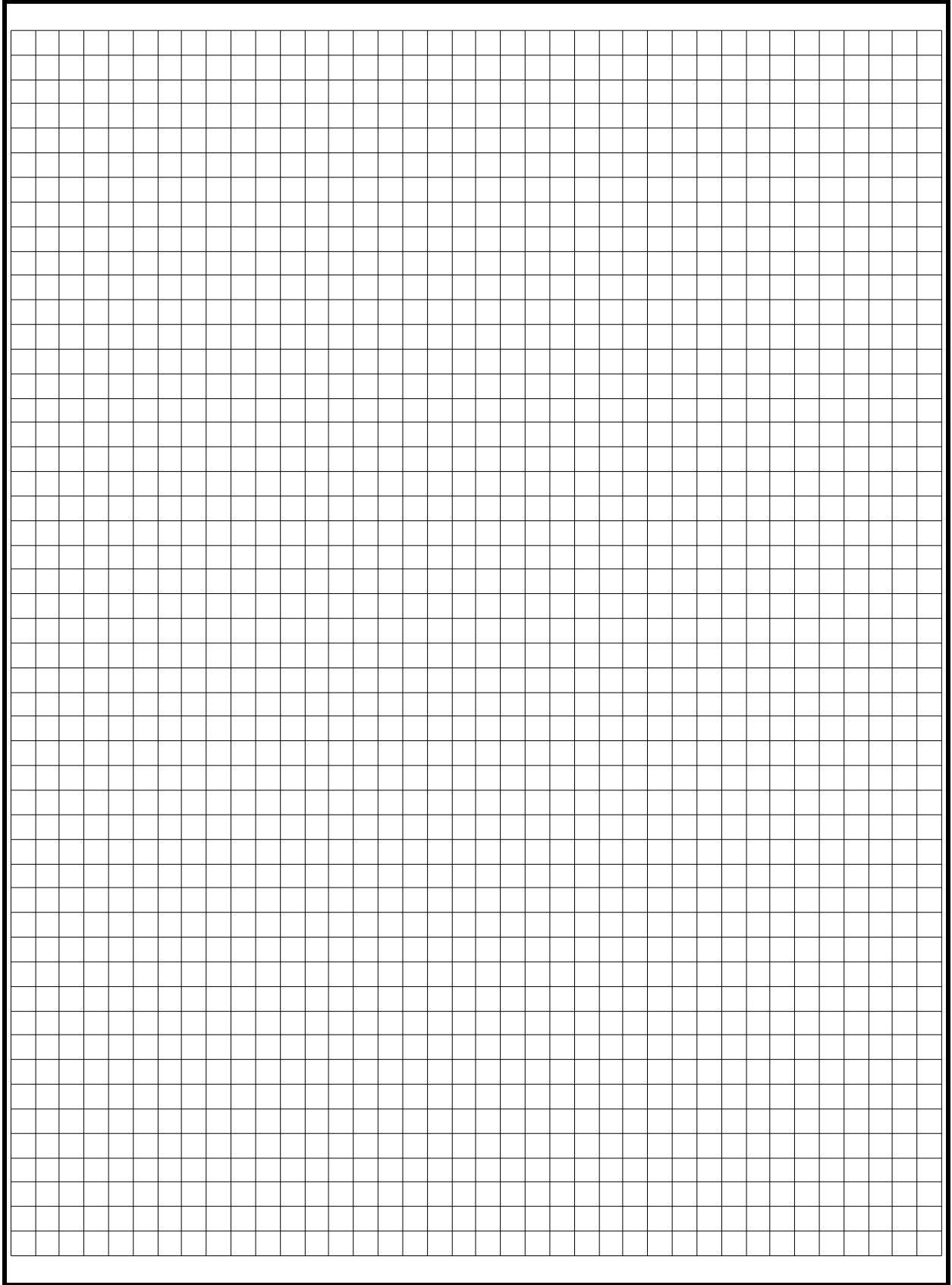
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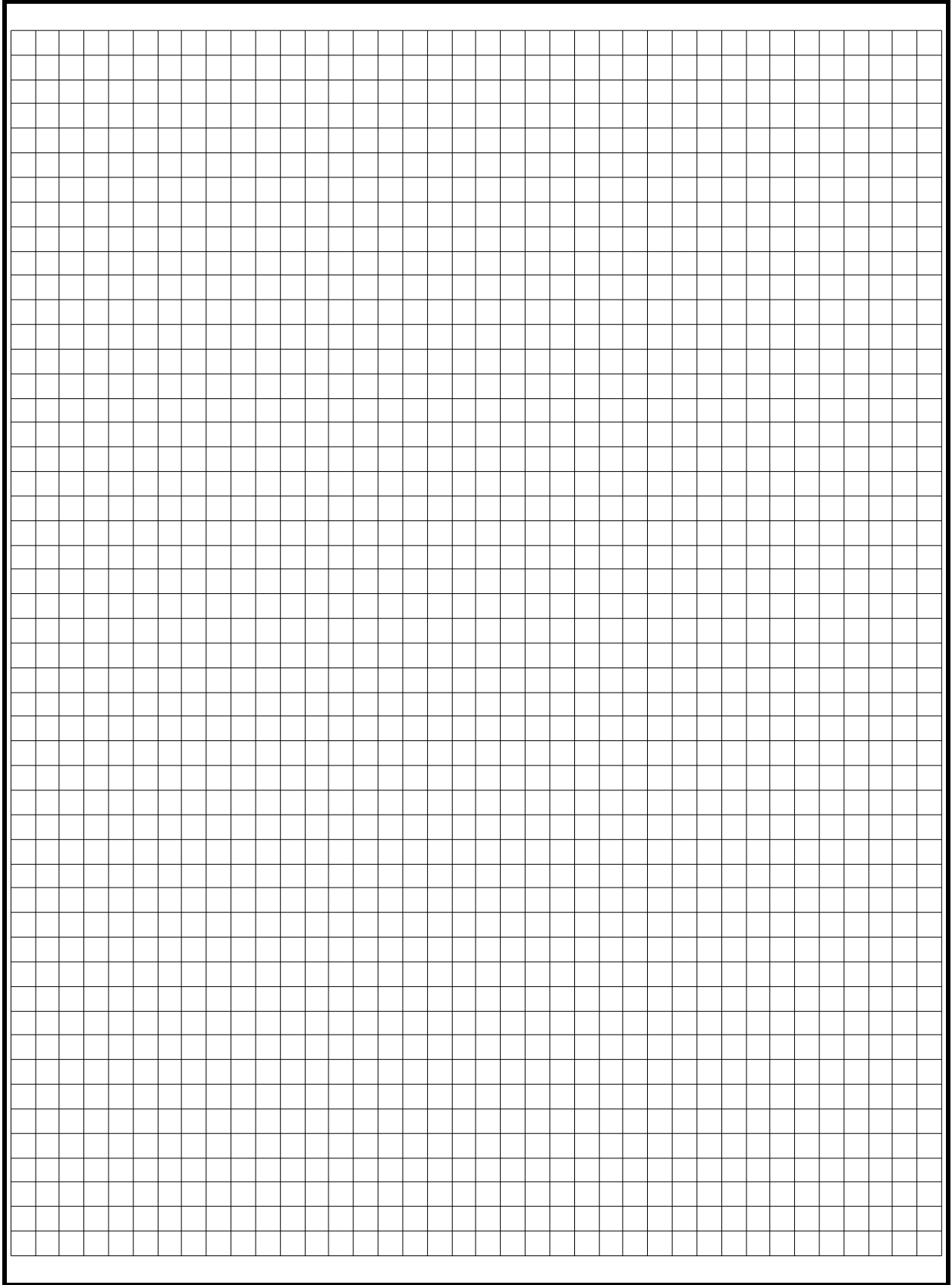
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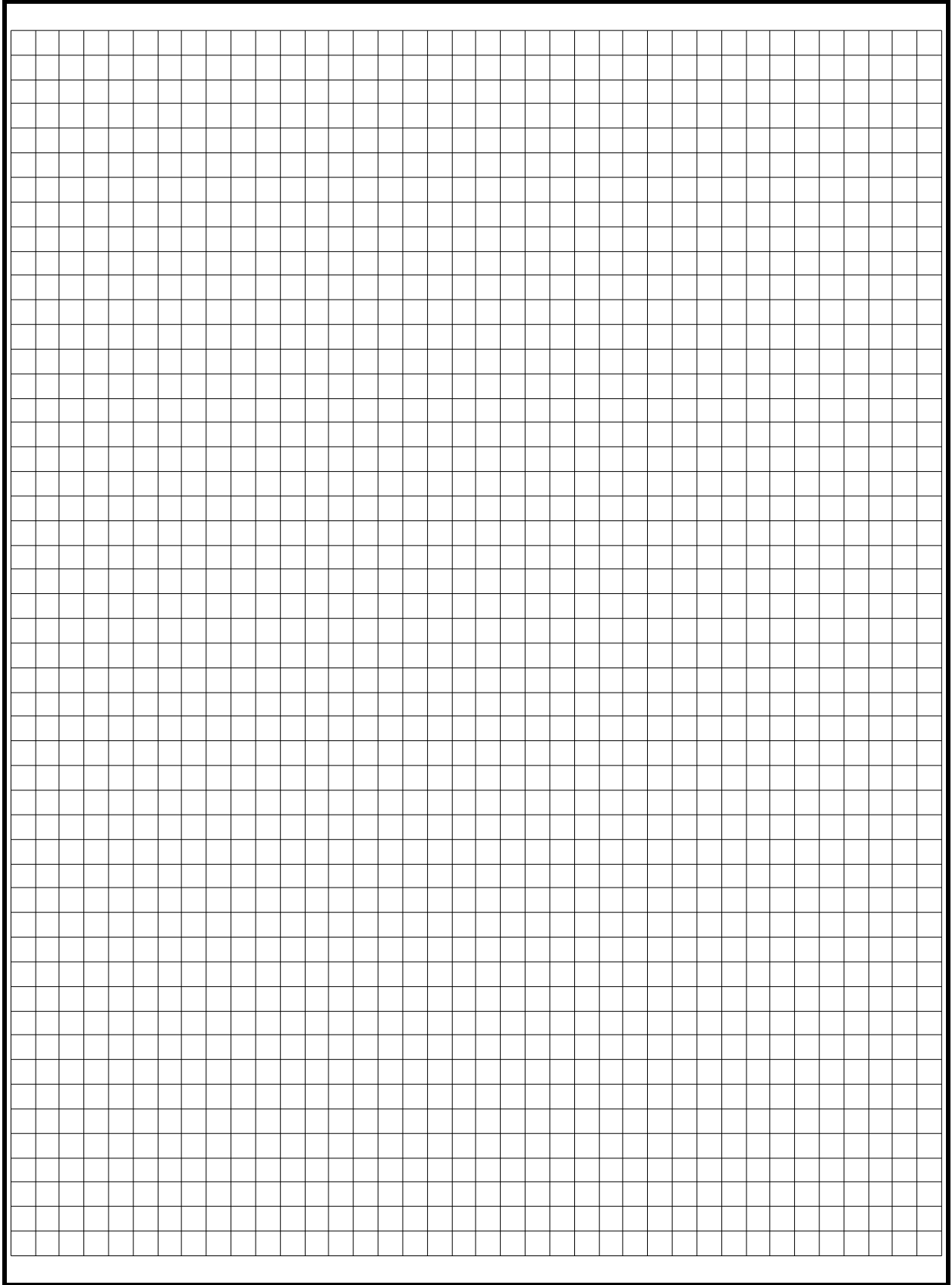
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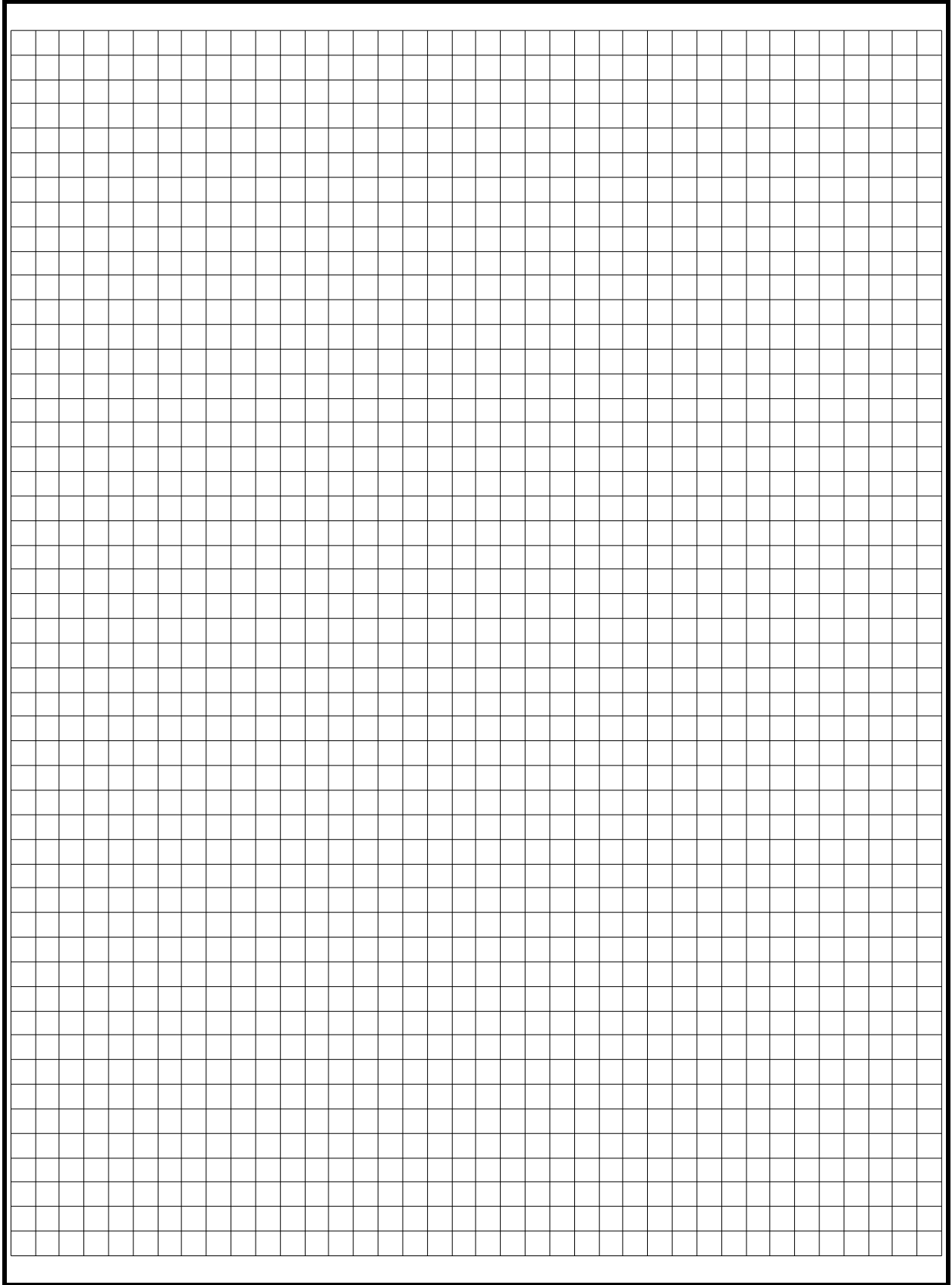
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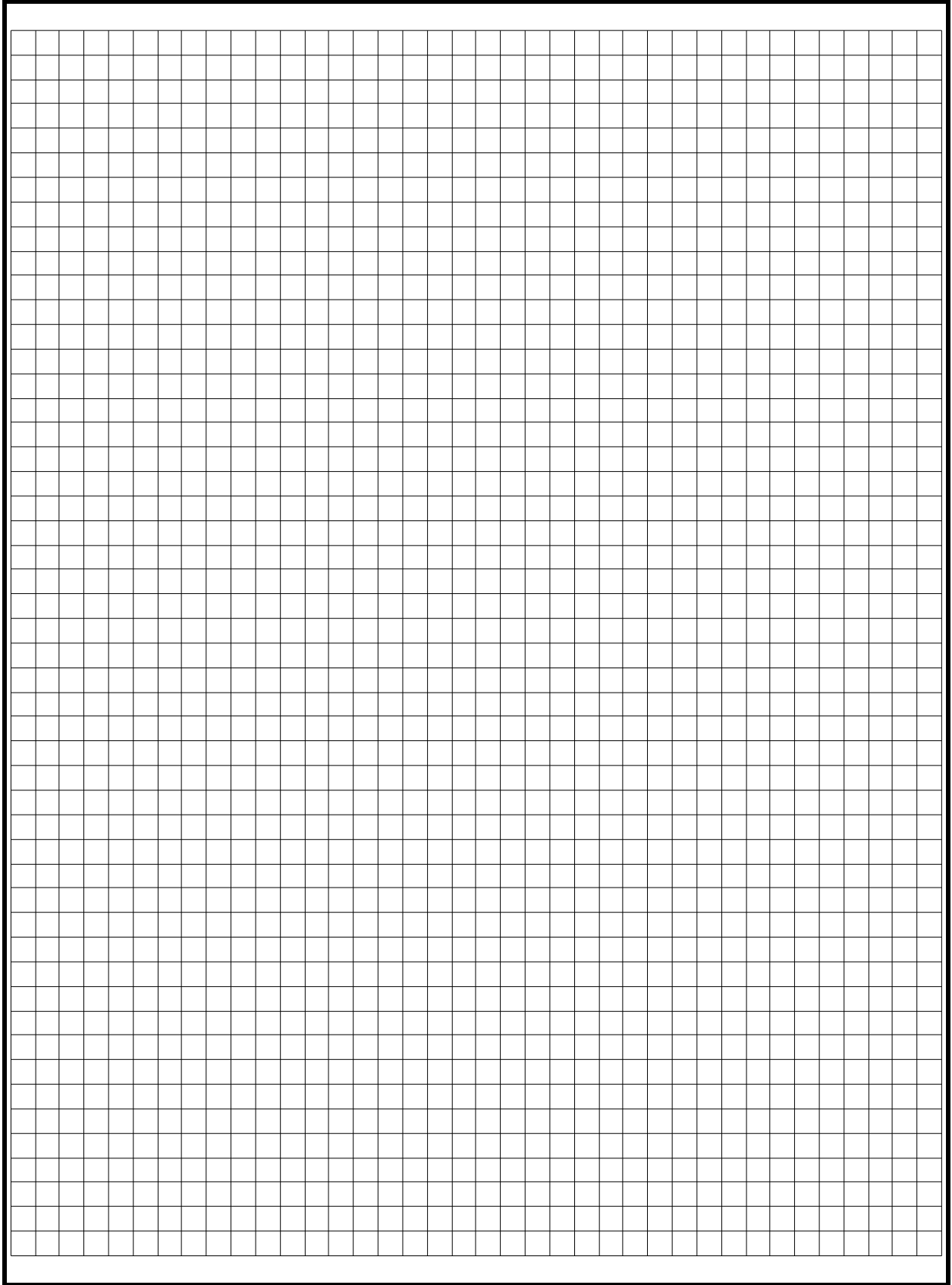
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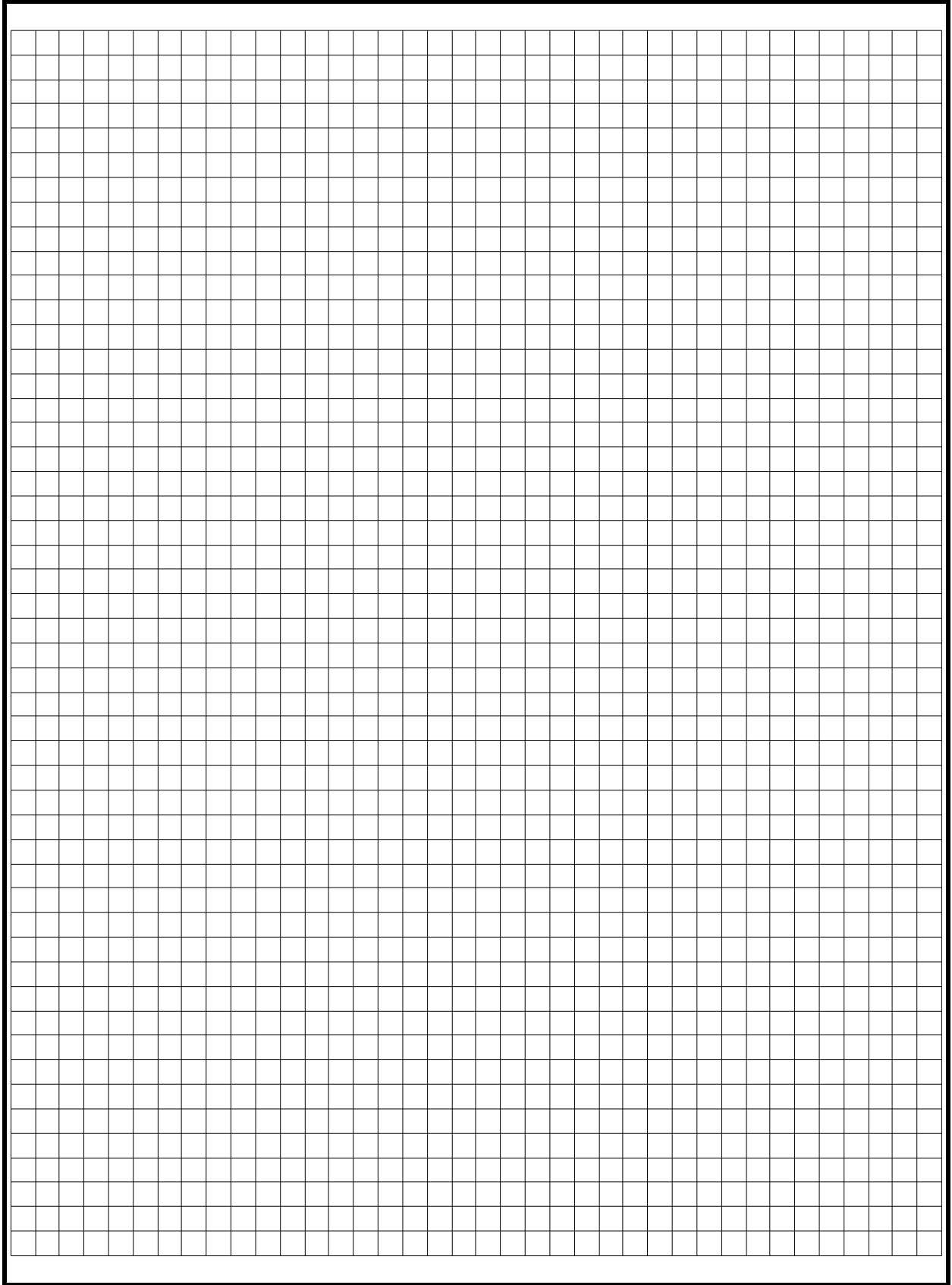
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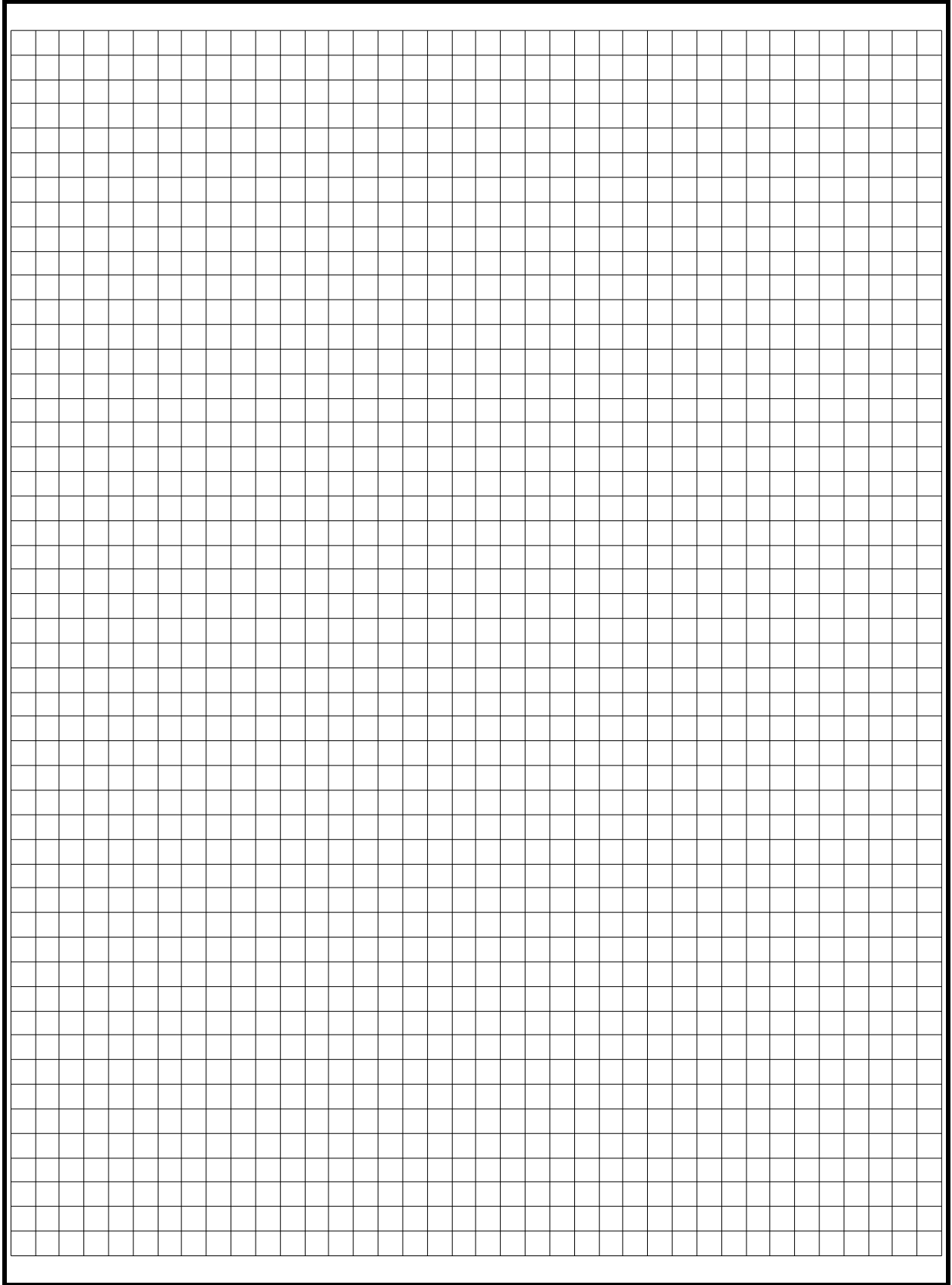
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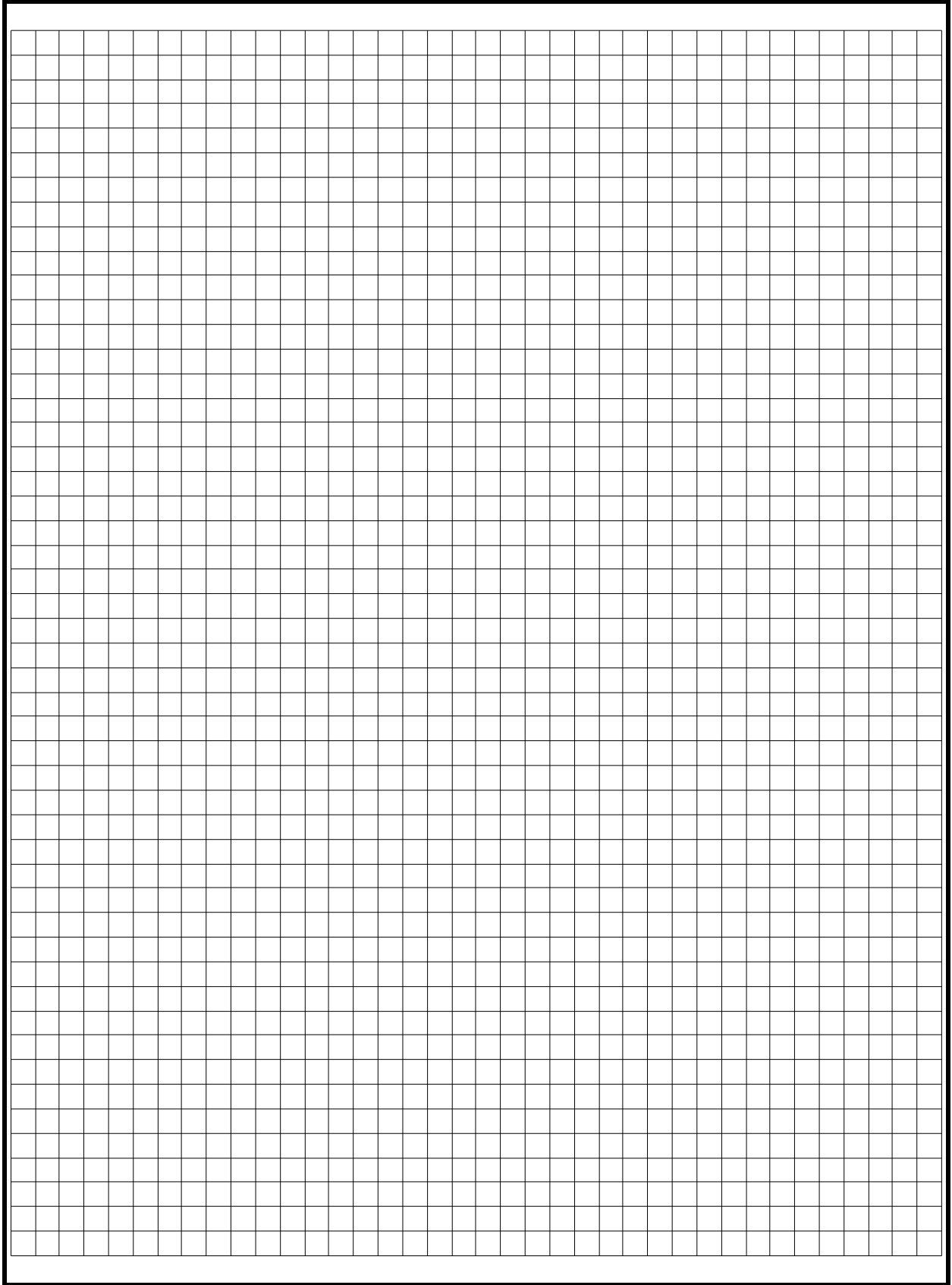
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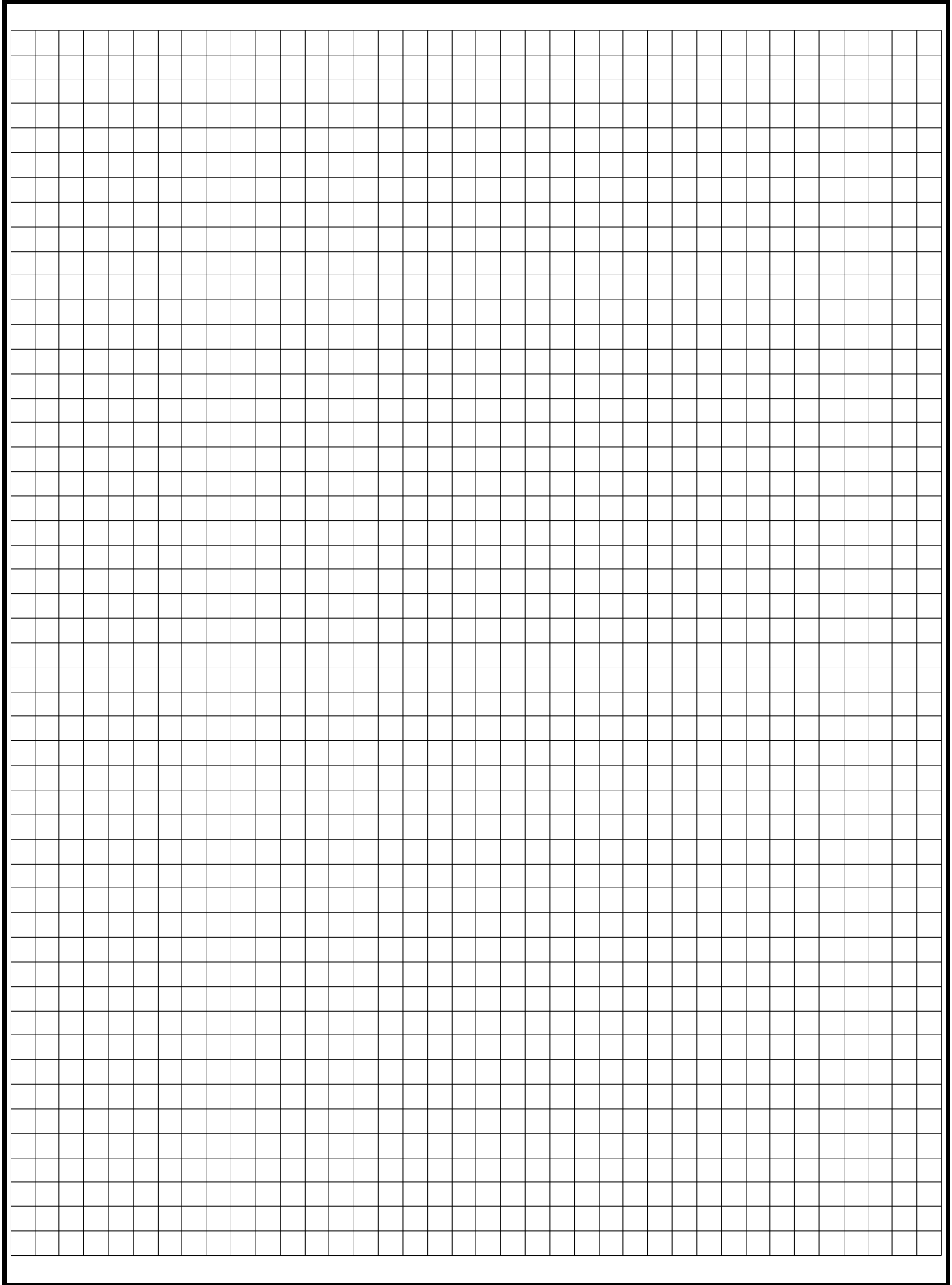
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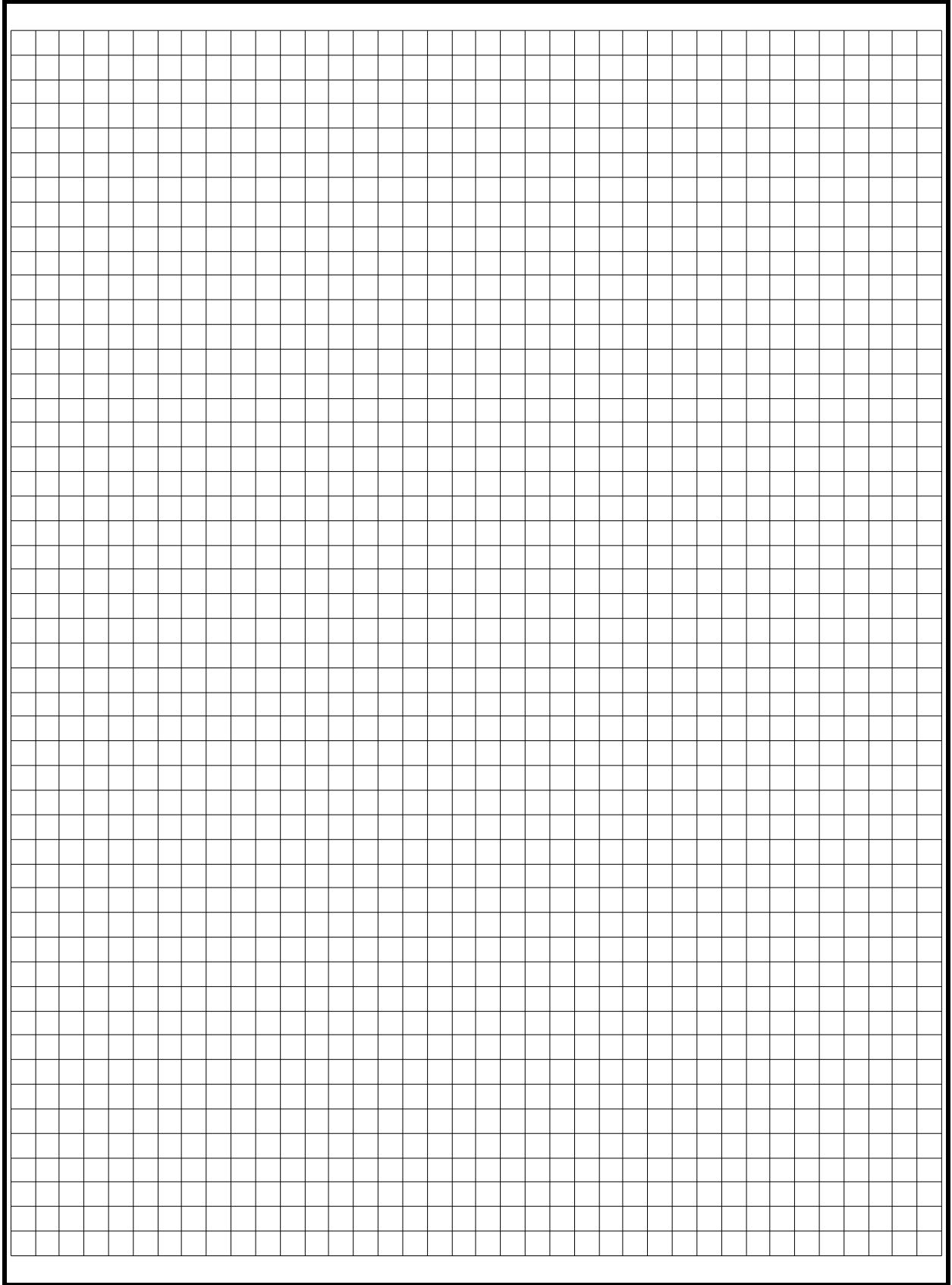
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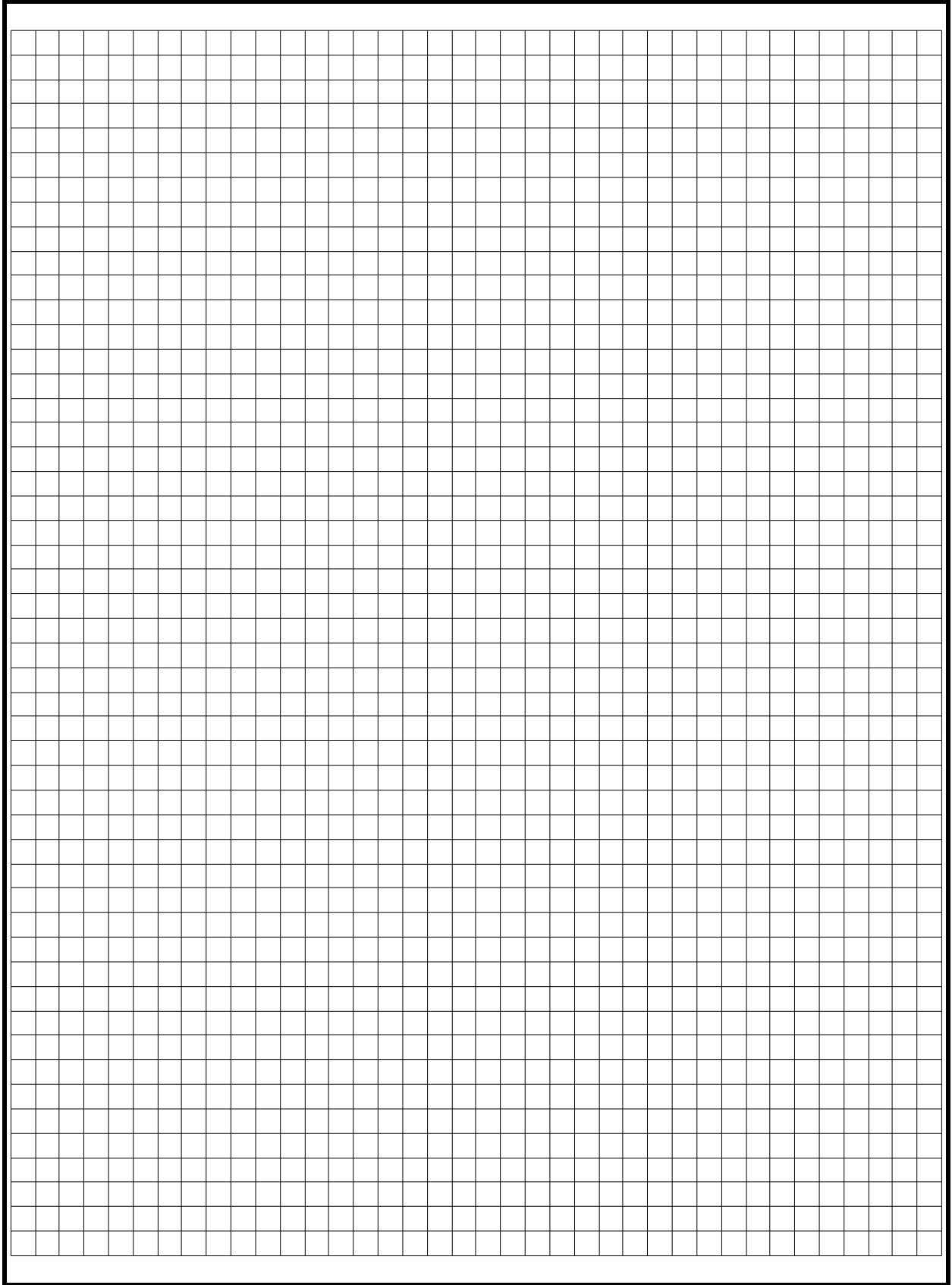
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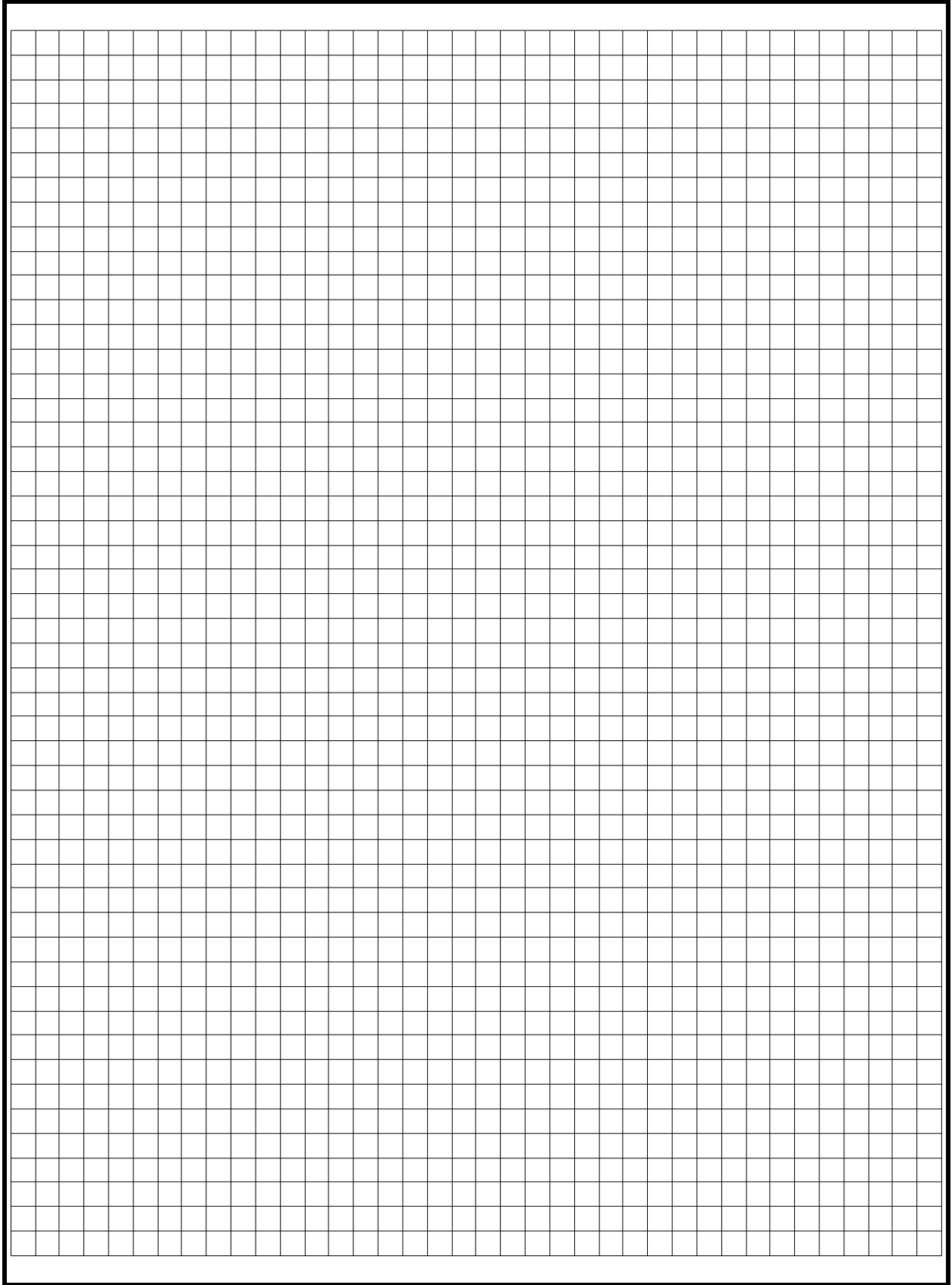
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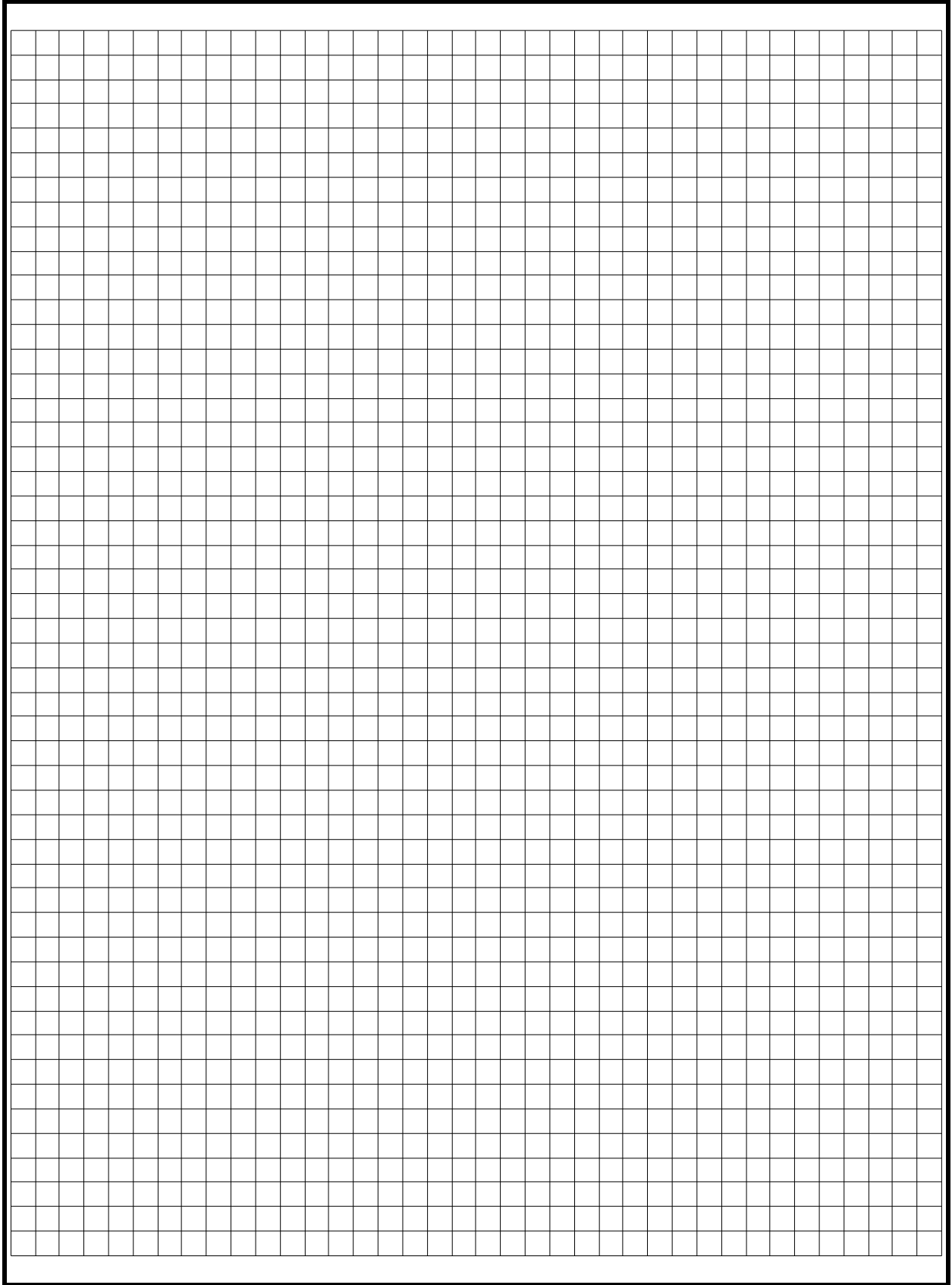
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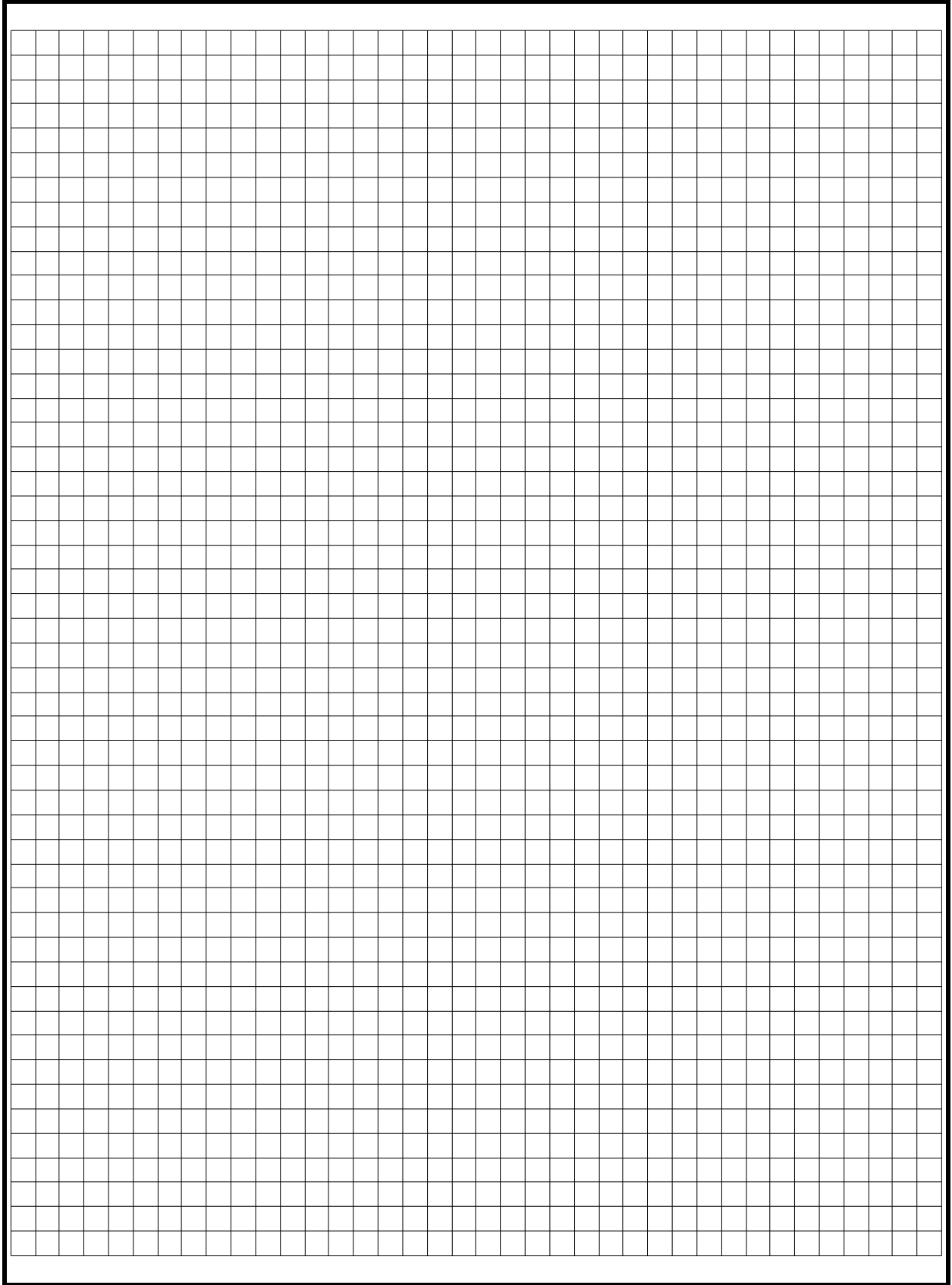
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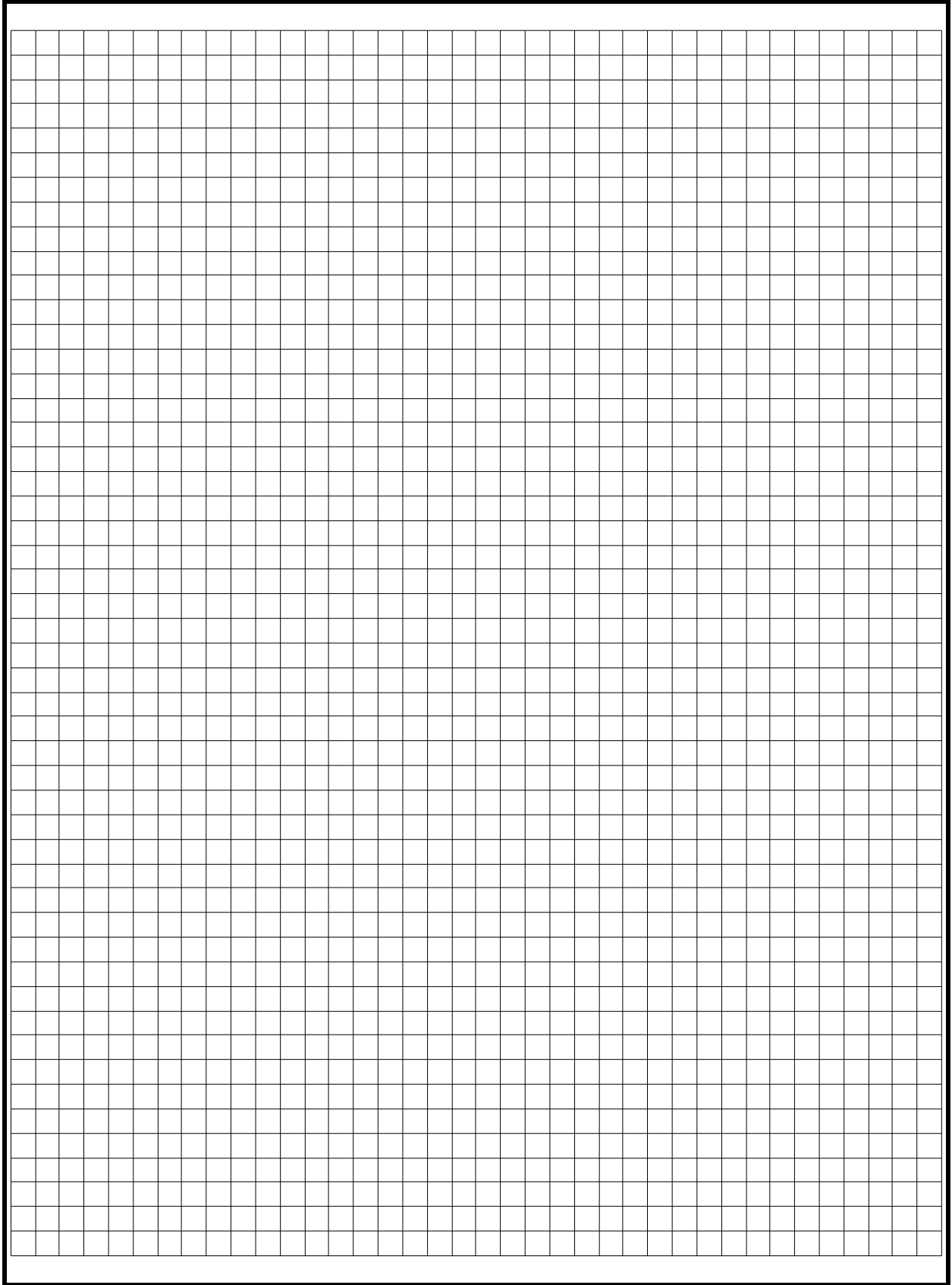
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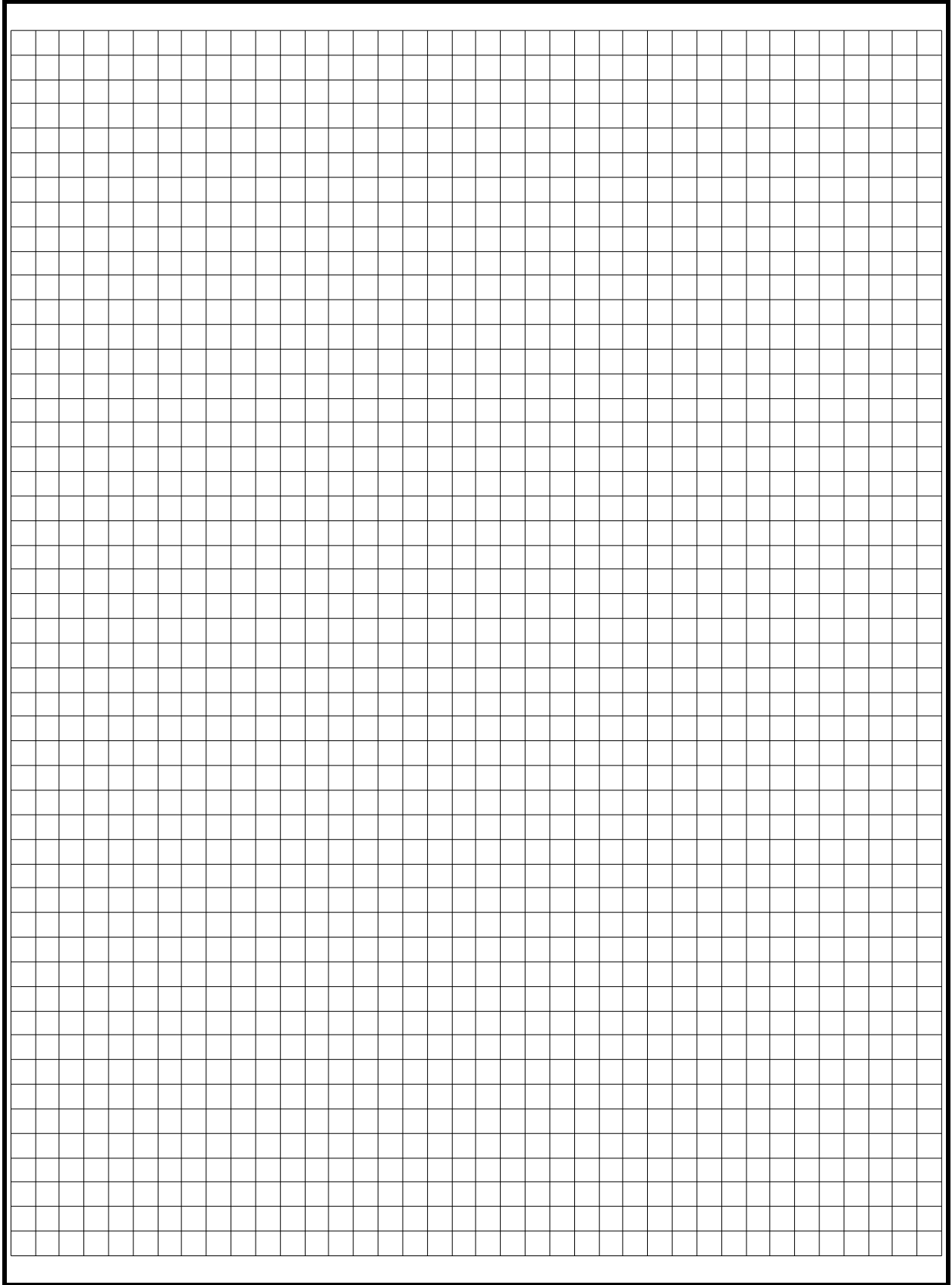
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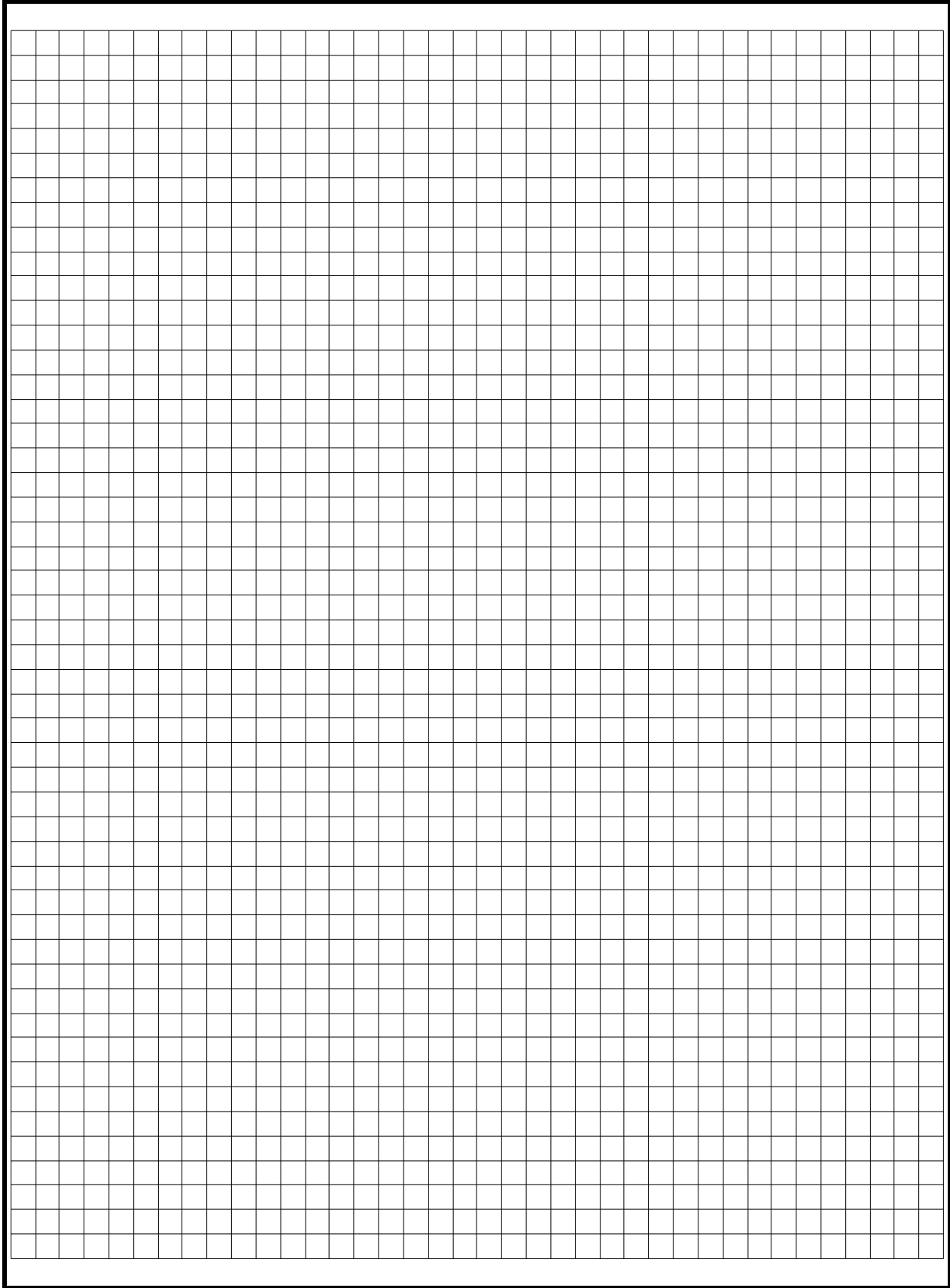
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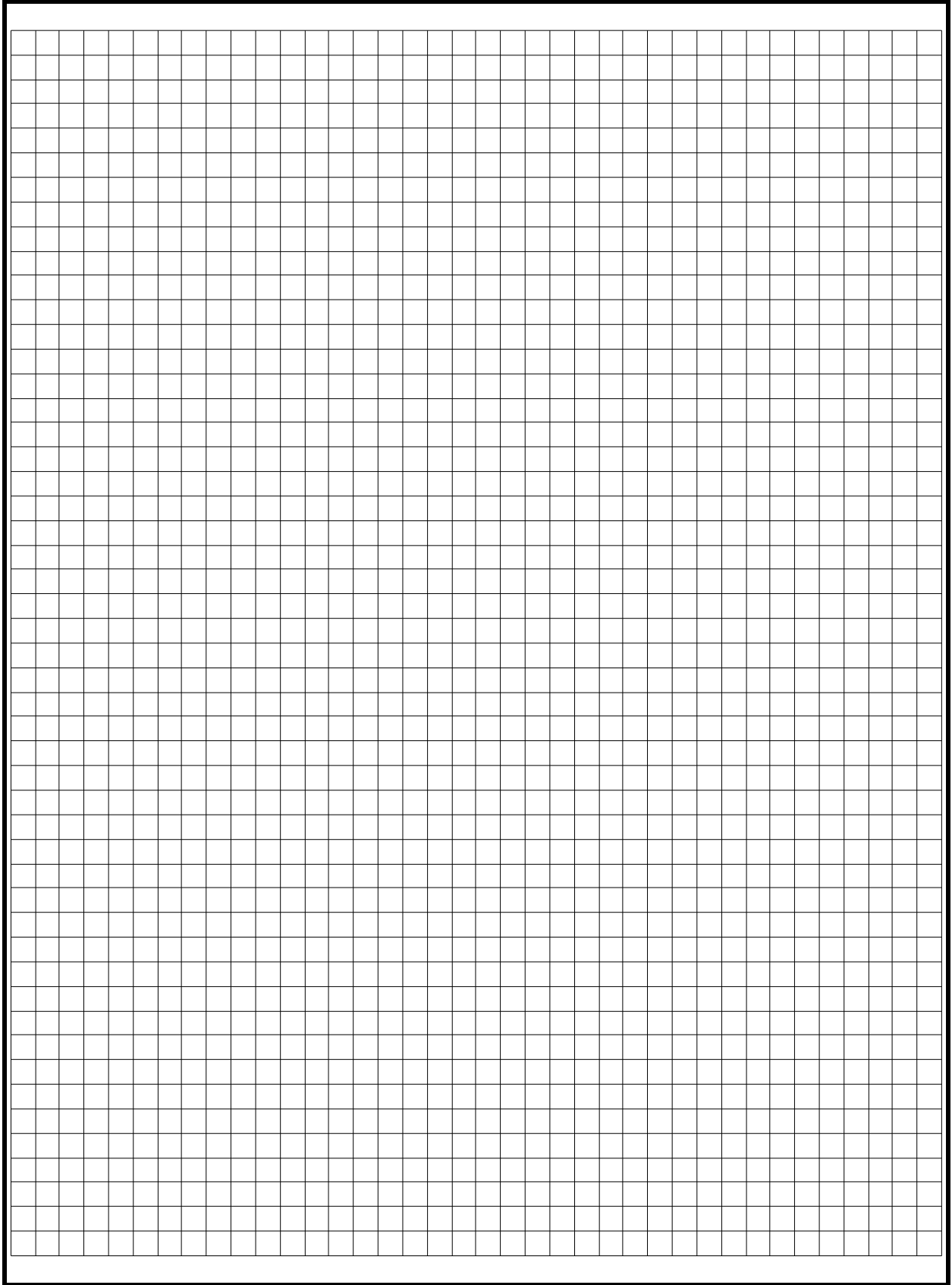
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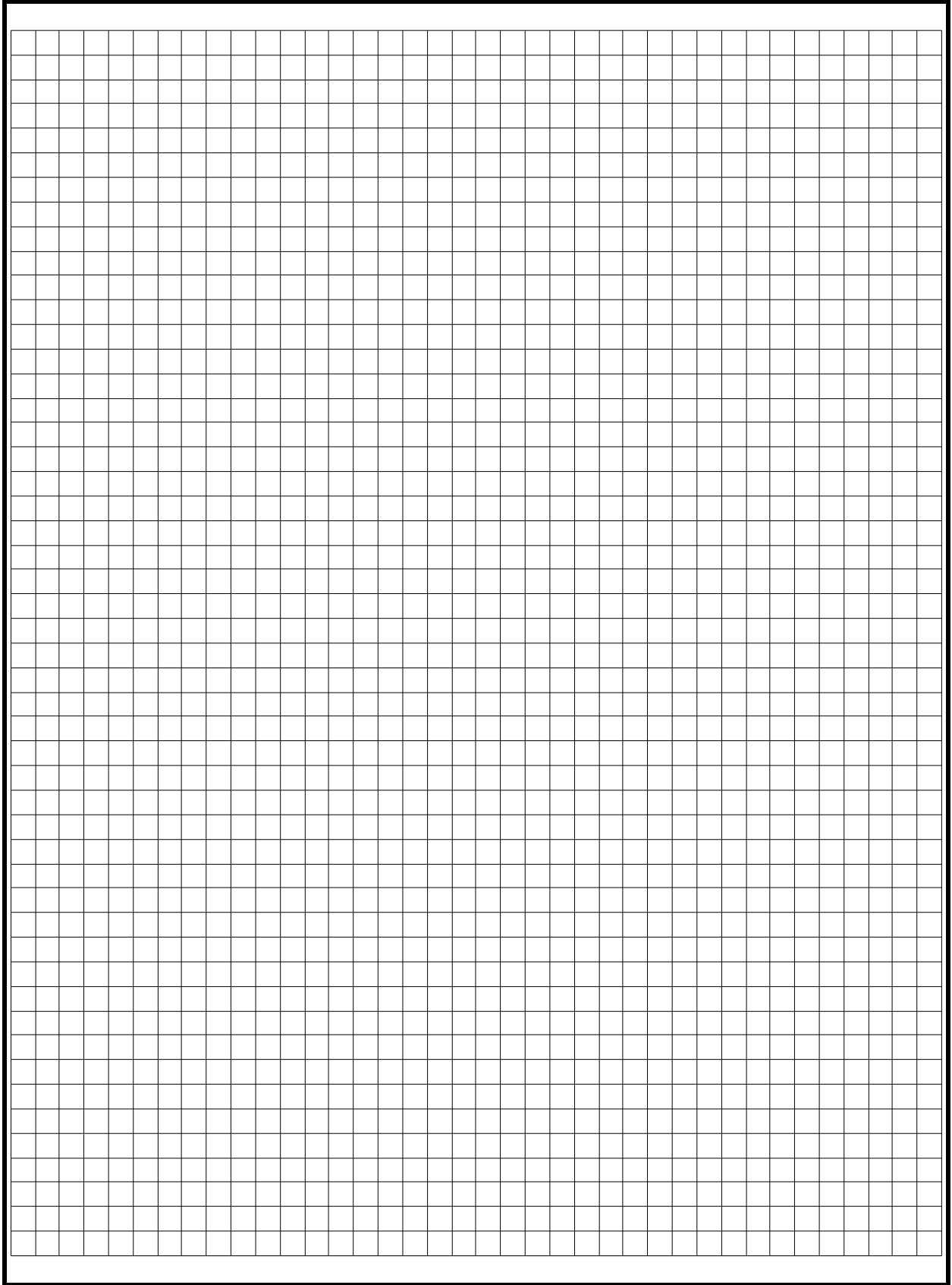
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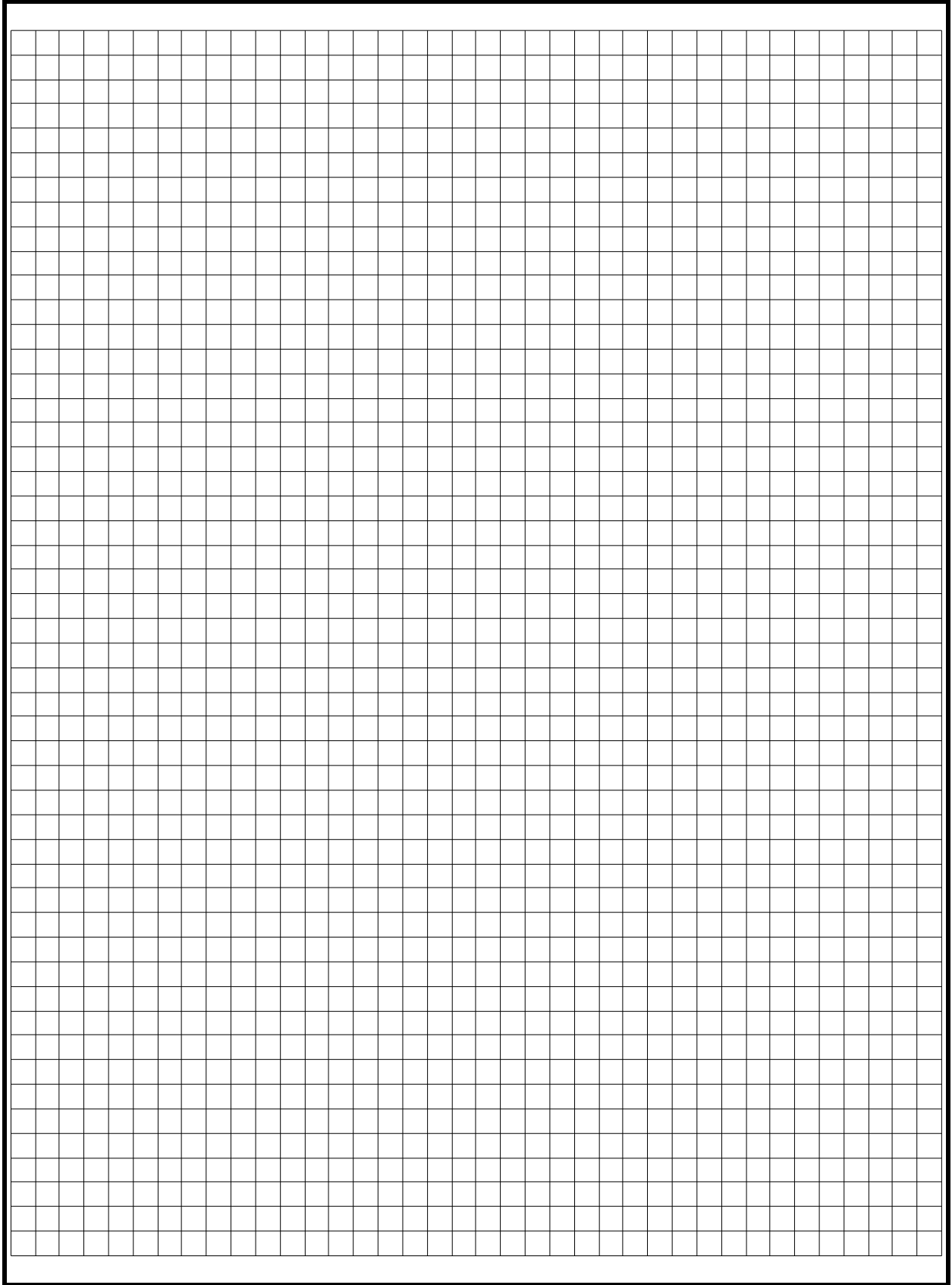
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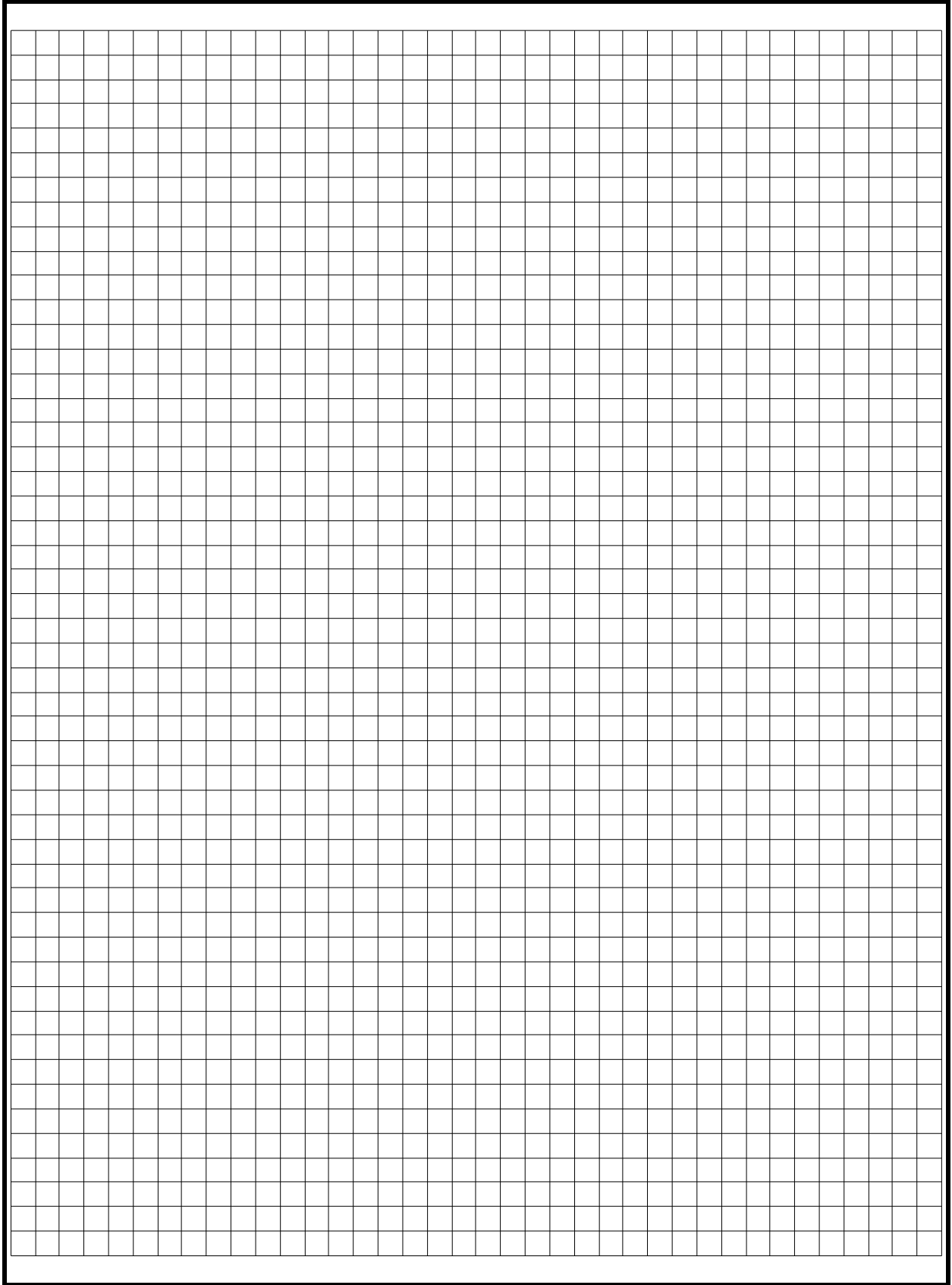
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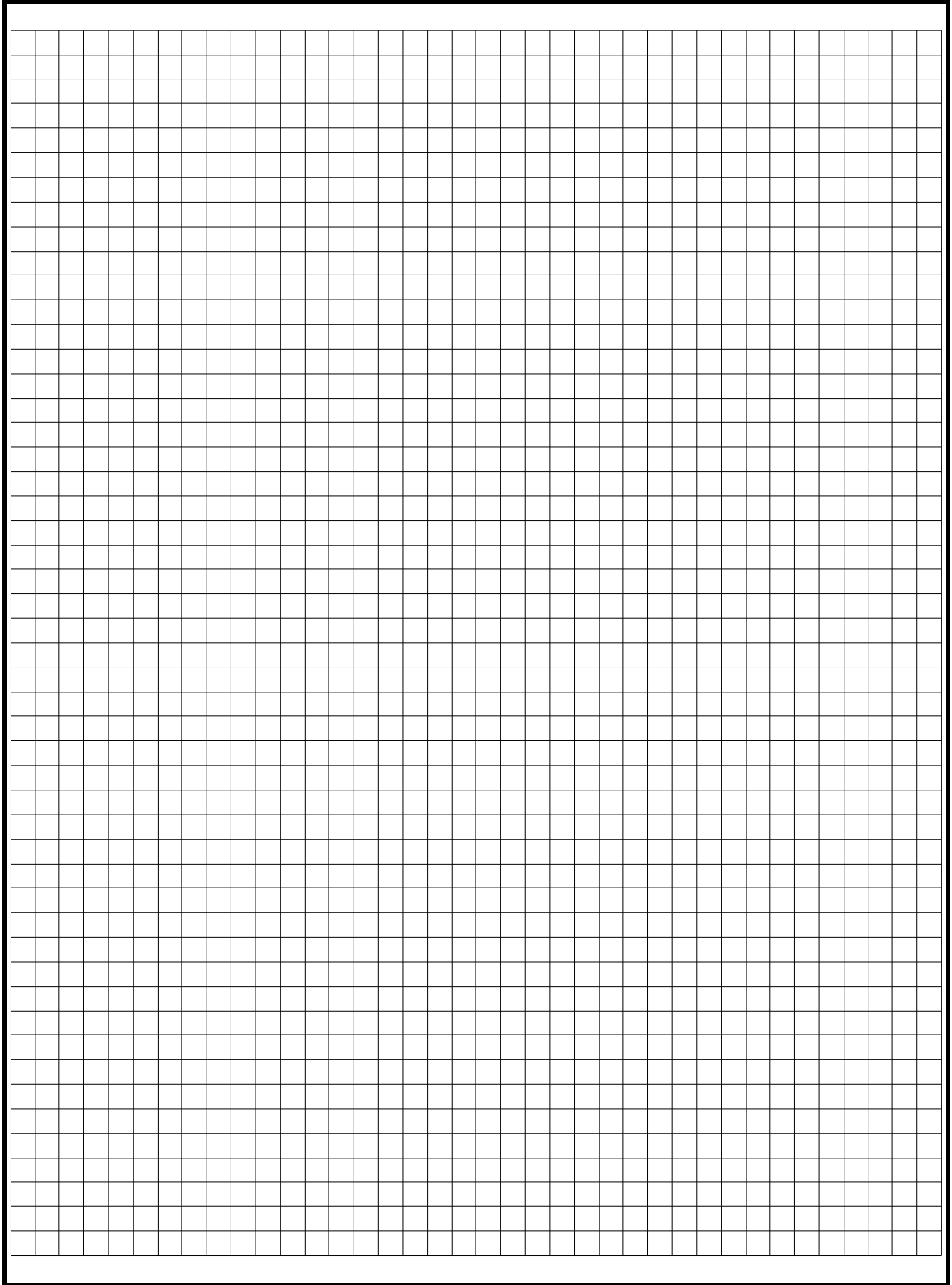
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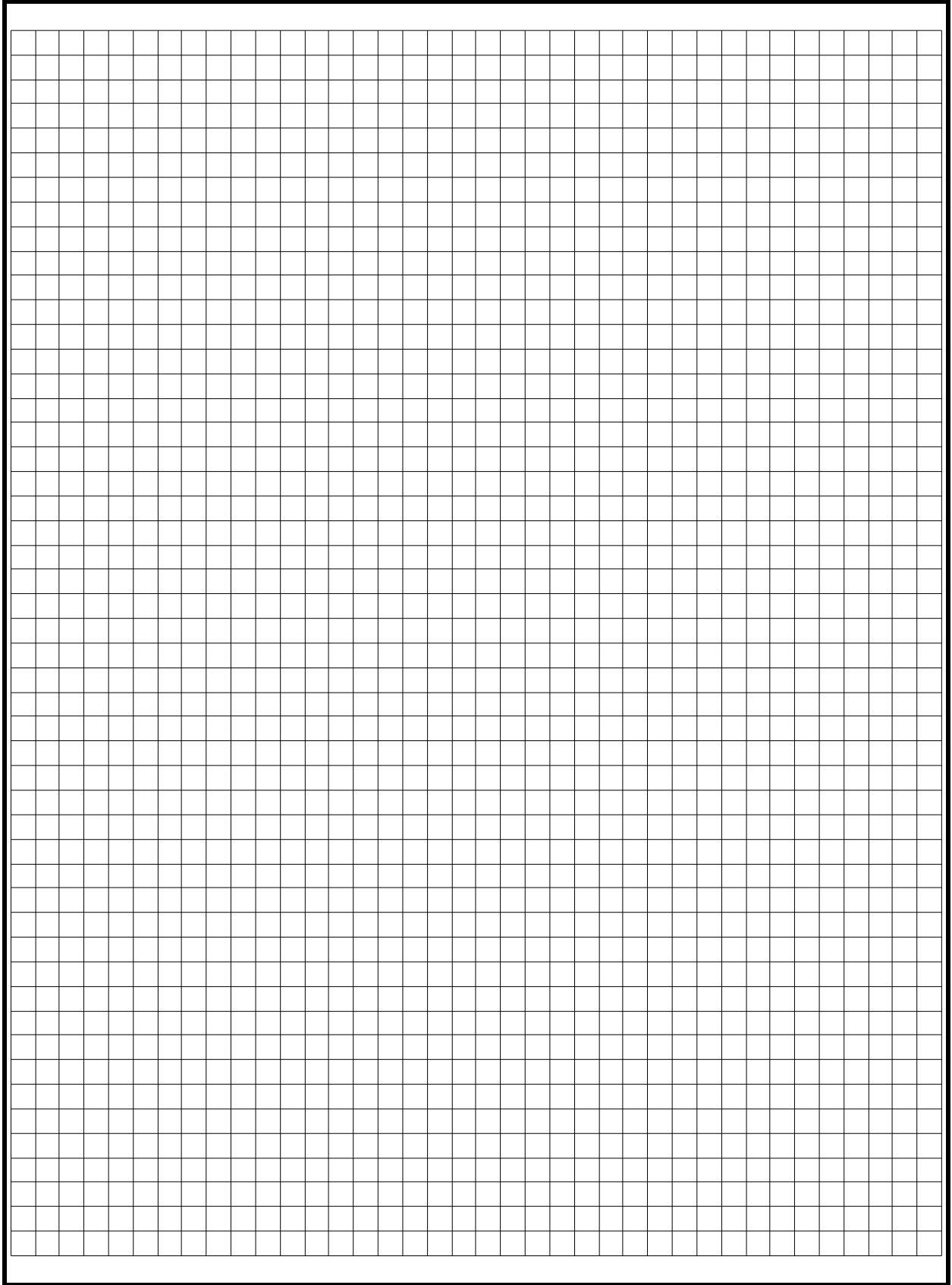
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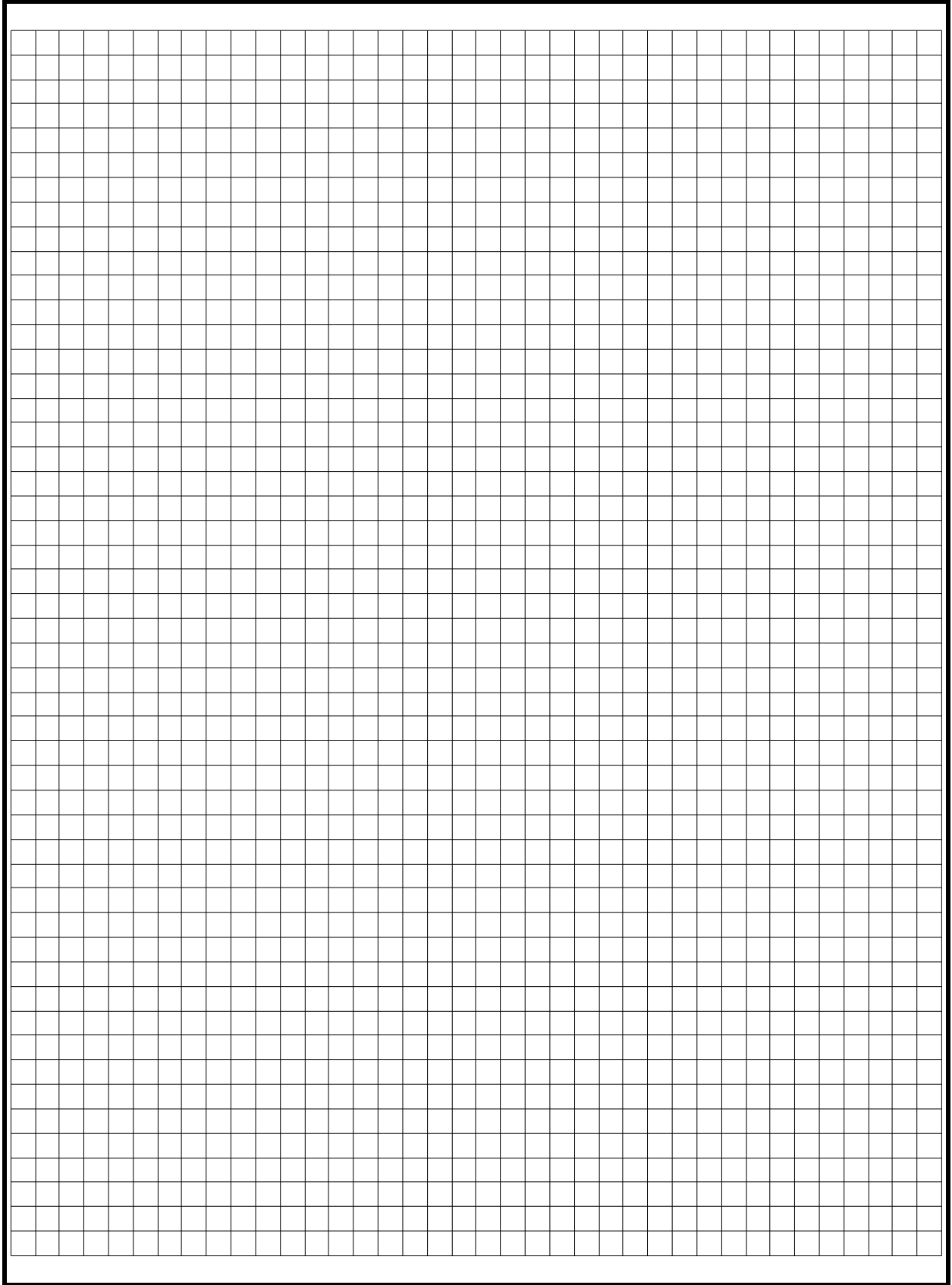
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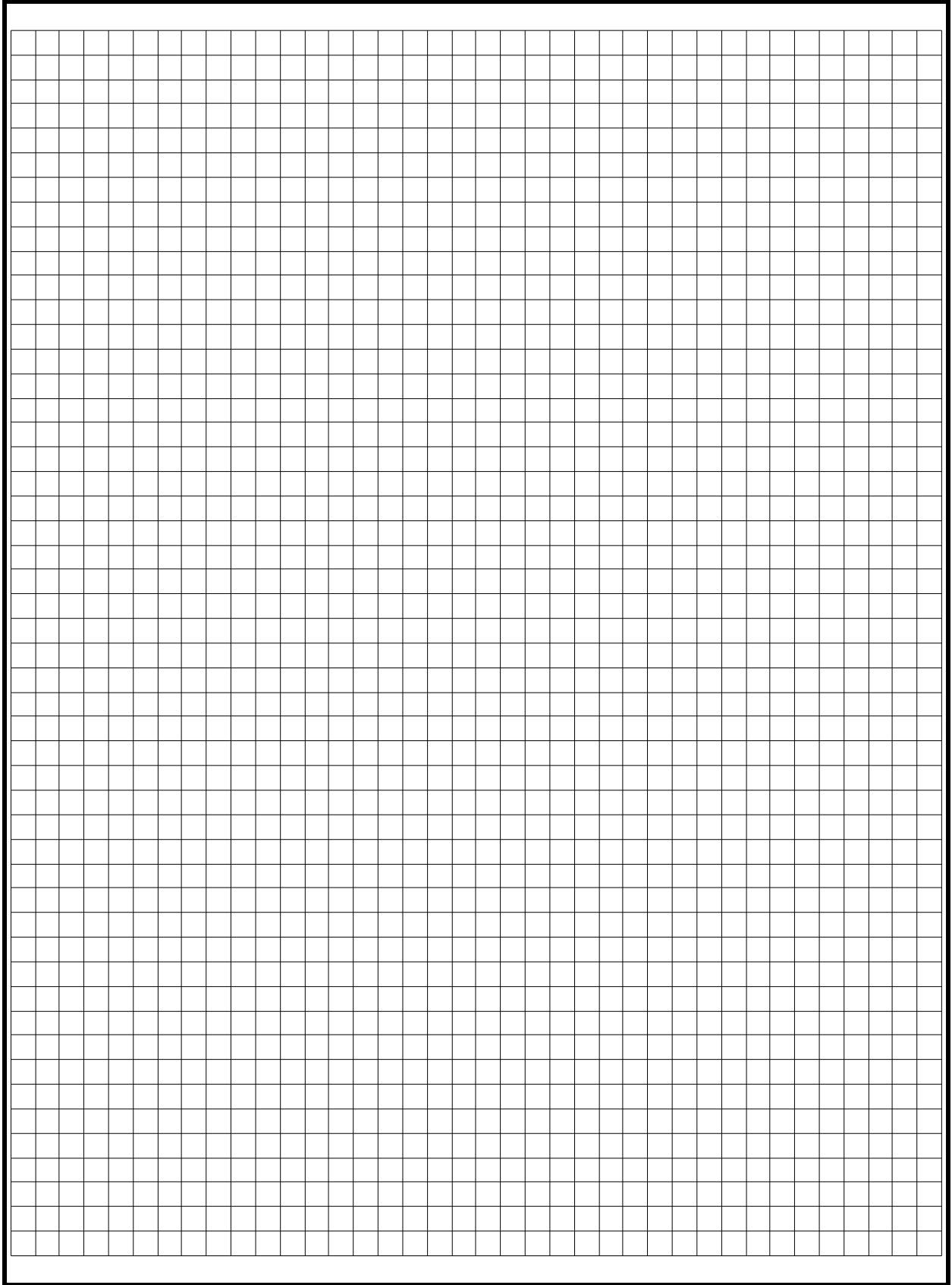
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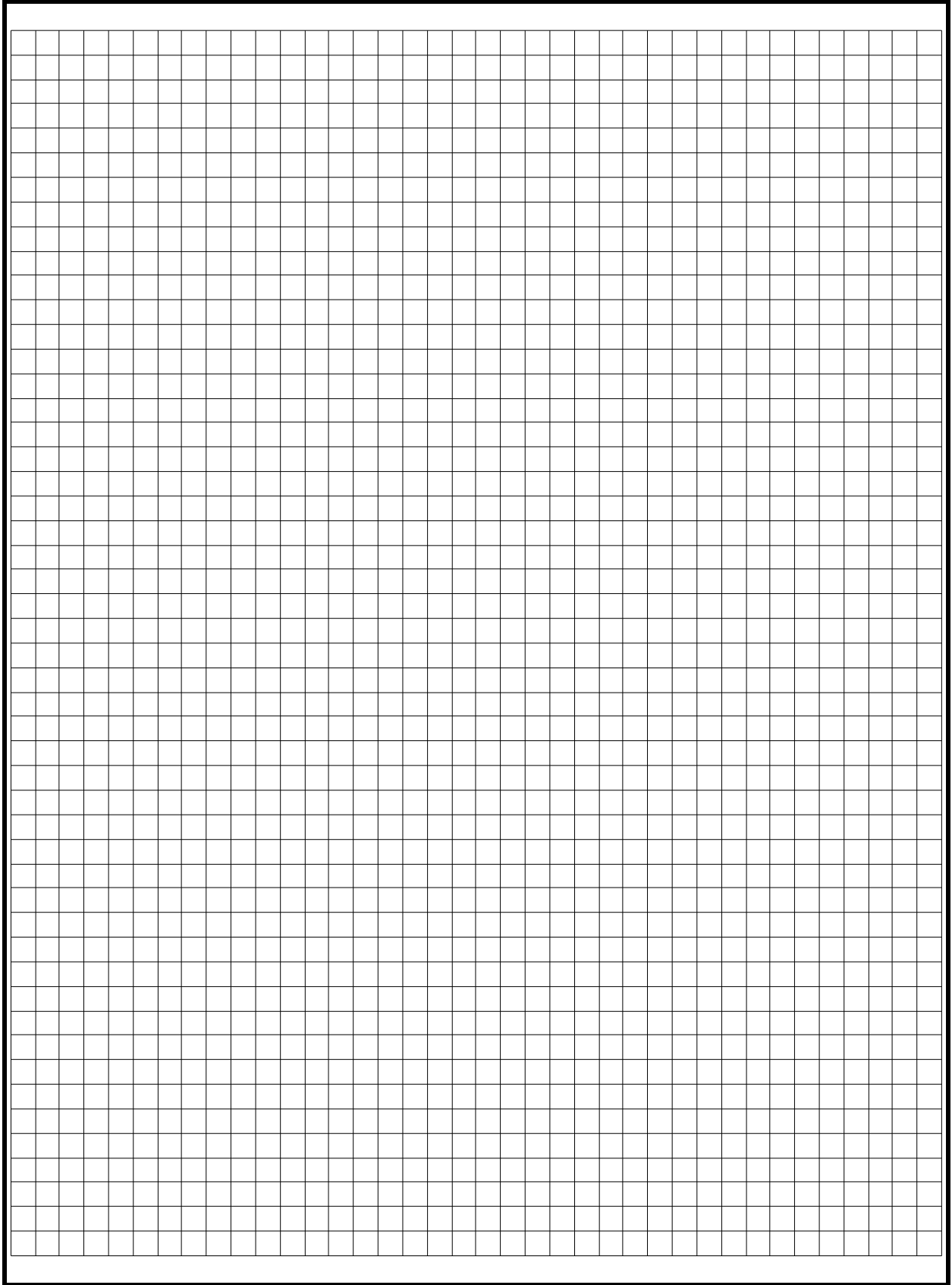
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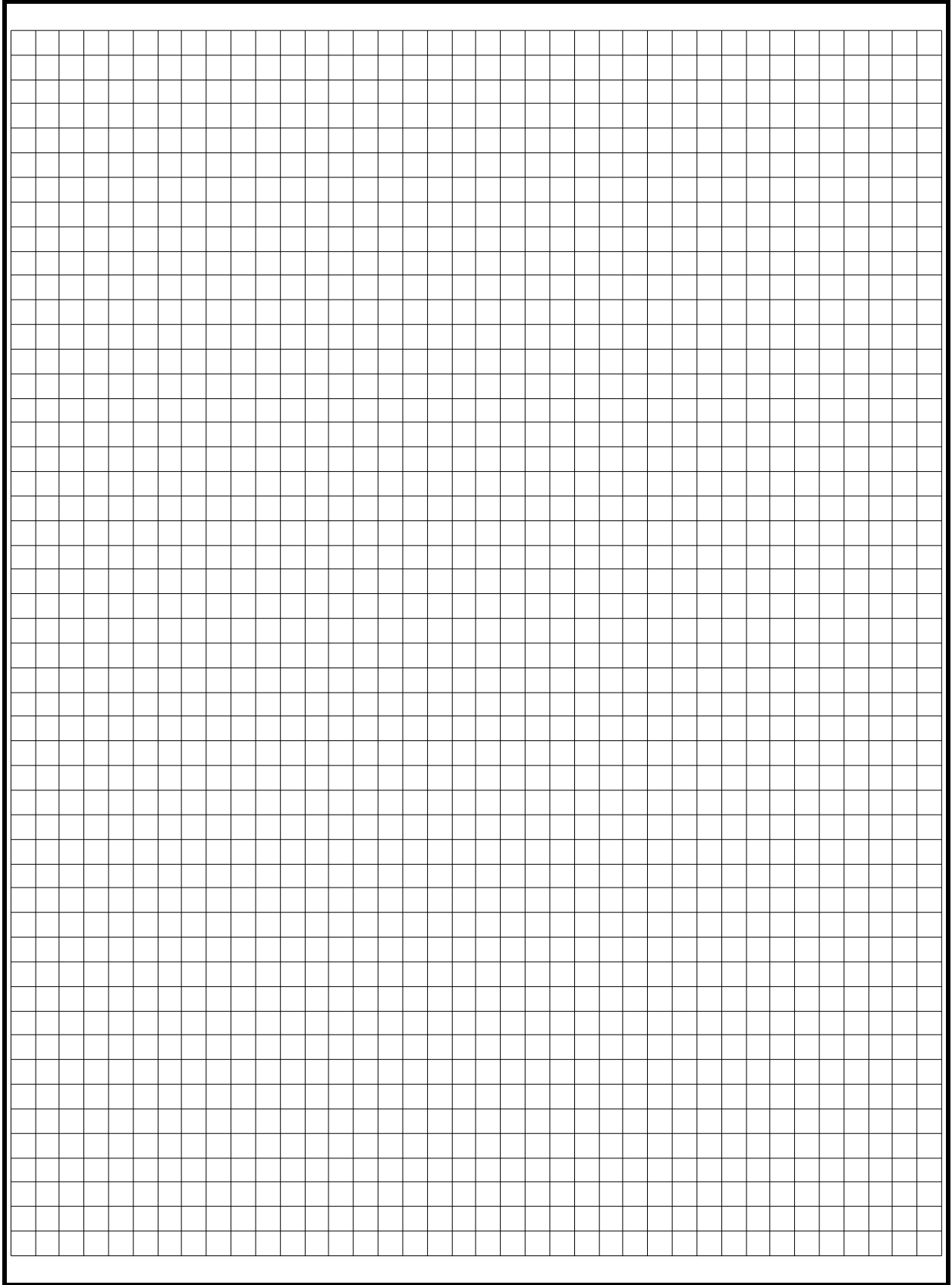
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A large grid of graph paper, consisting of 20 columns and 30 rows of small squares, enclosed in a thick black border. The grid is intended for calculations or drawing.

Signed: _____

Date: _____

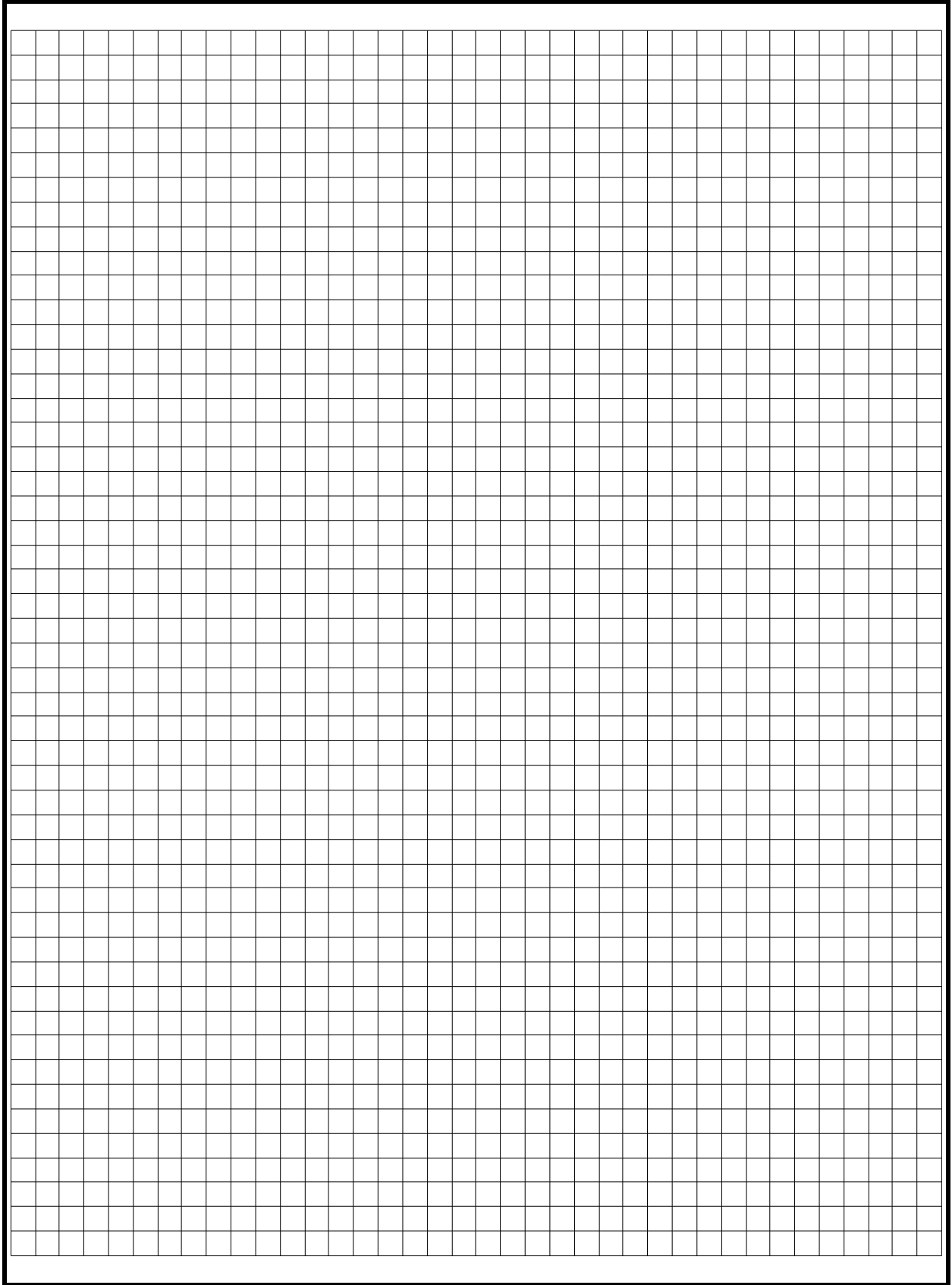
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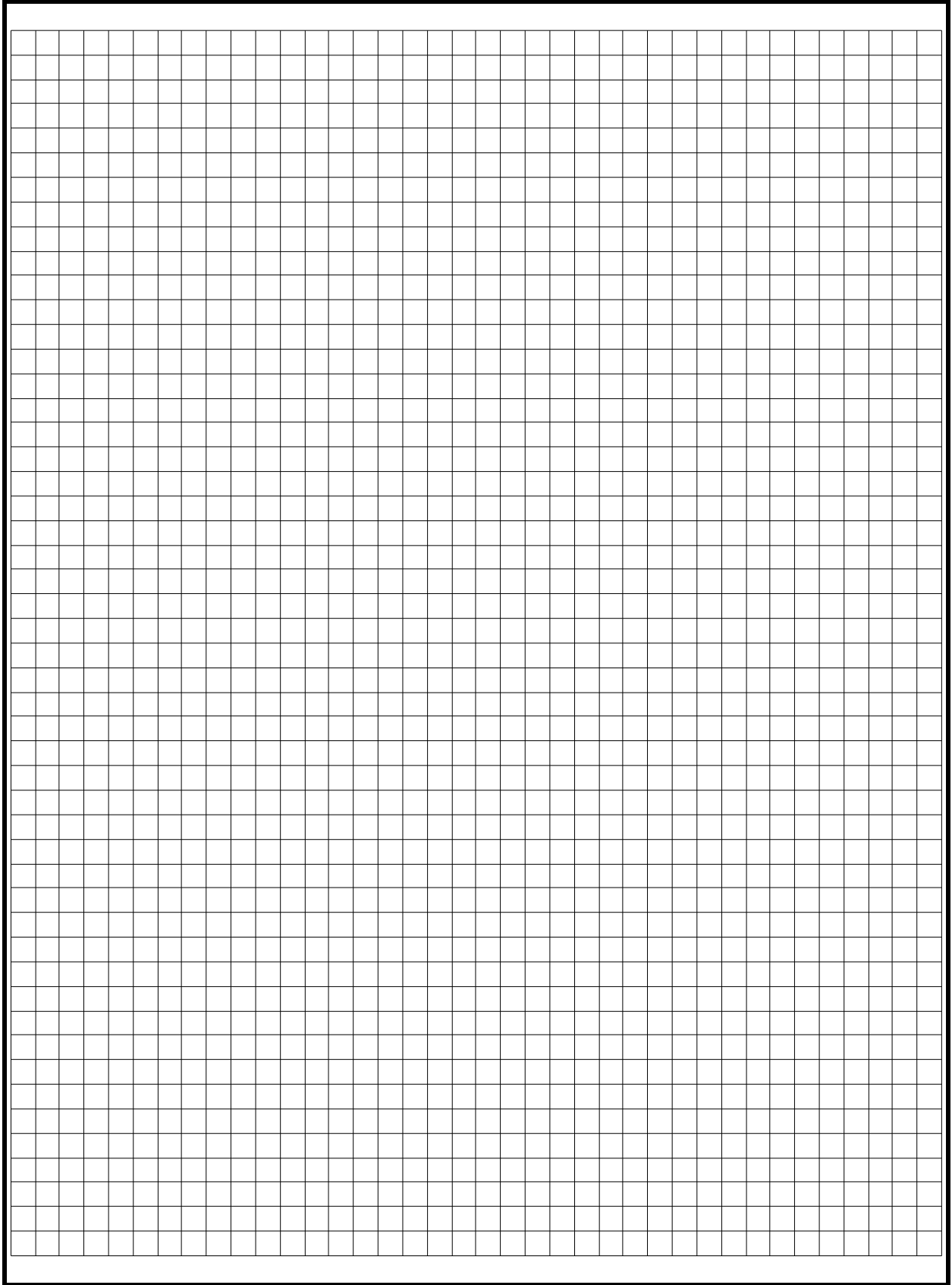
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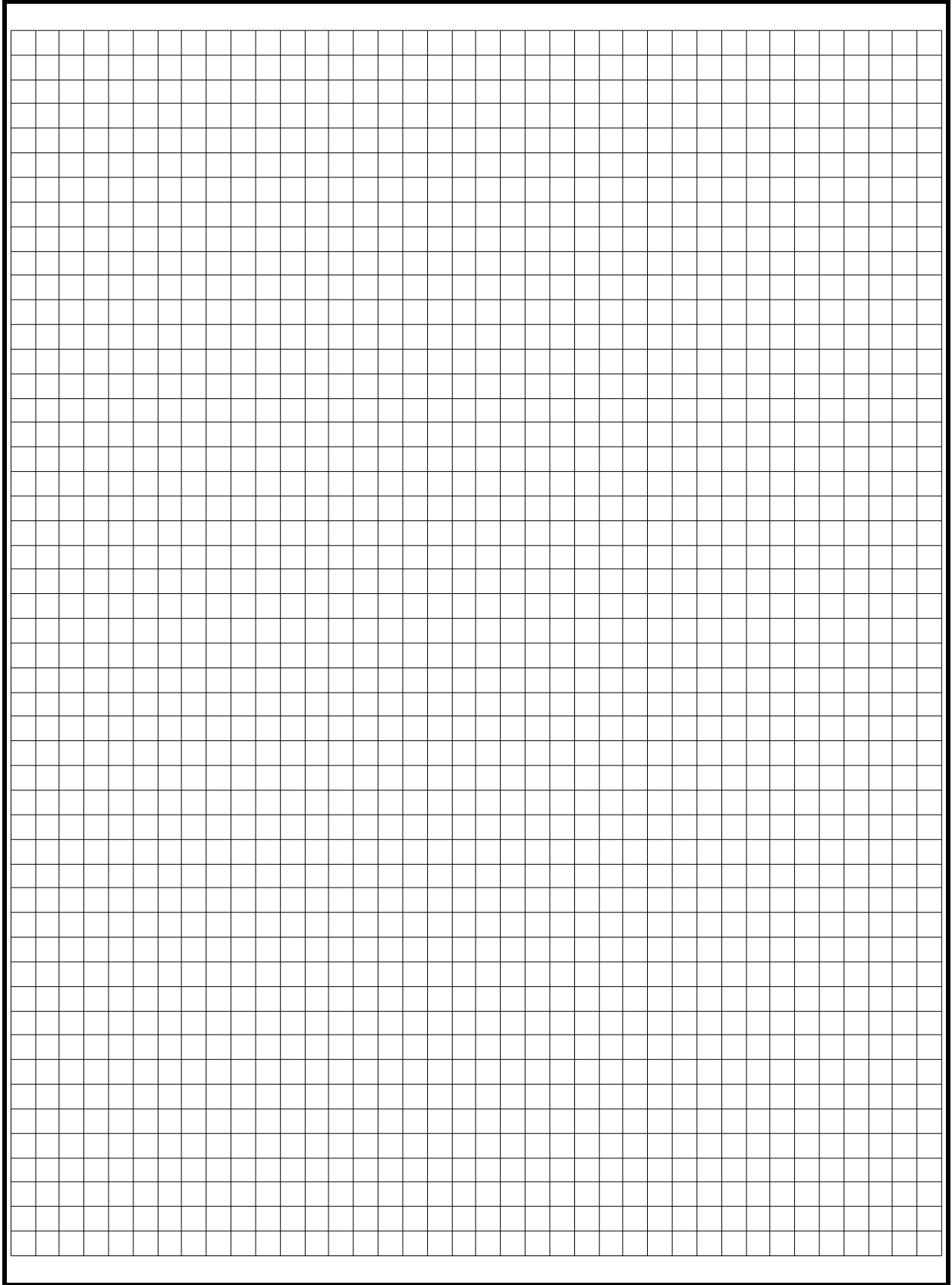
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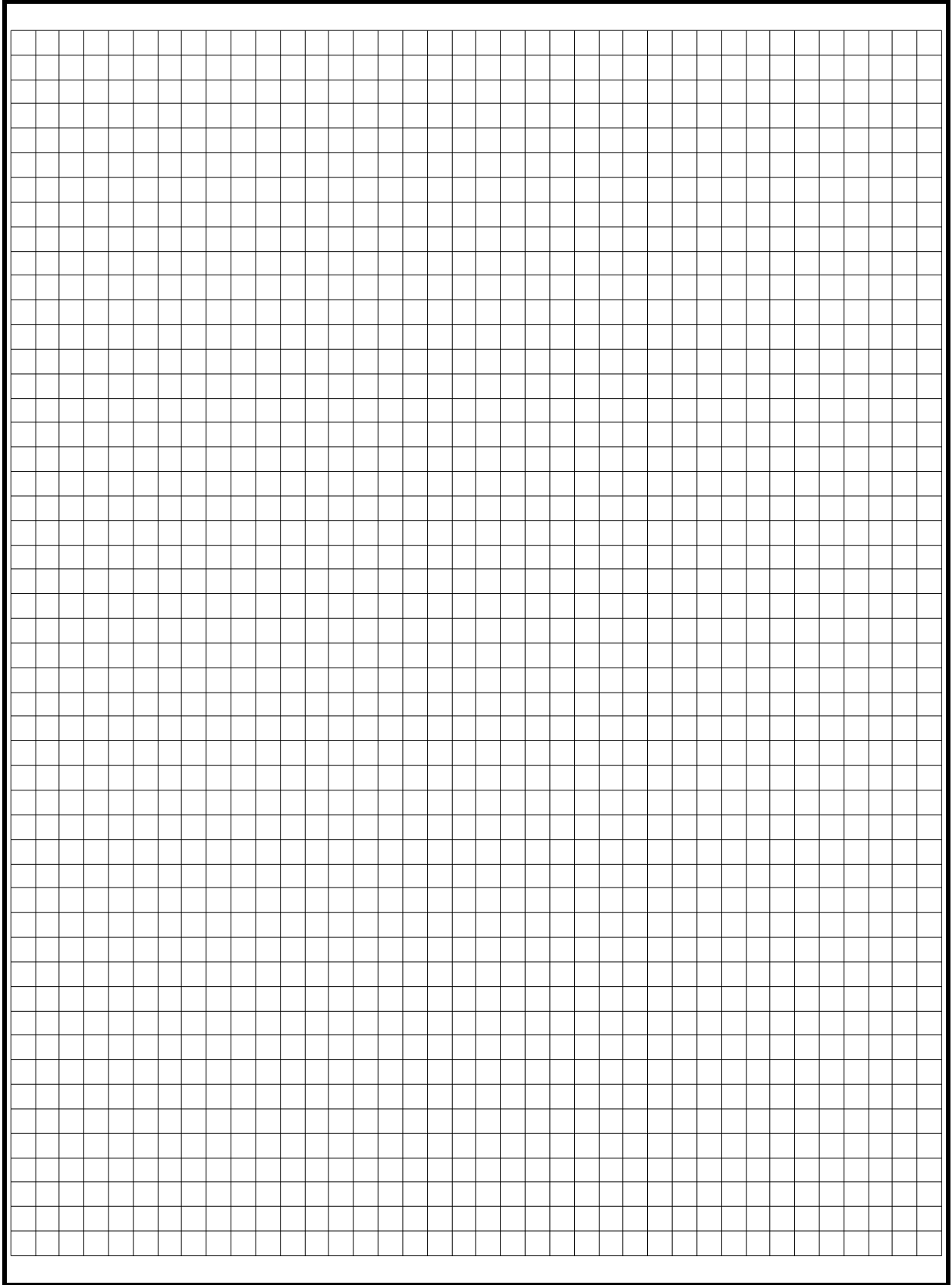
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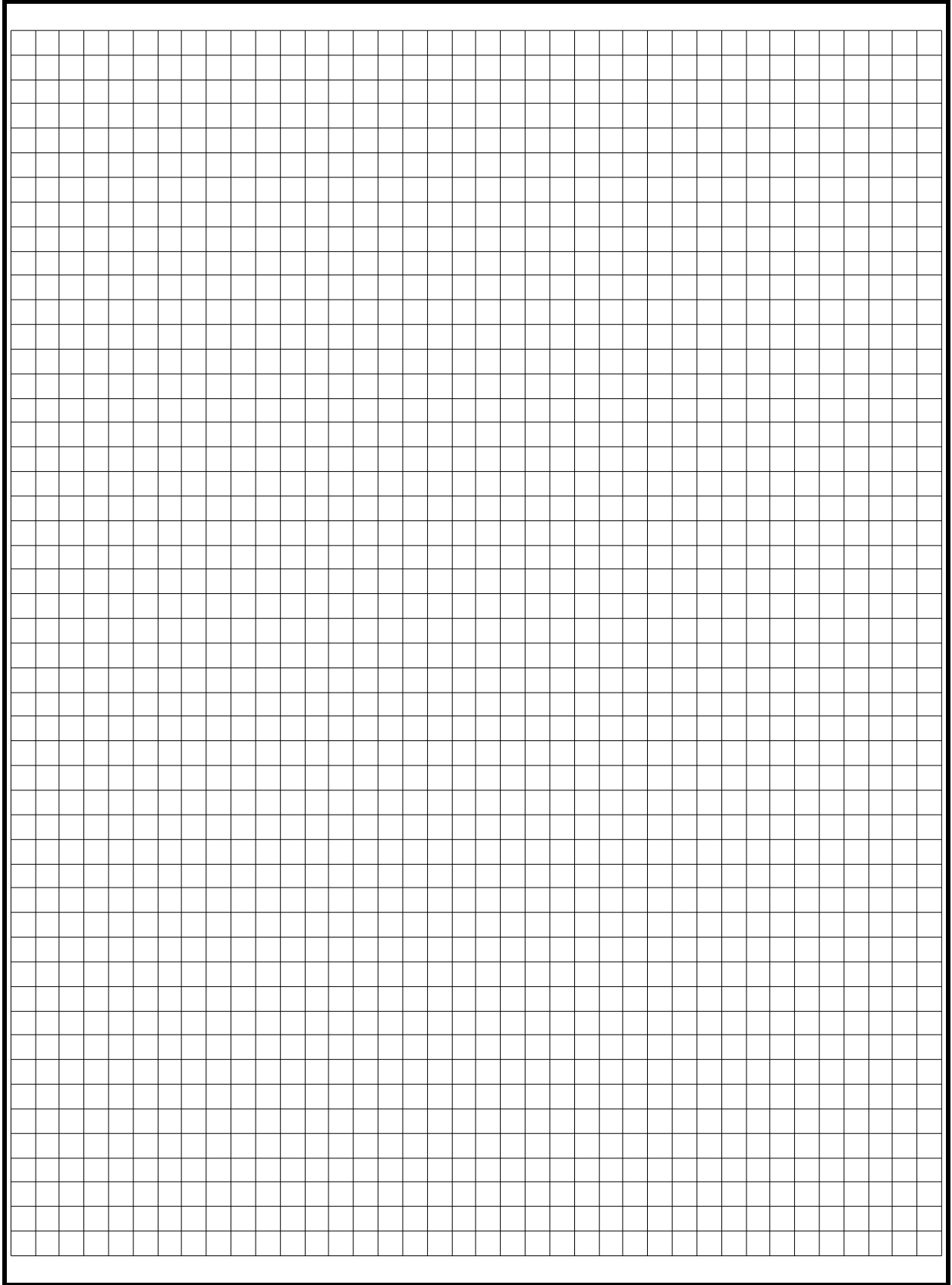
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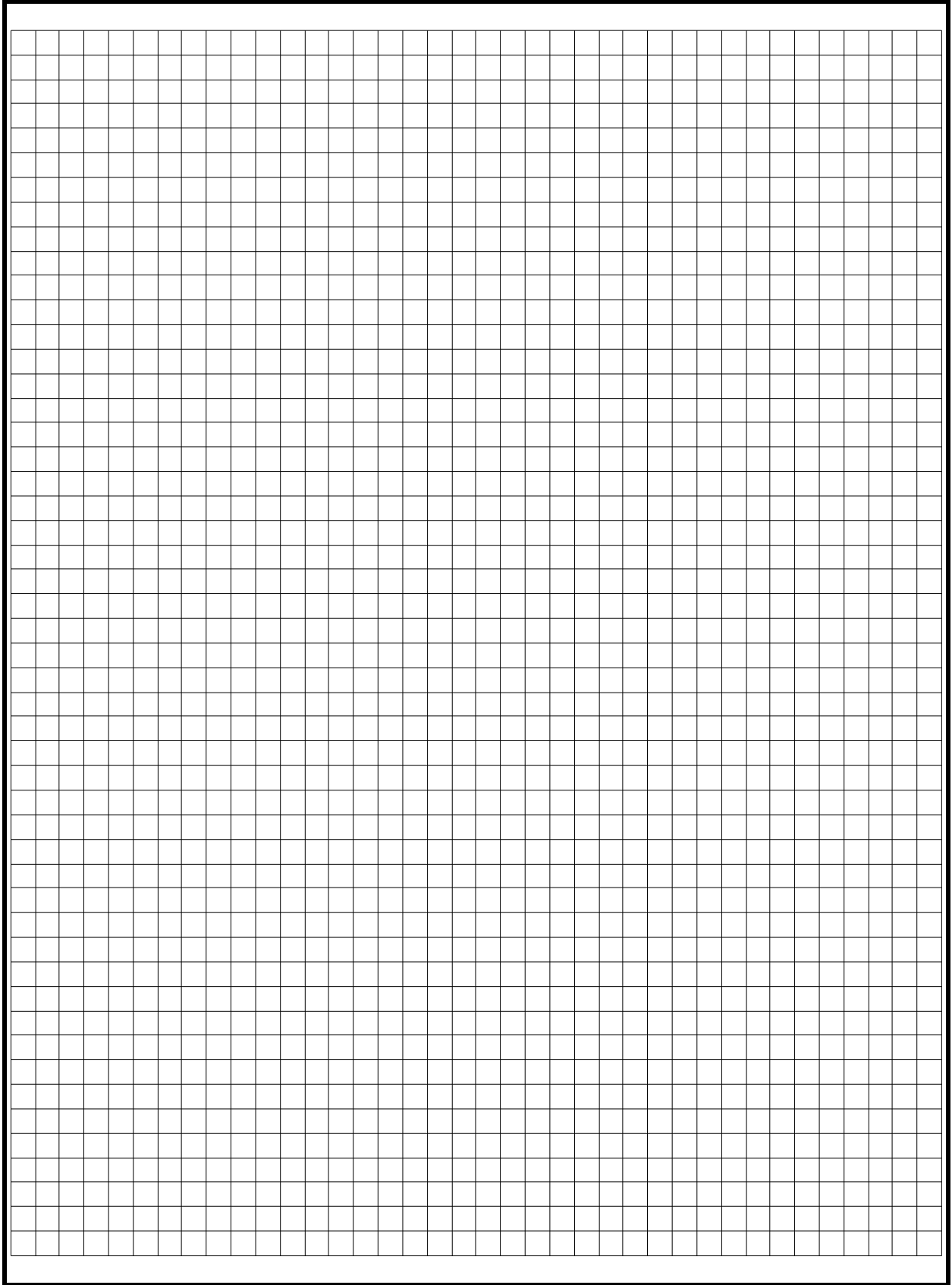
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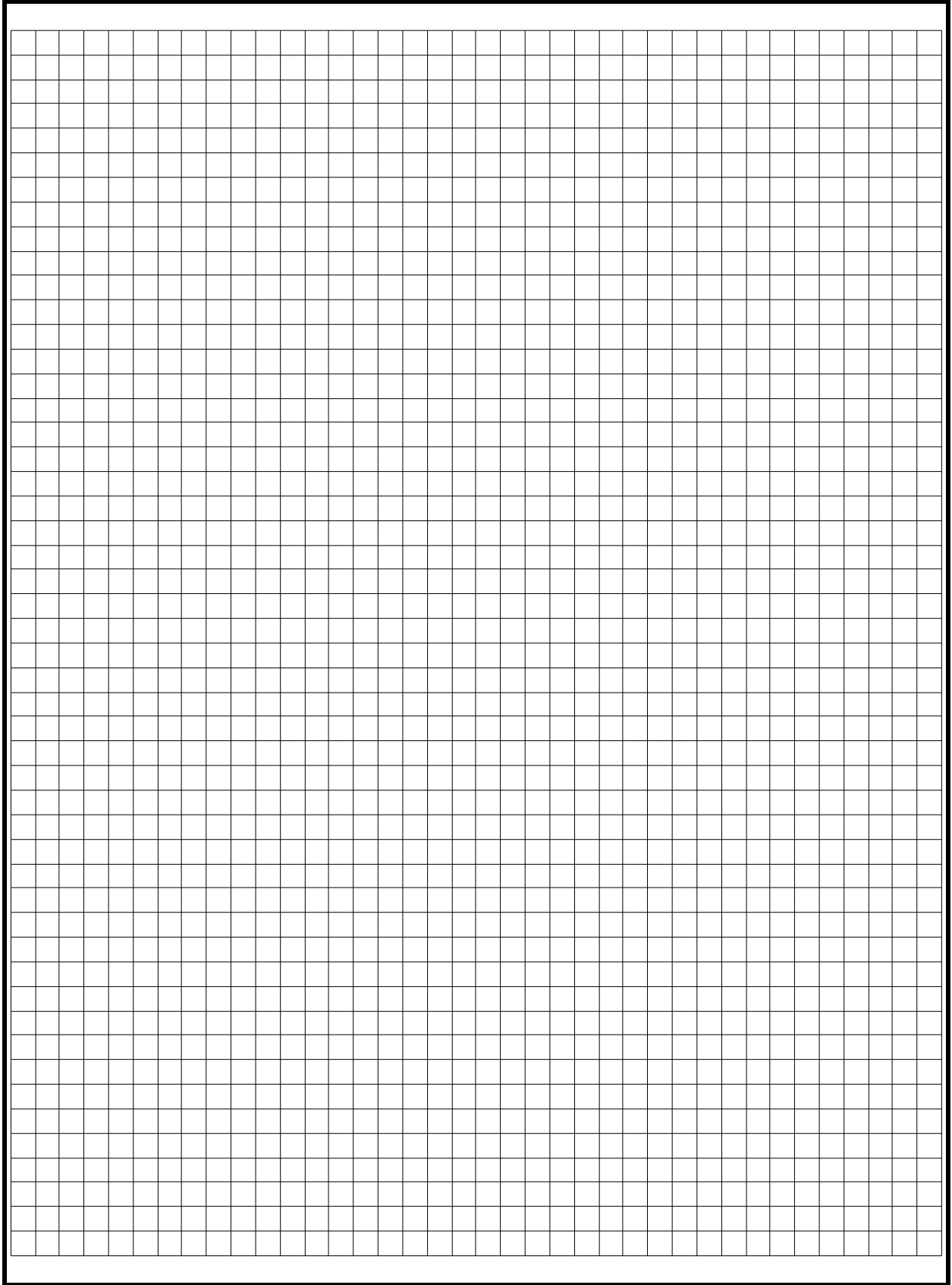
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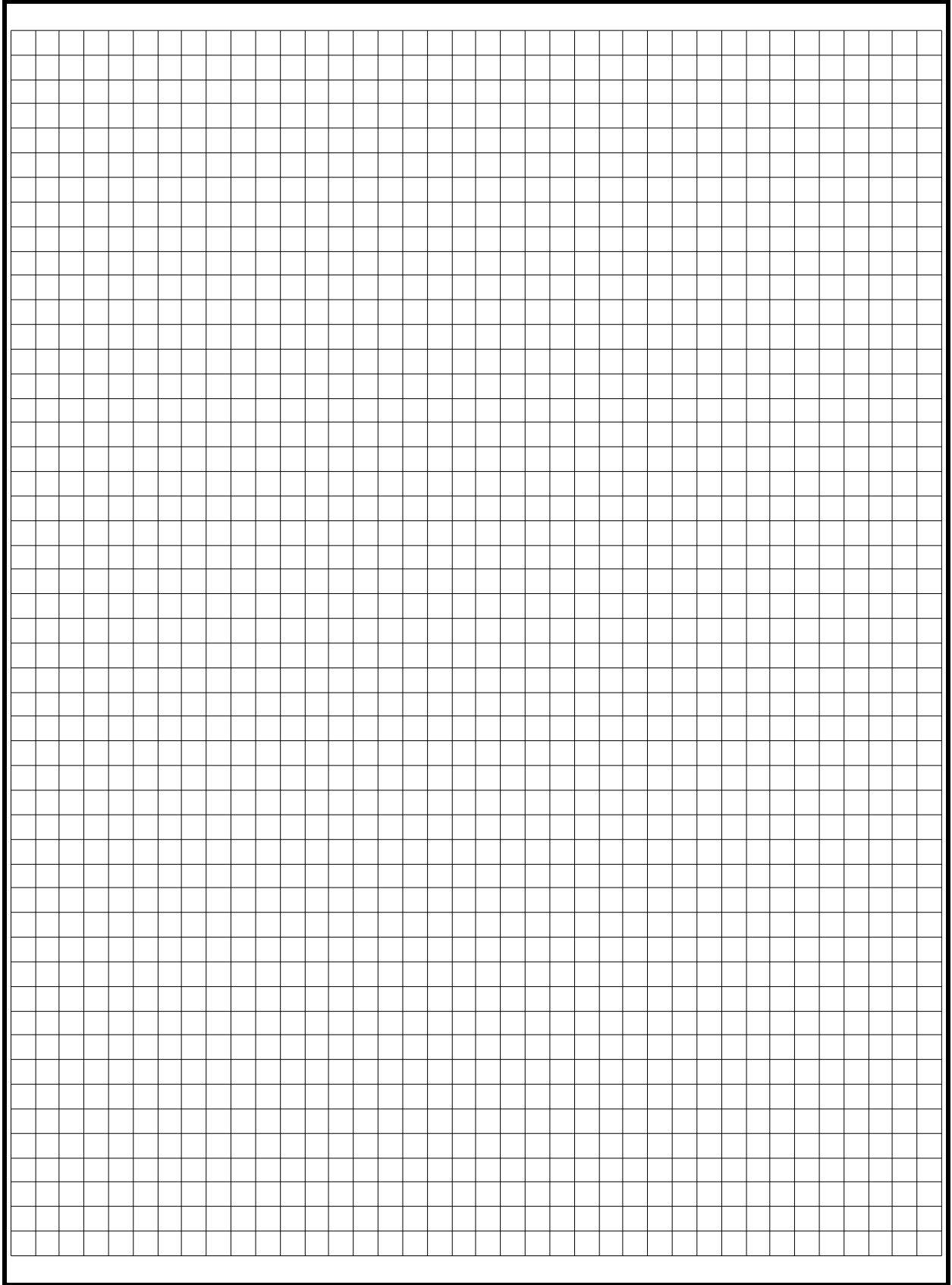
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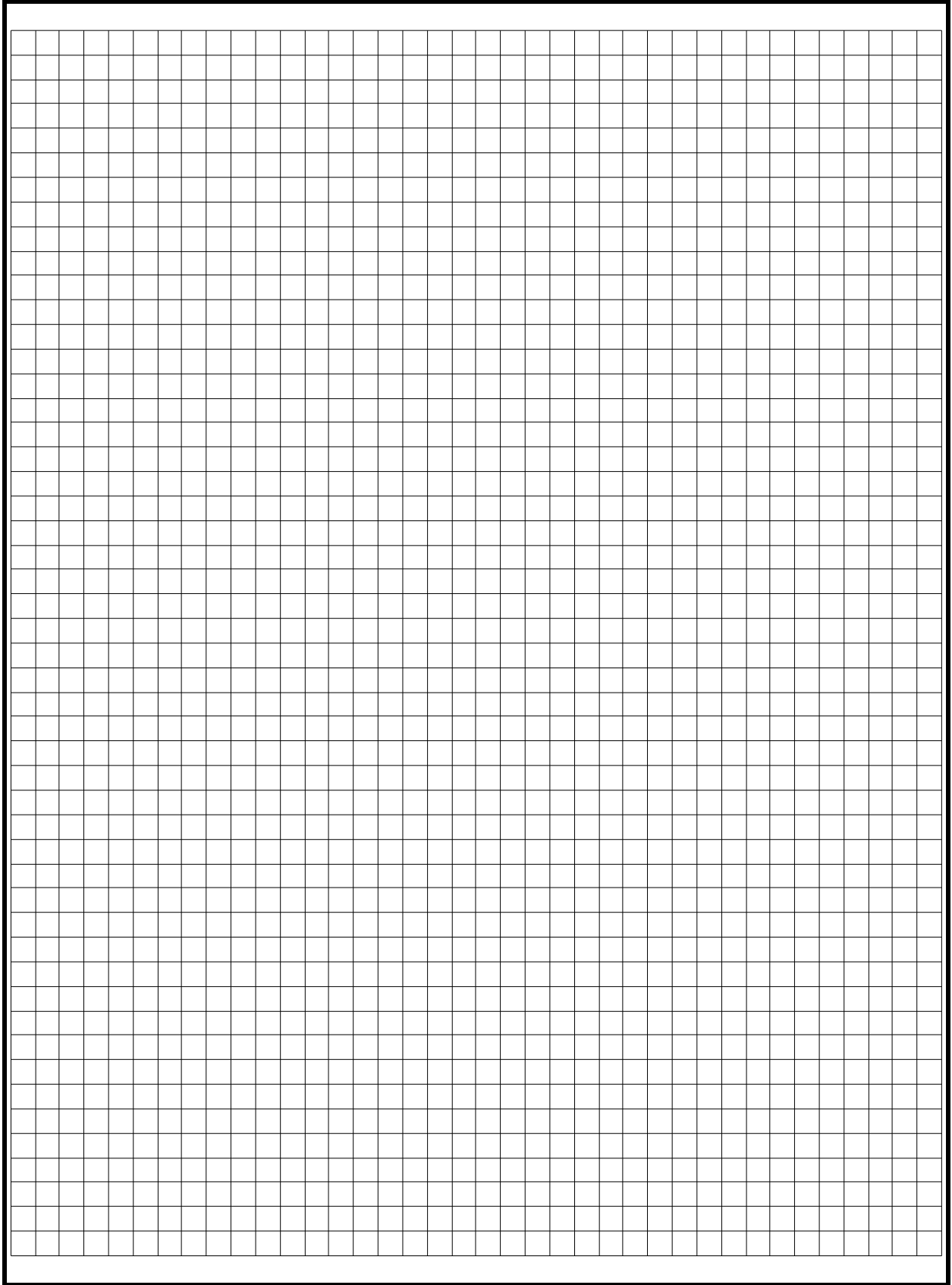
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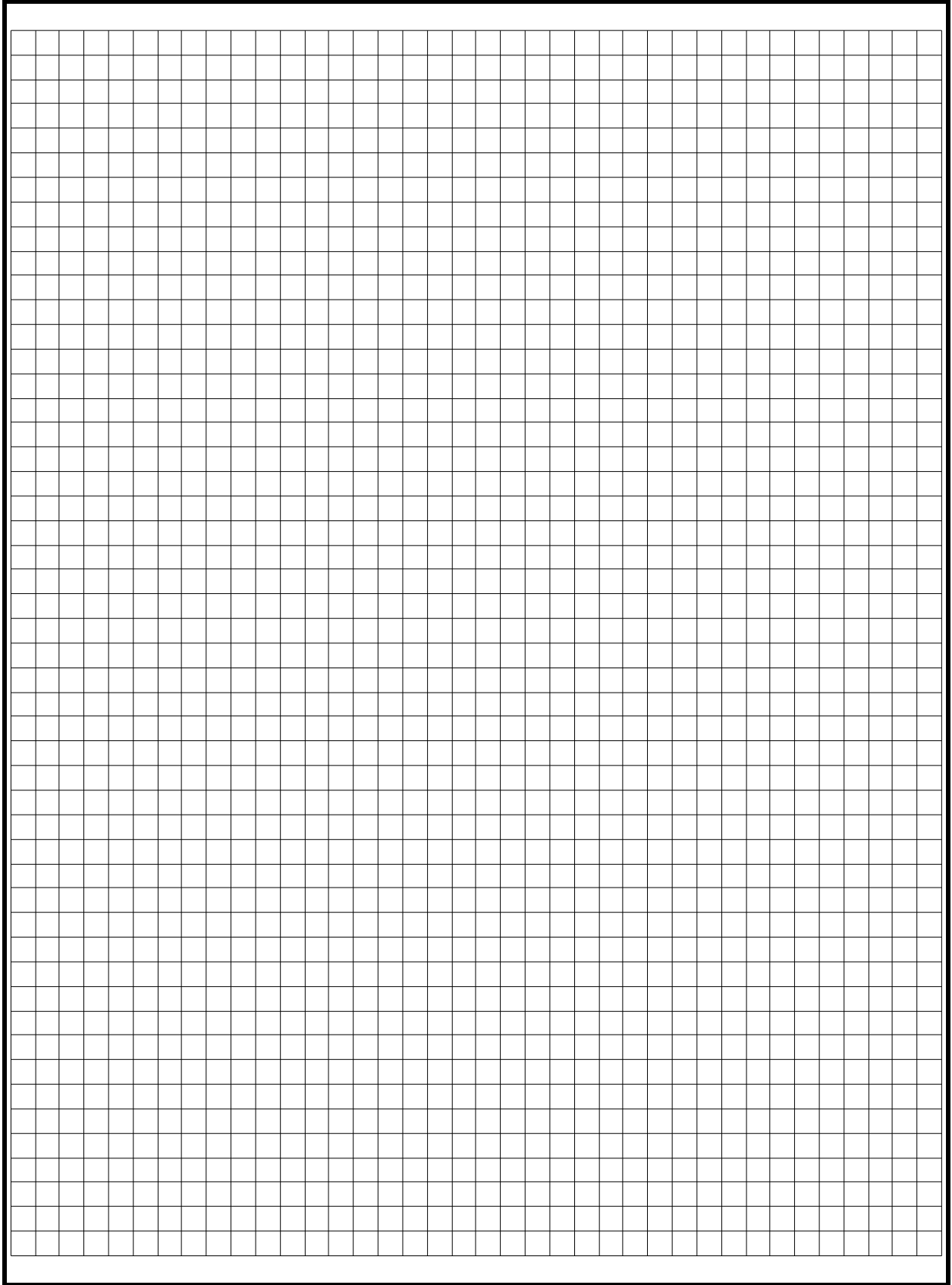
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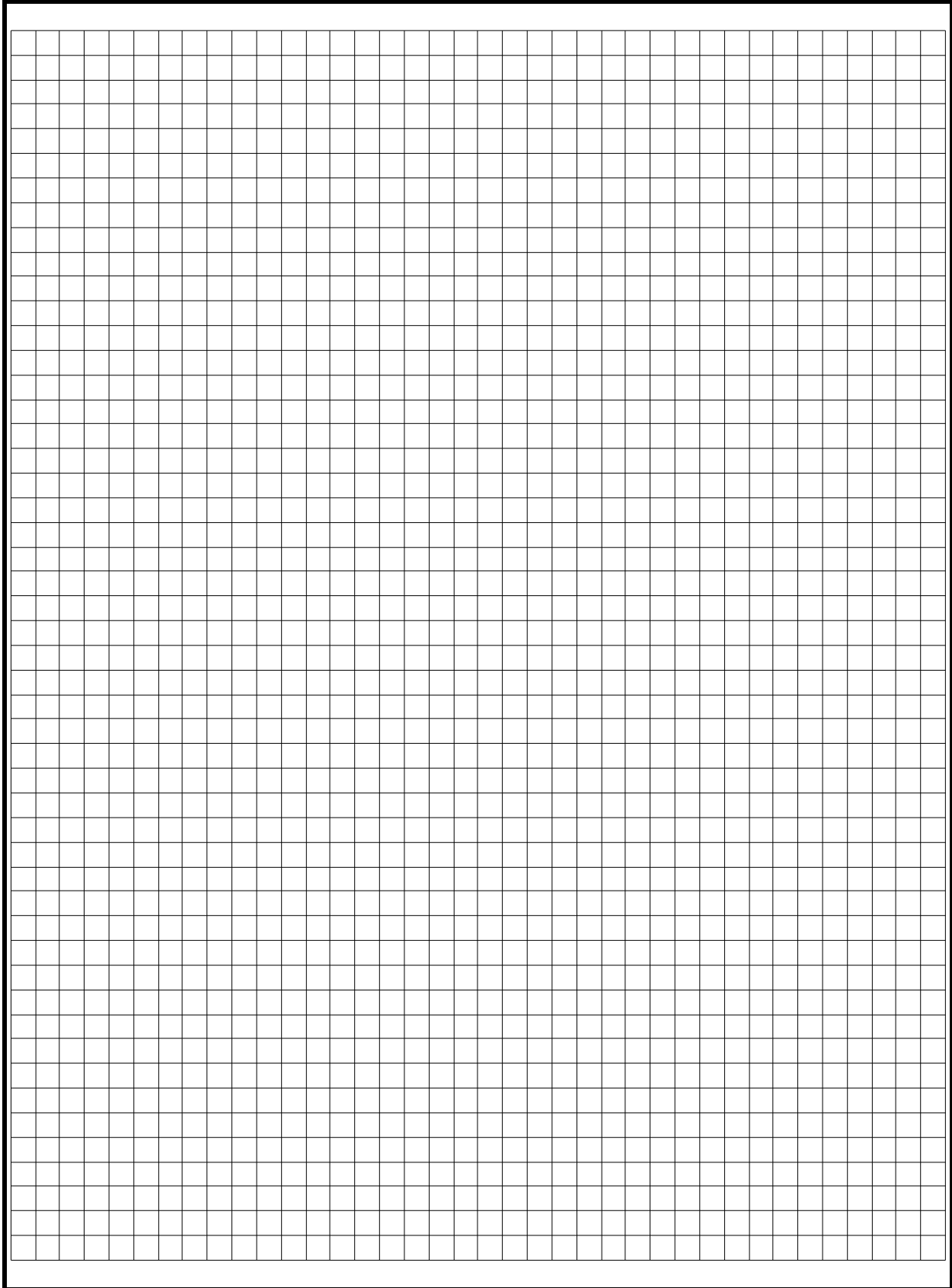
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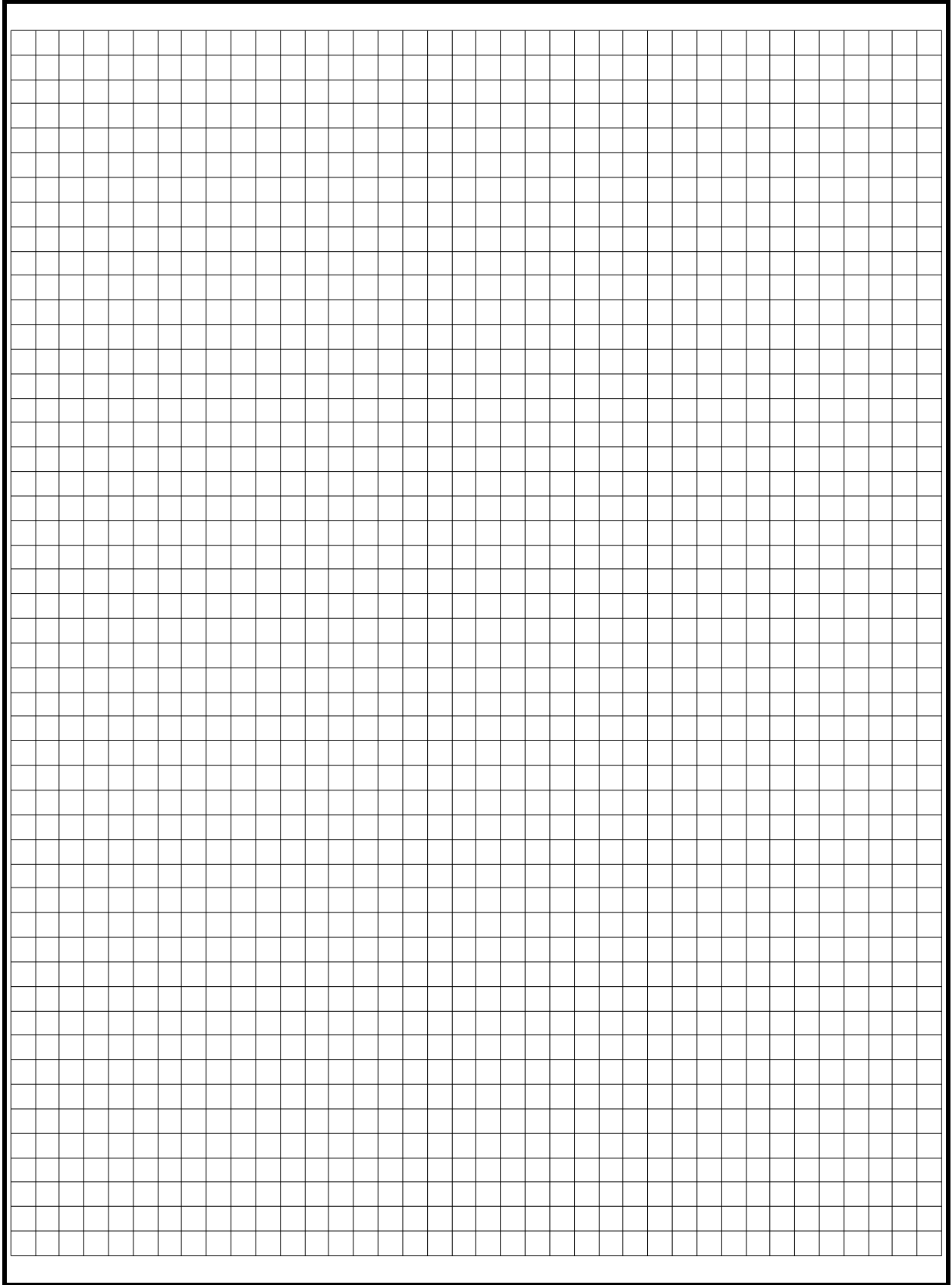
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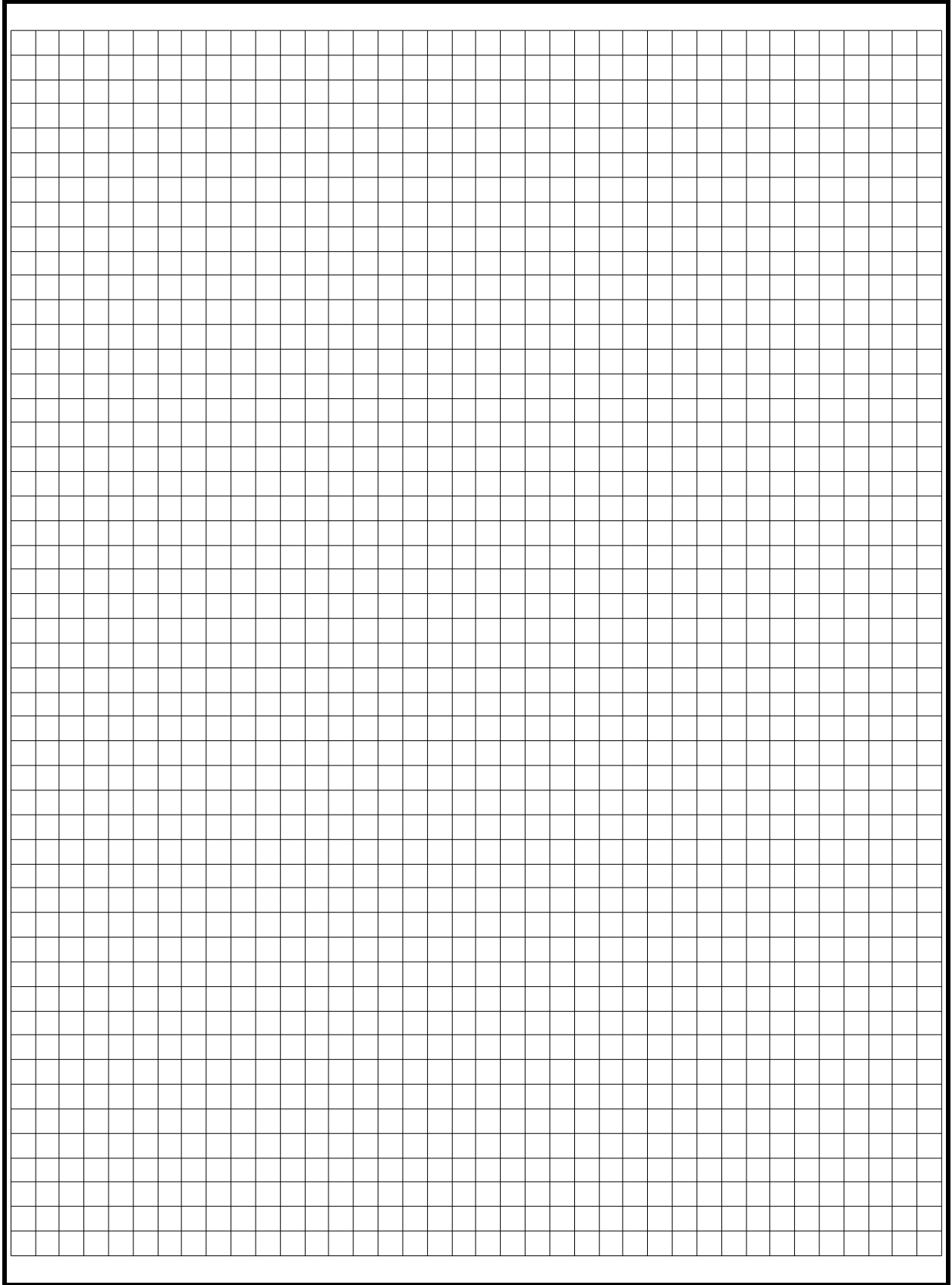
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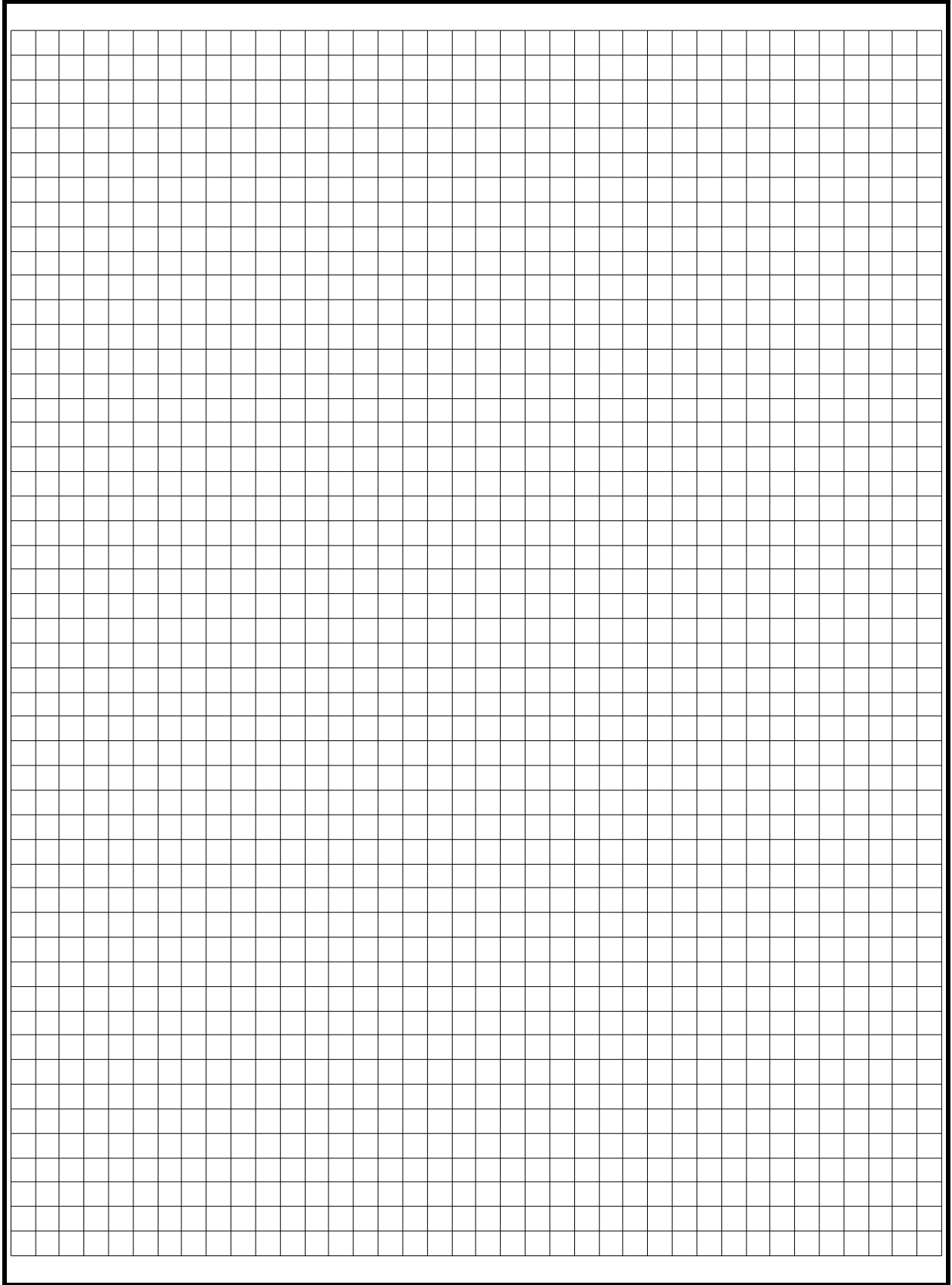
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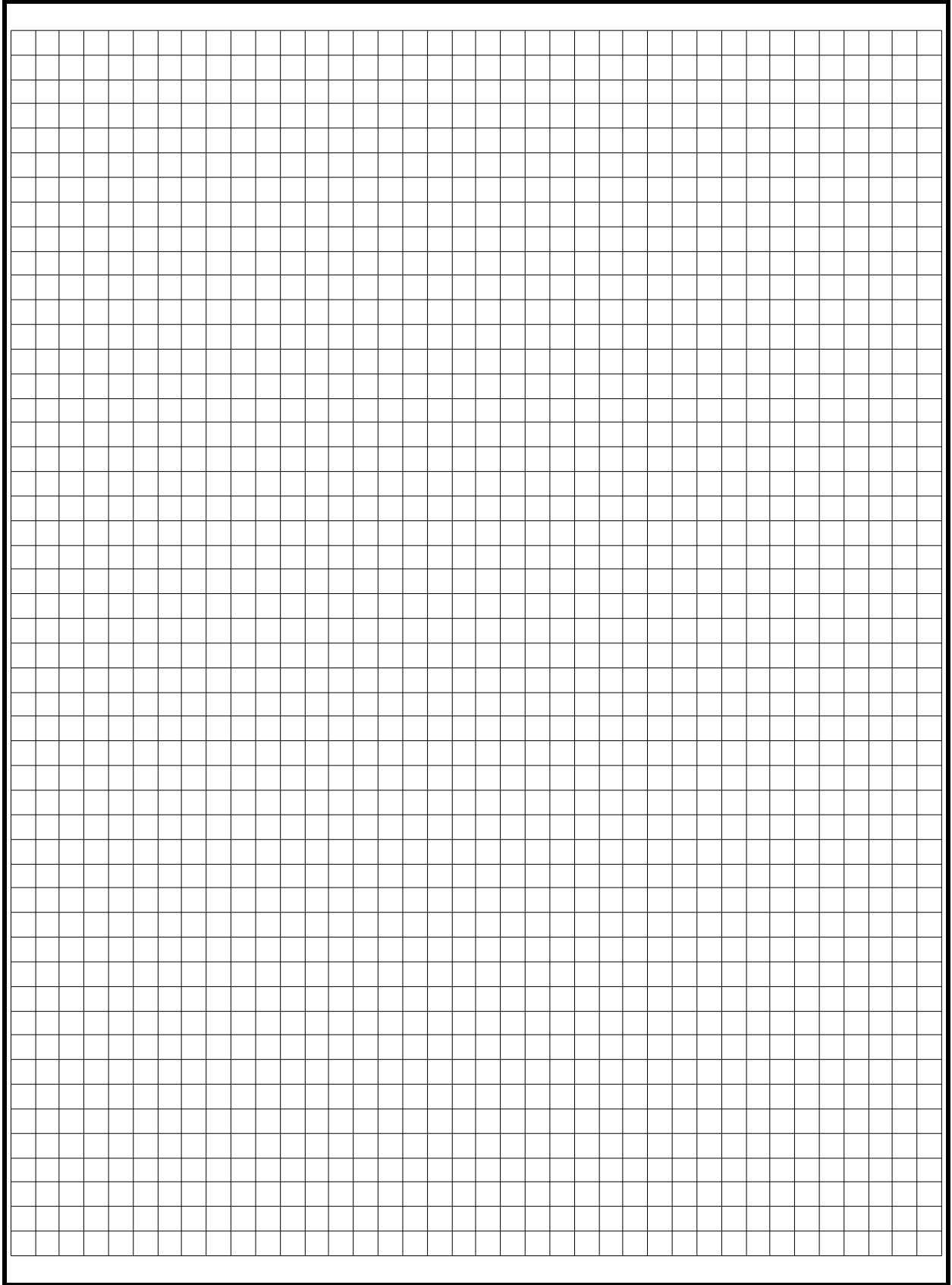
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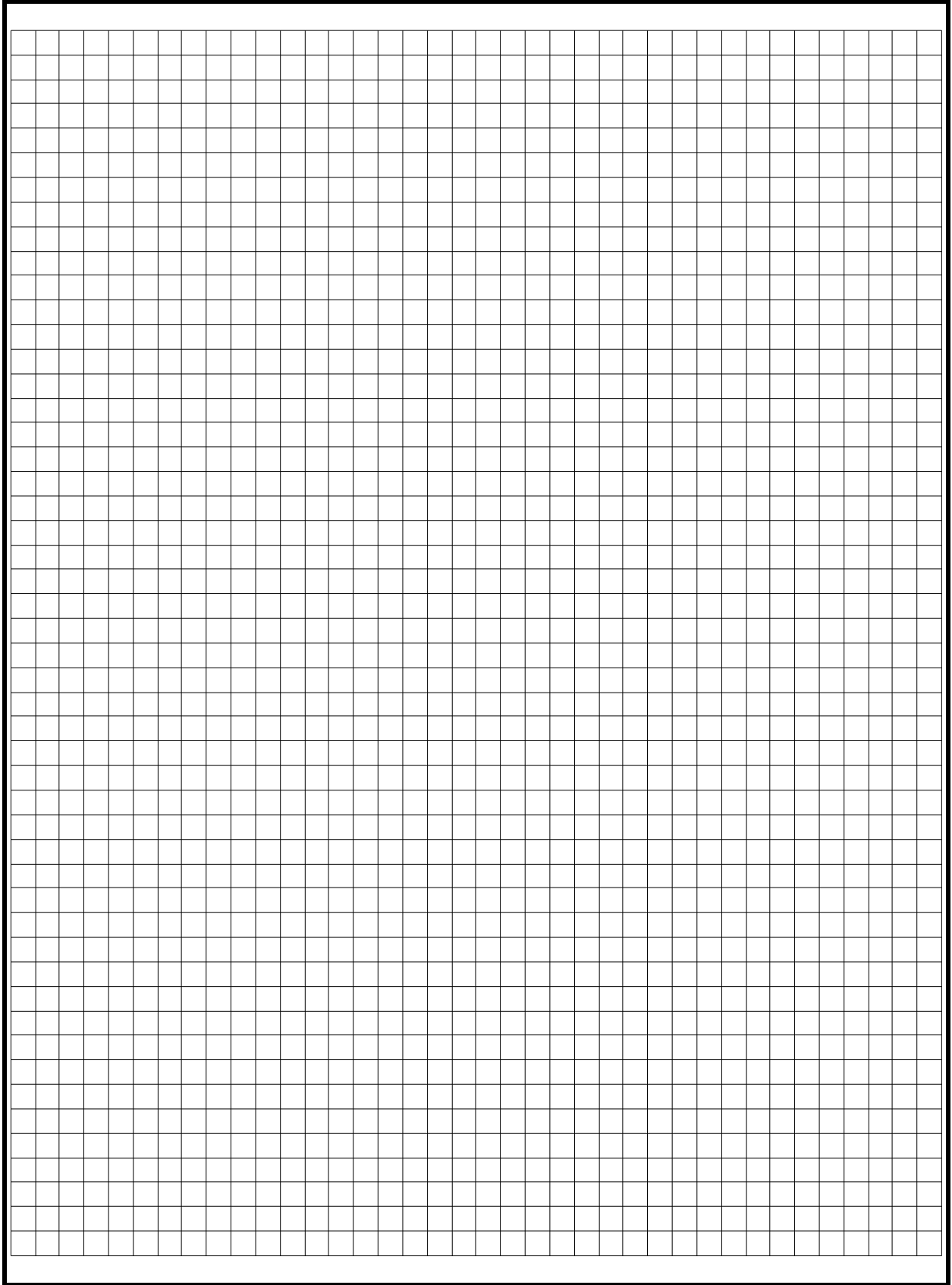
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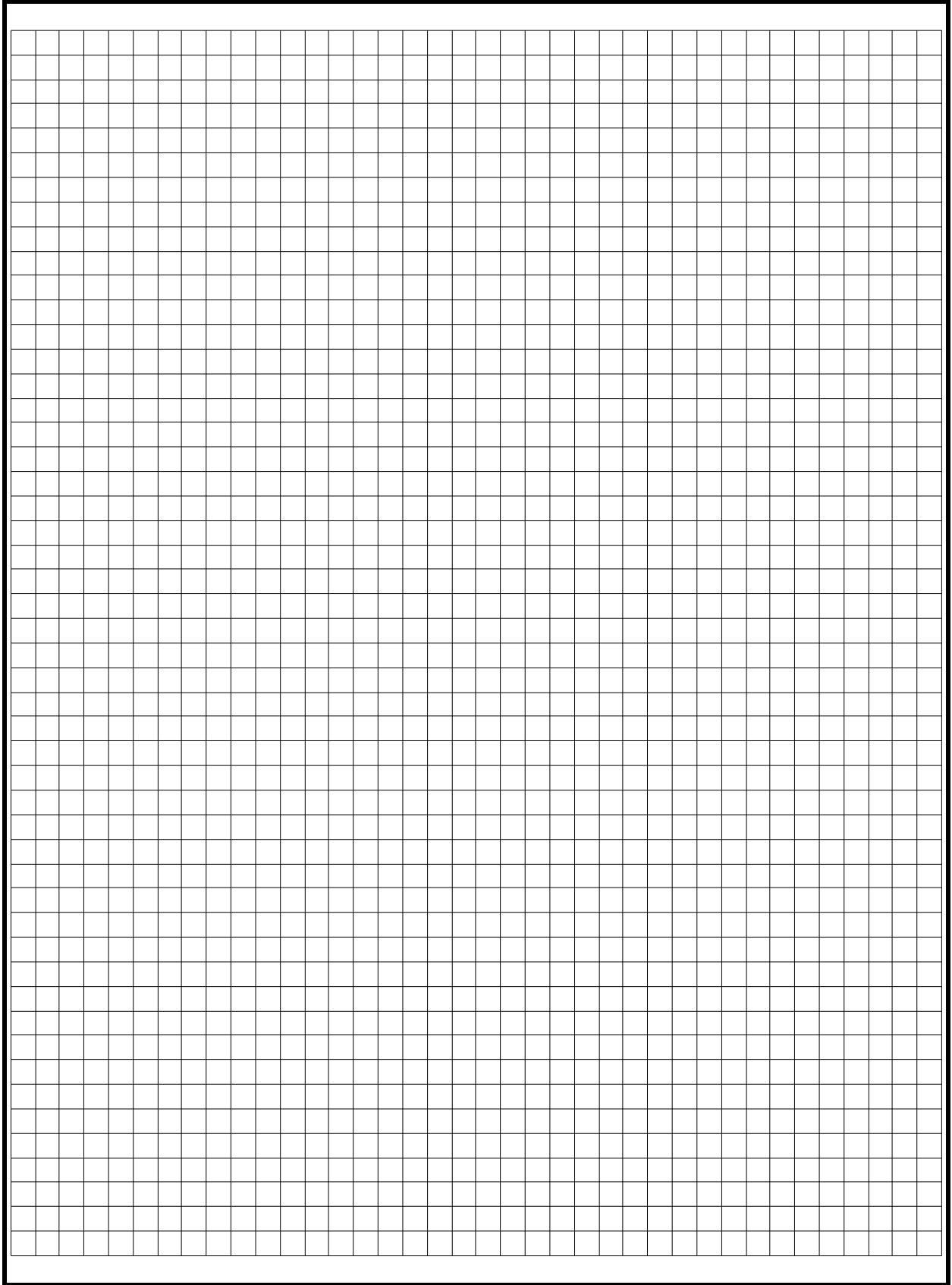
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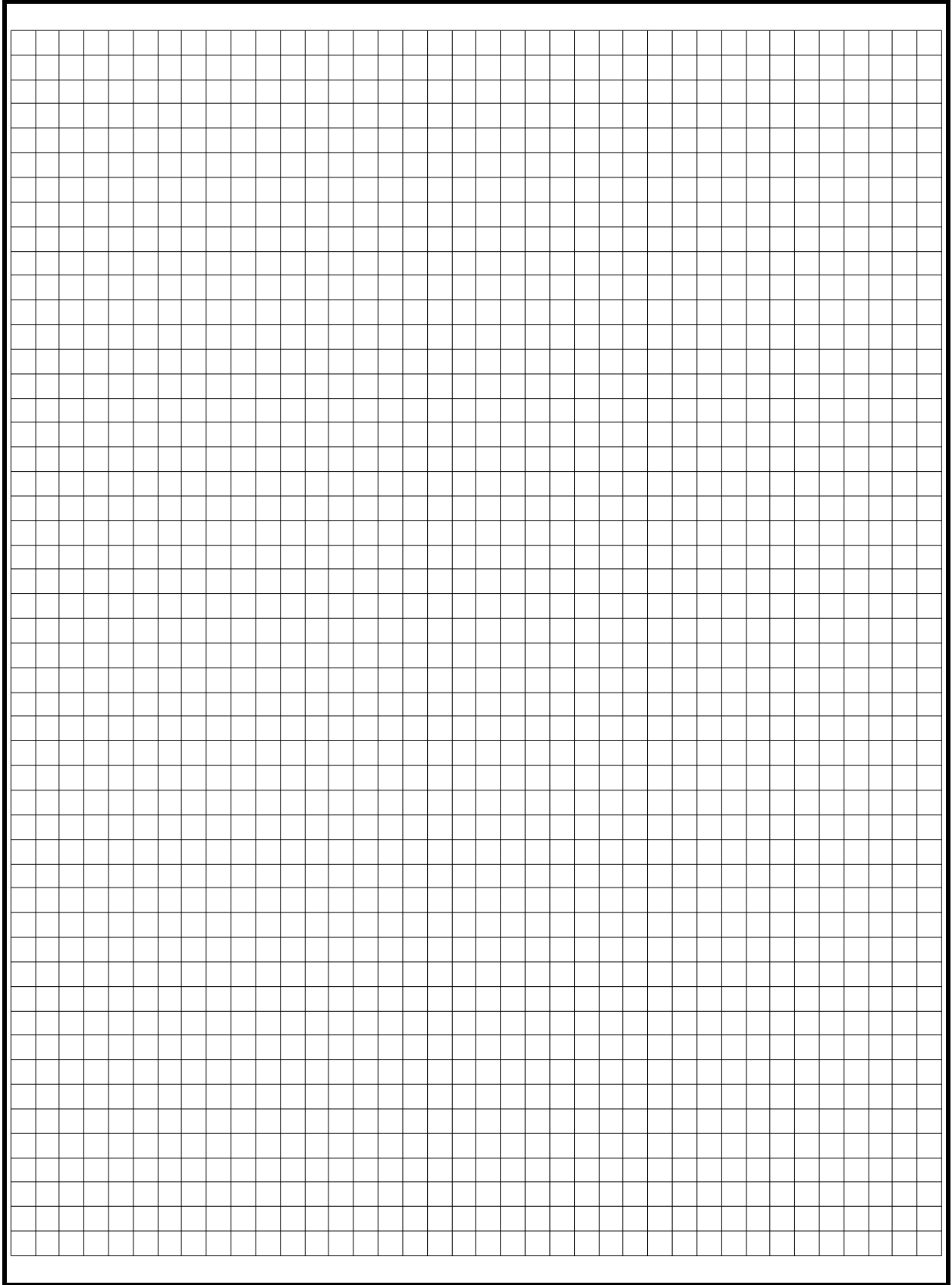
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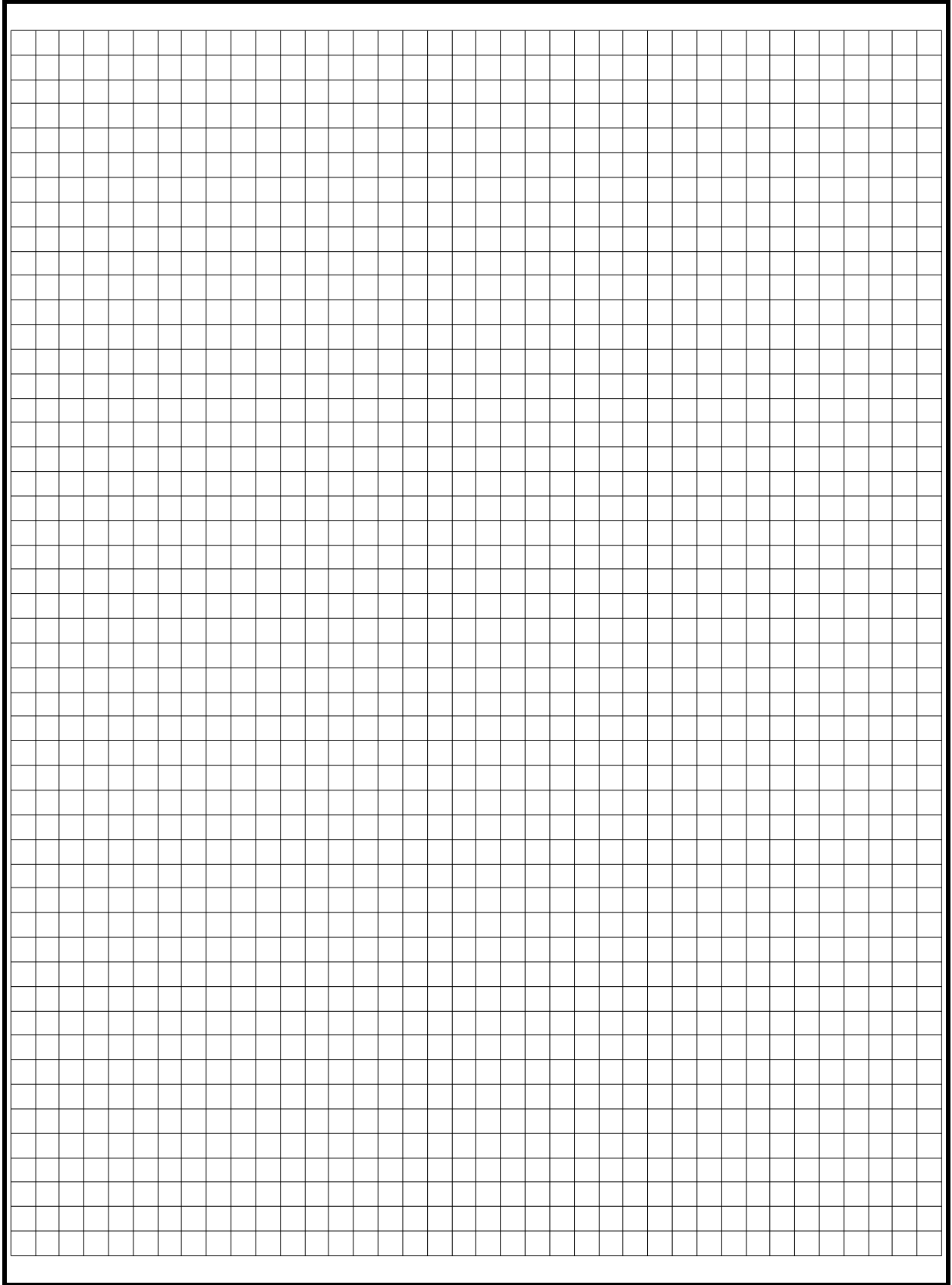
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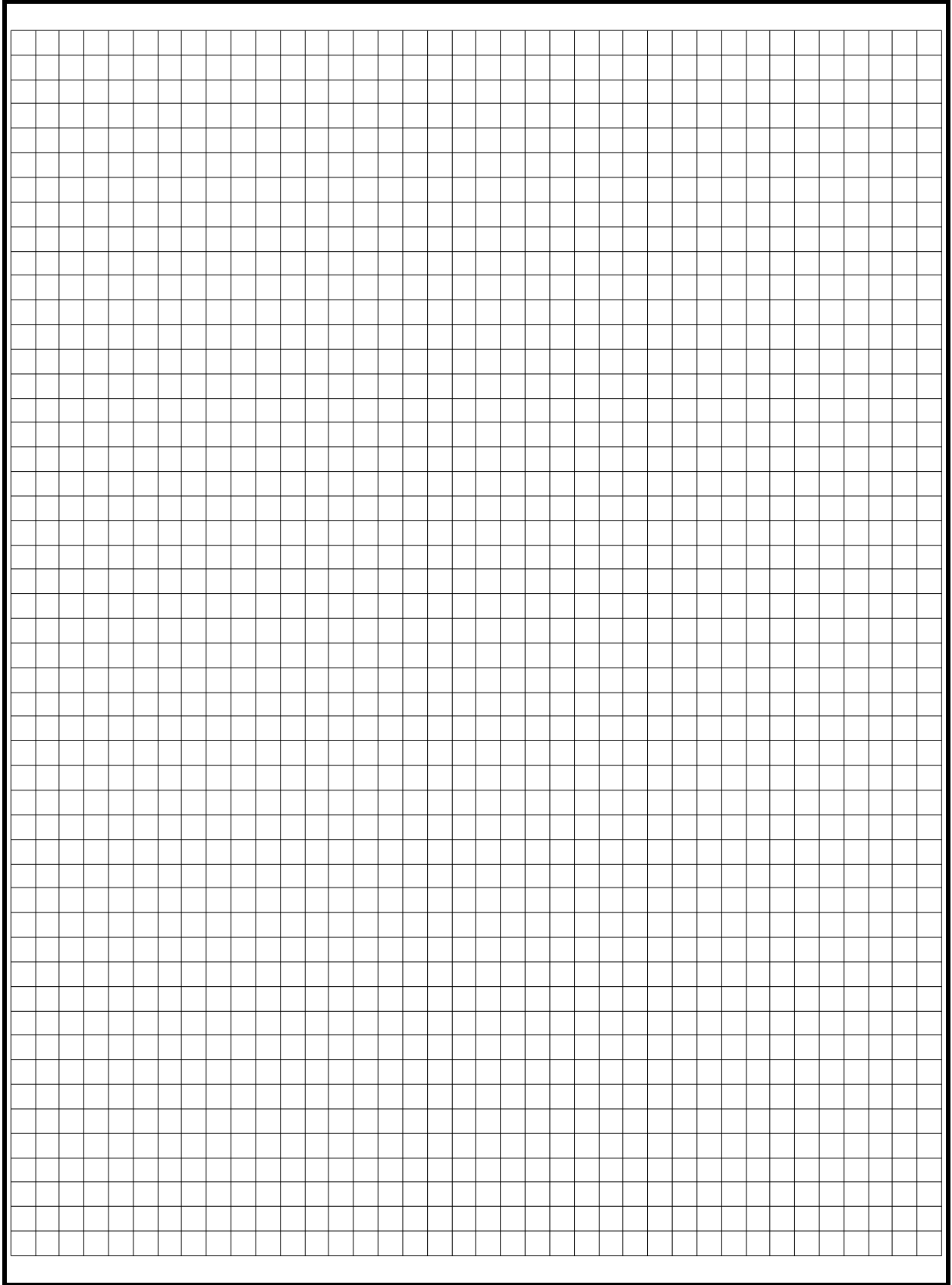
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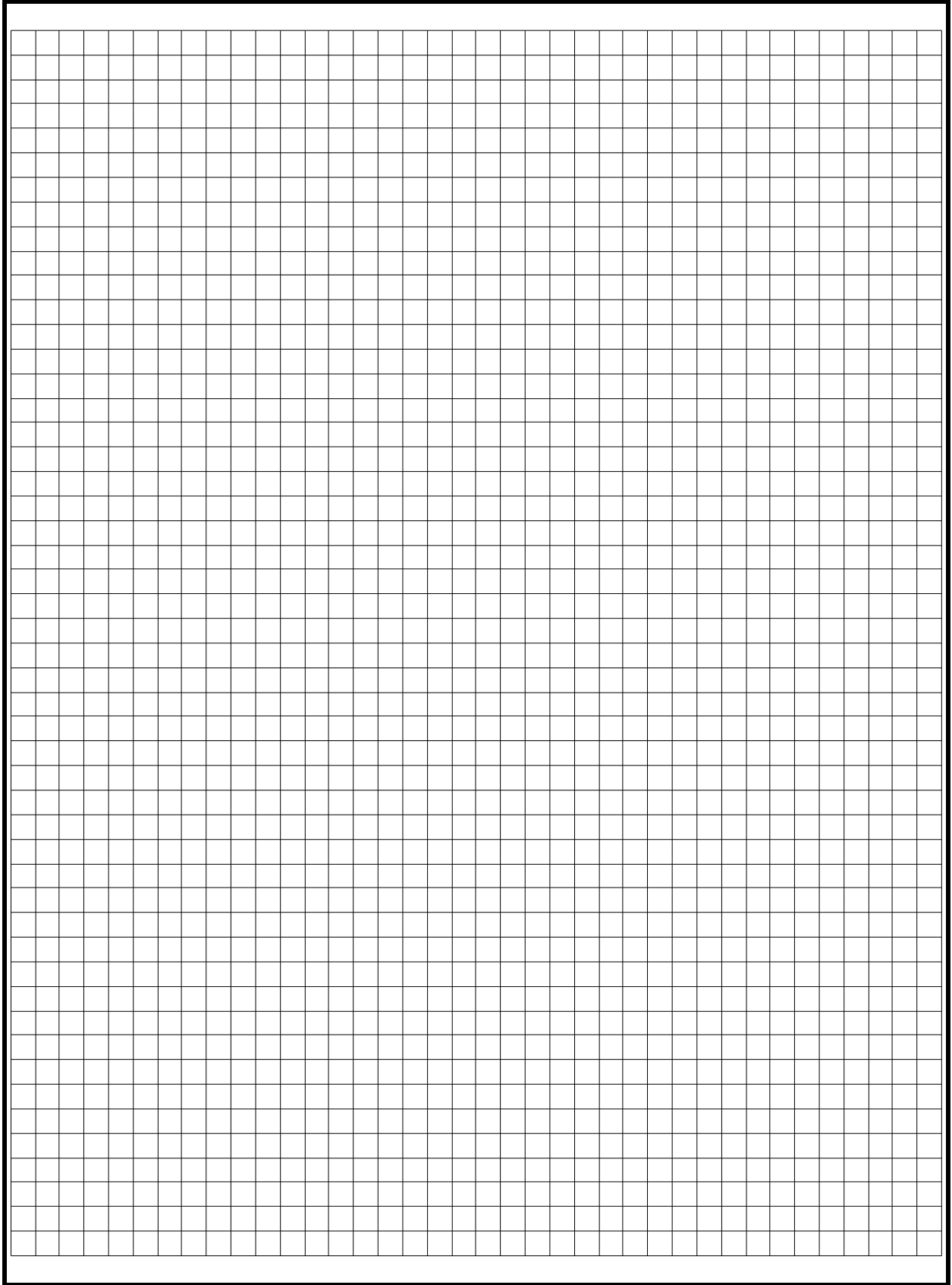
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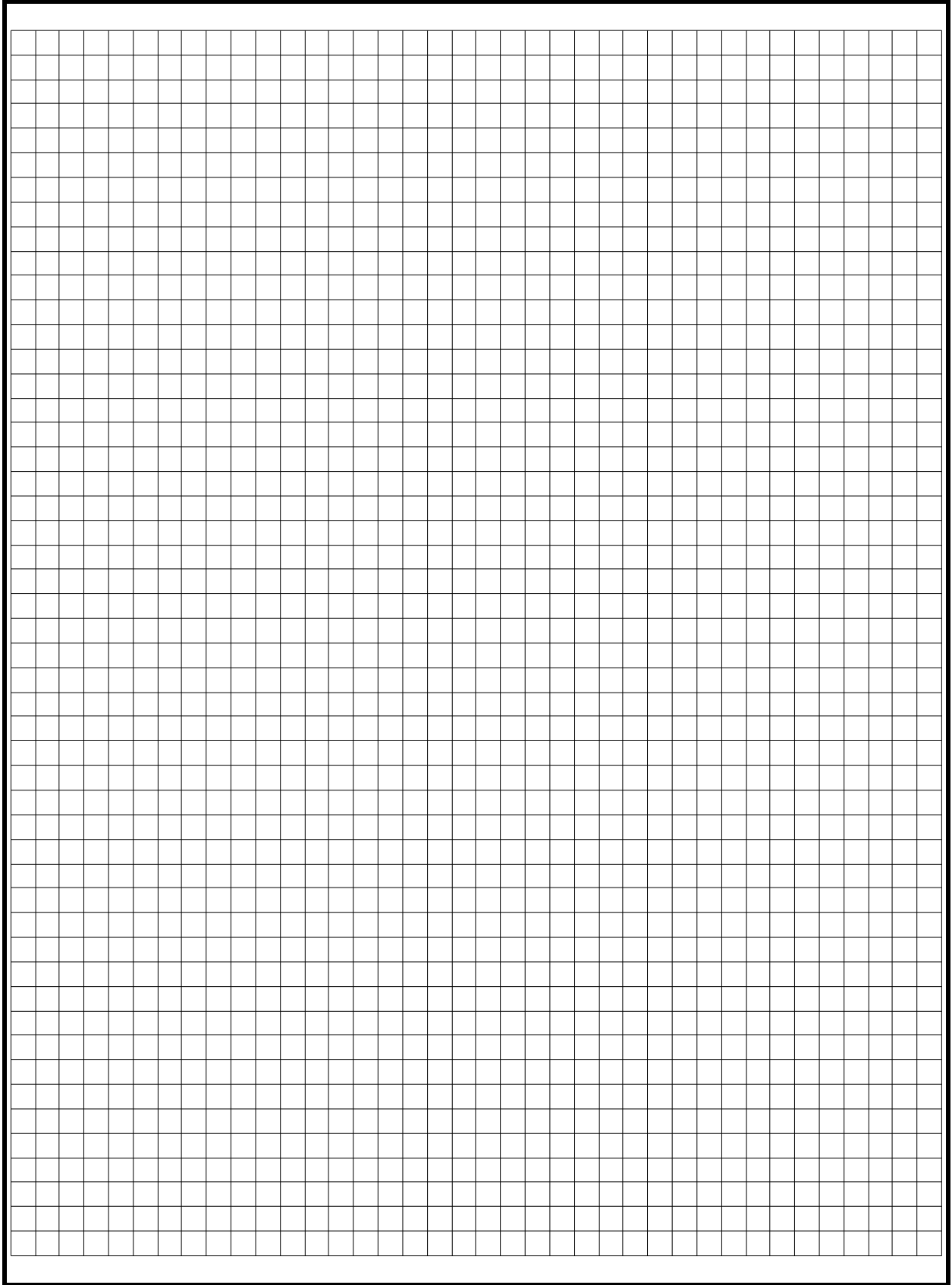
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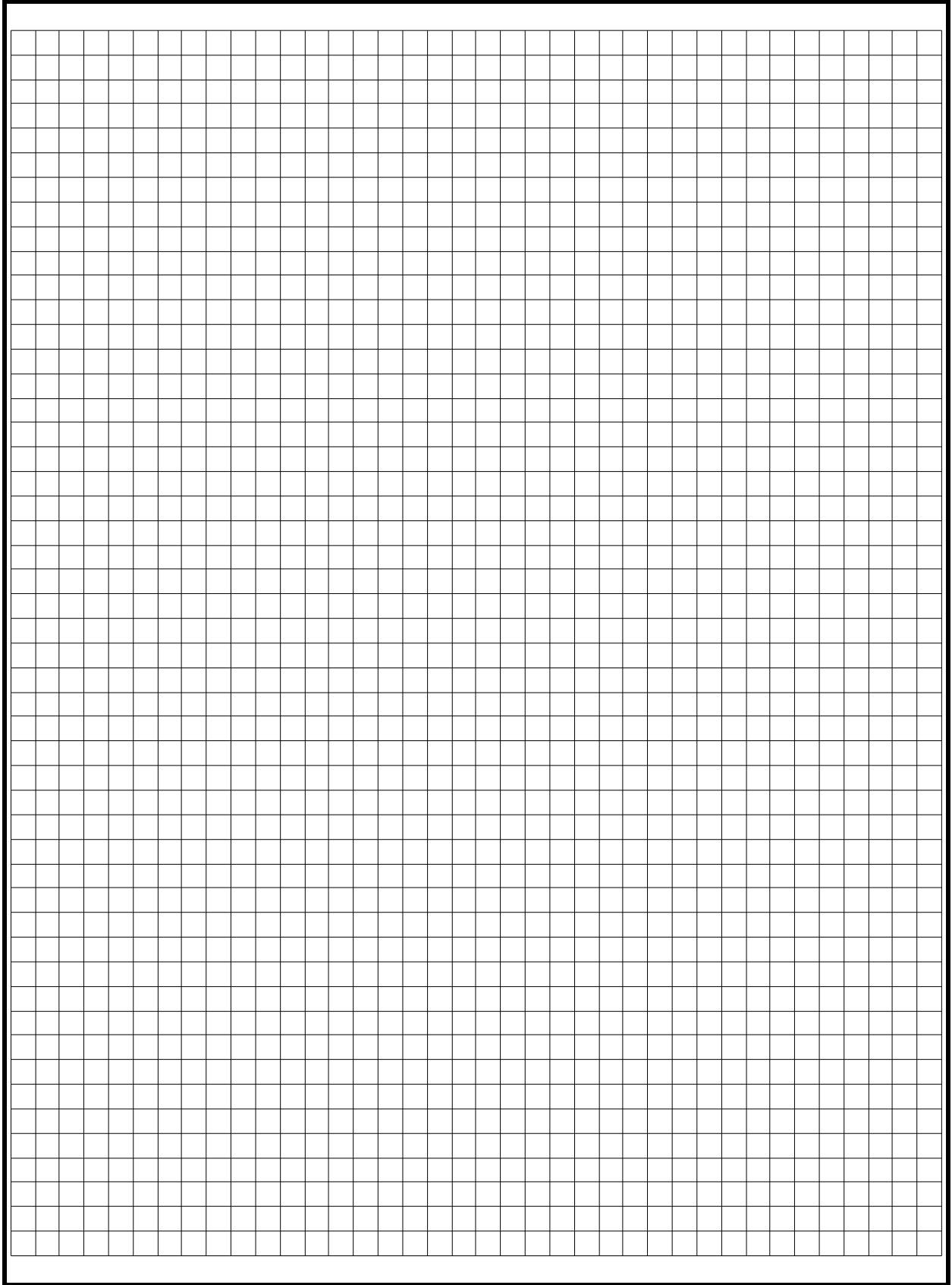
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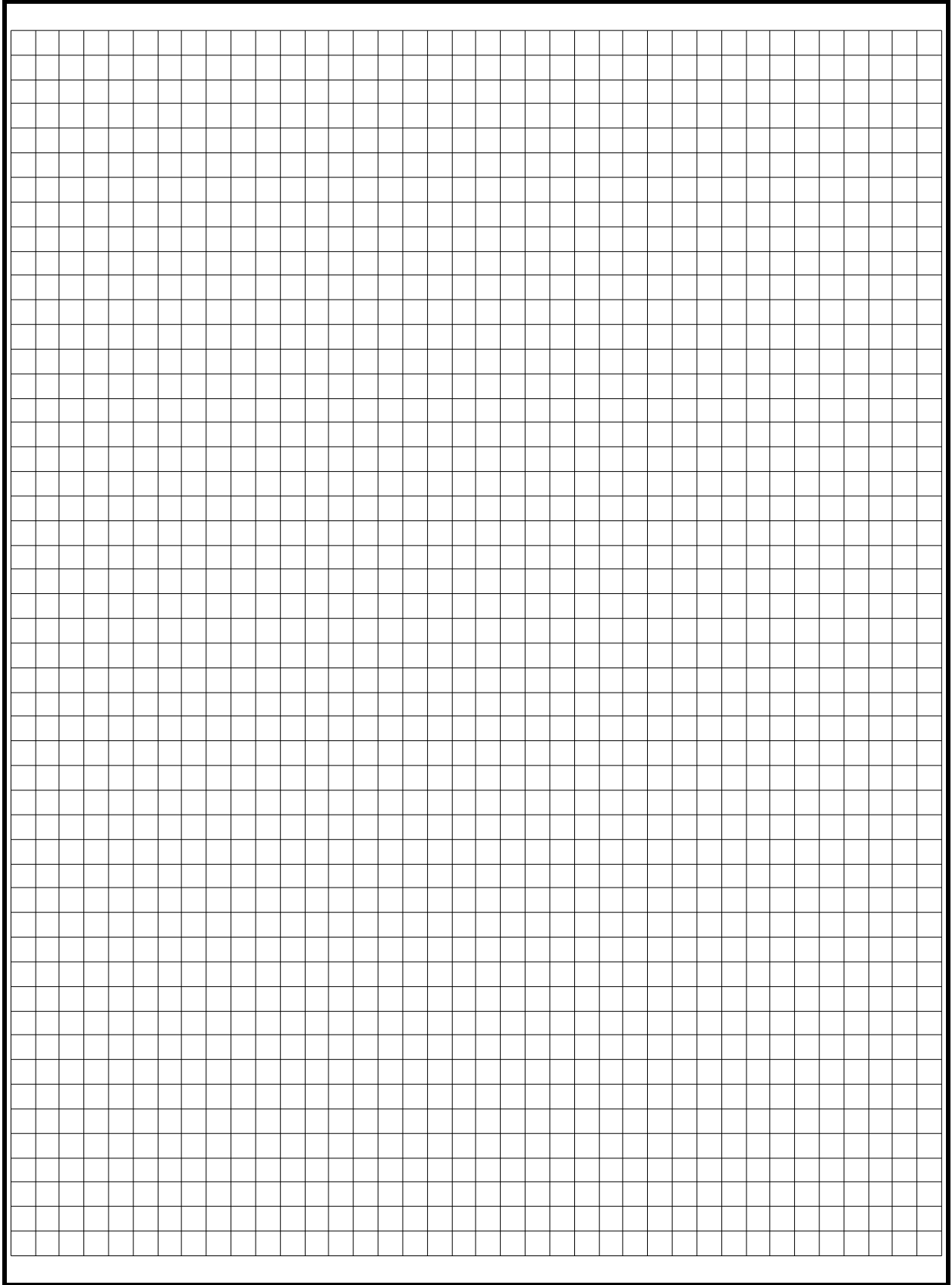
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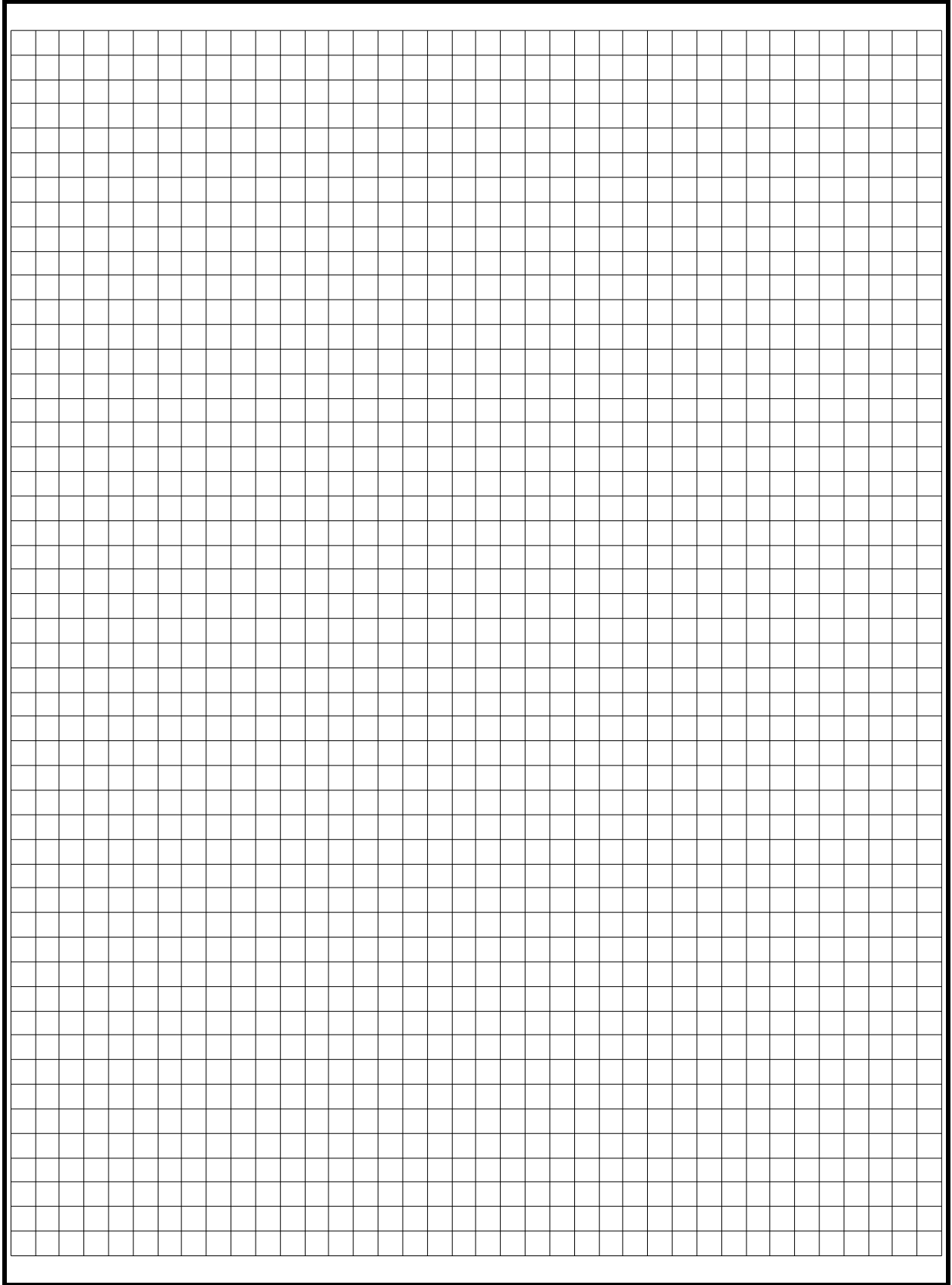
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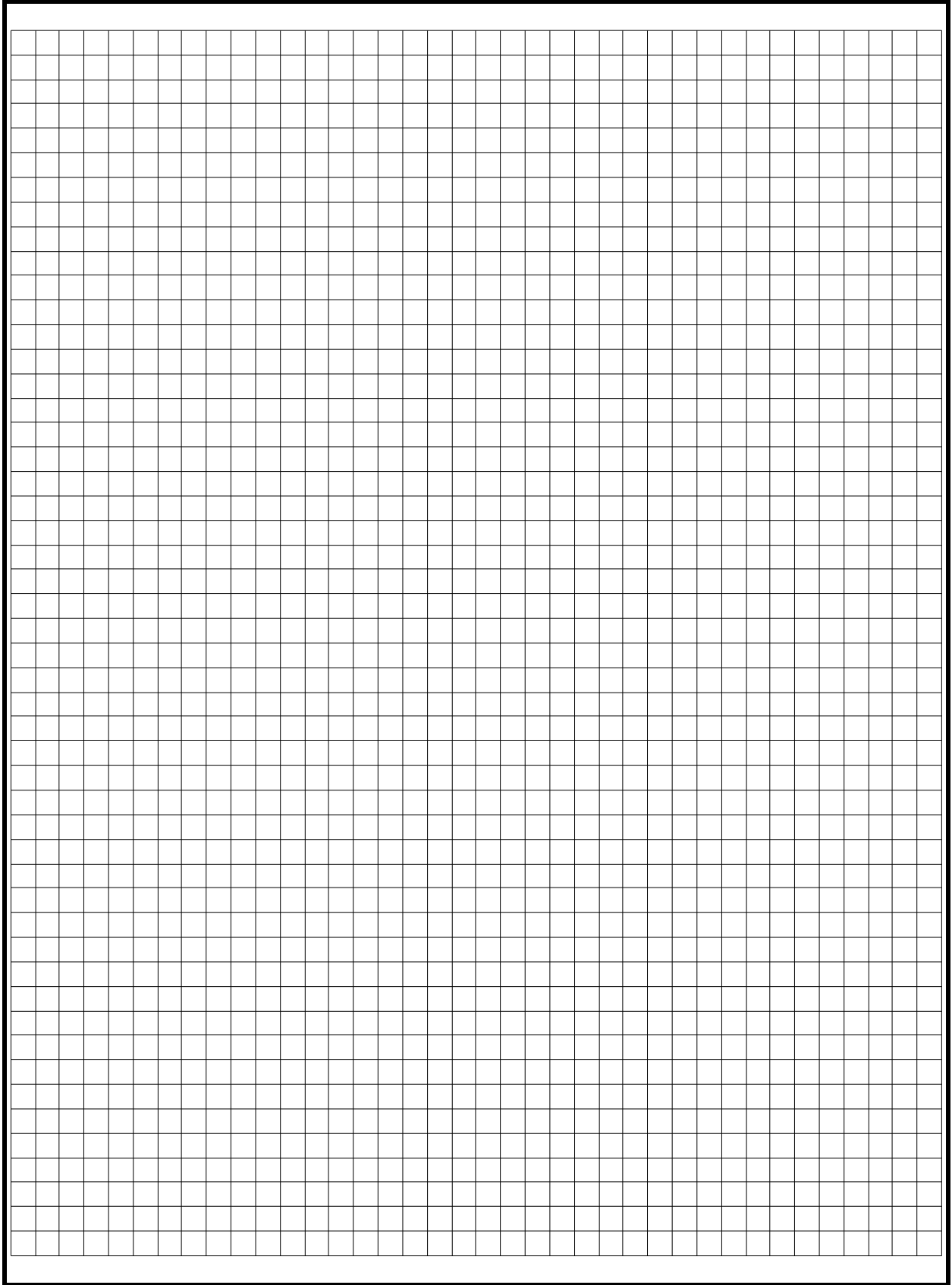
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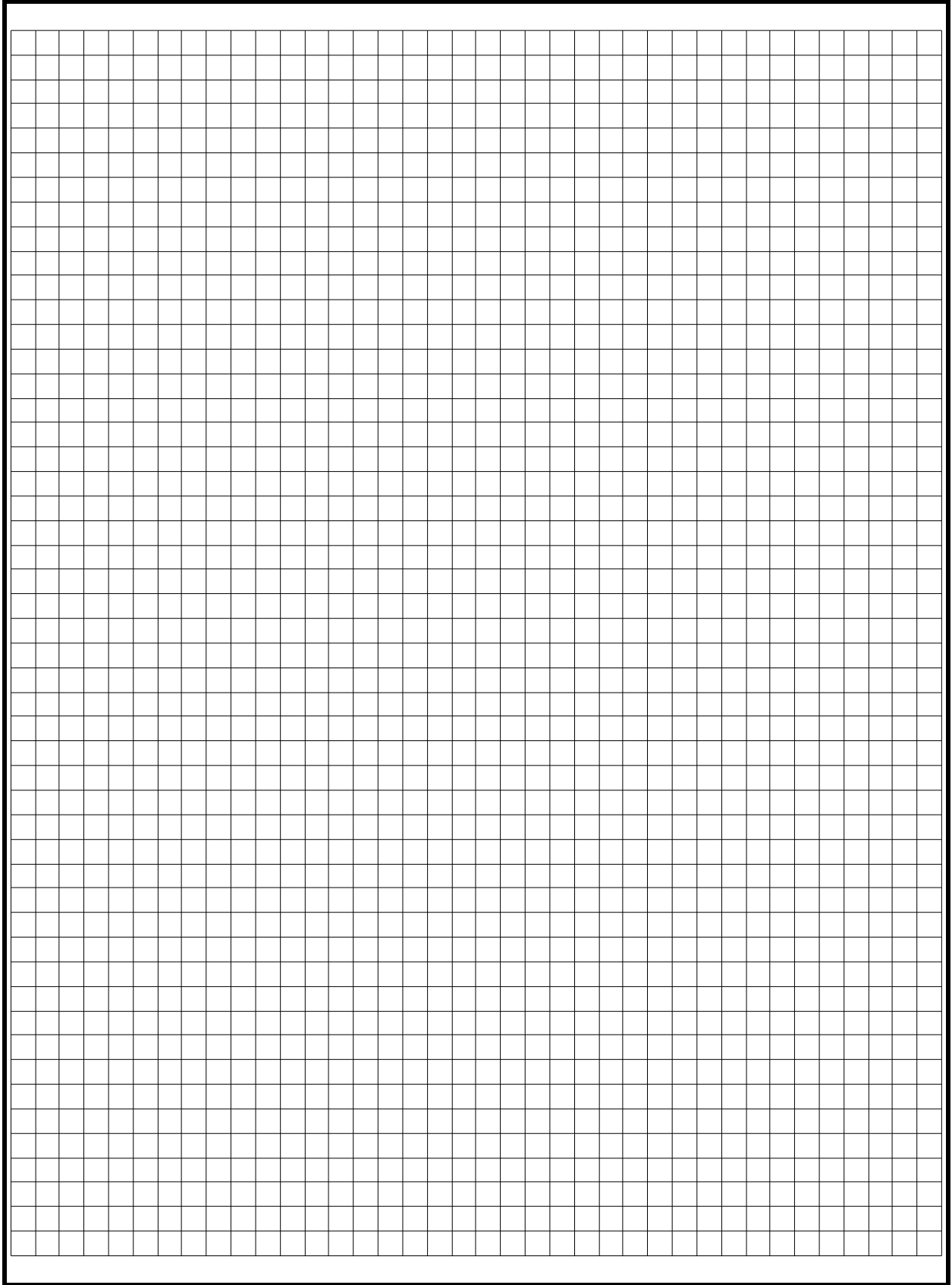
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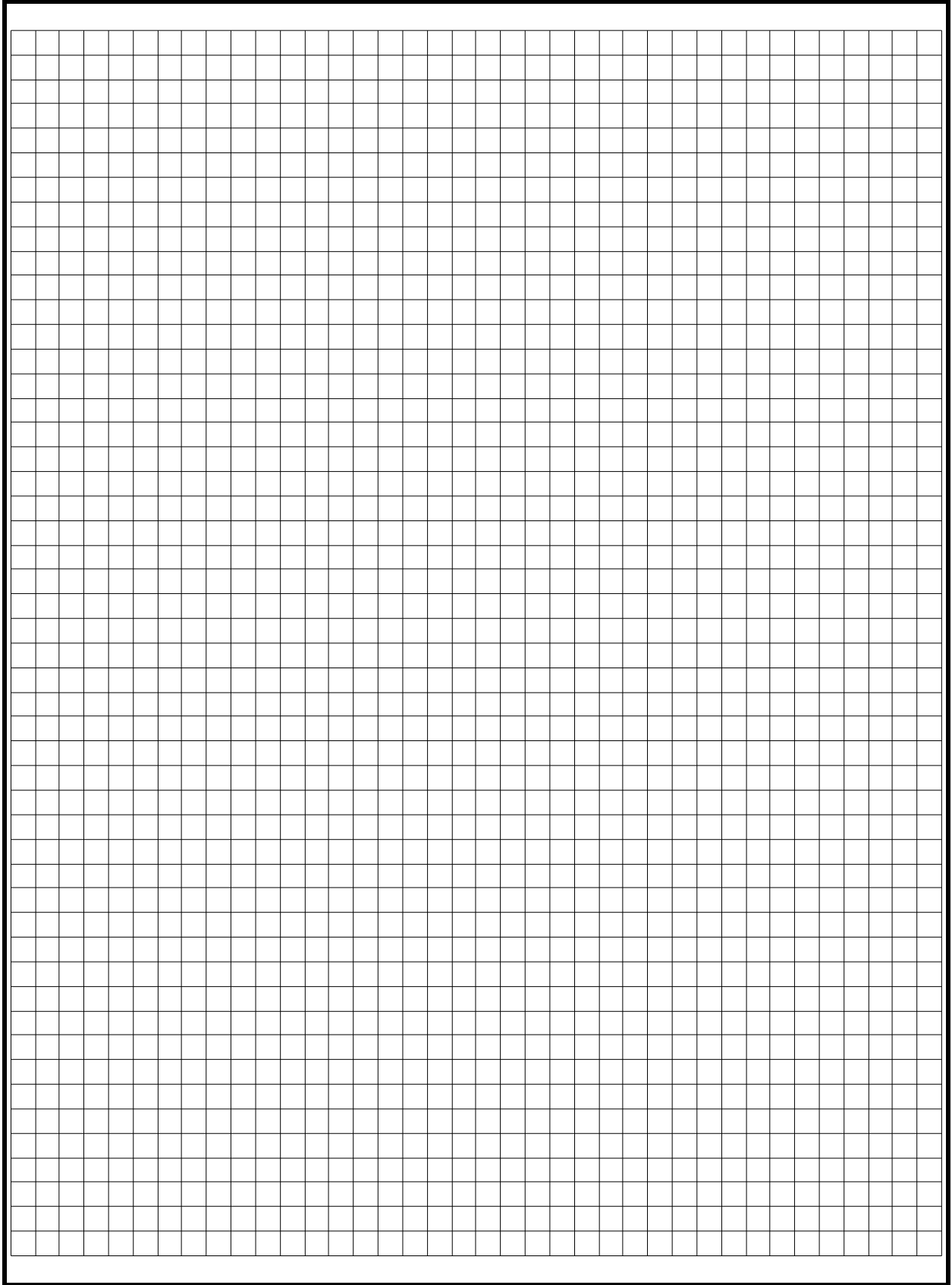
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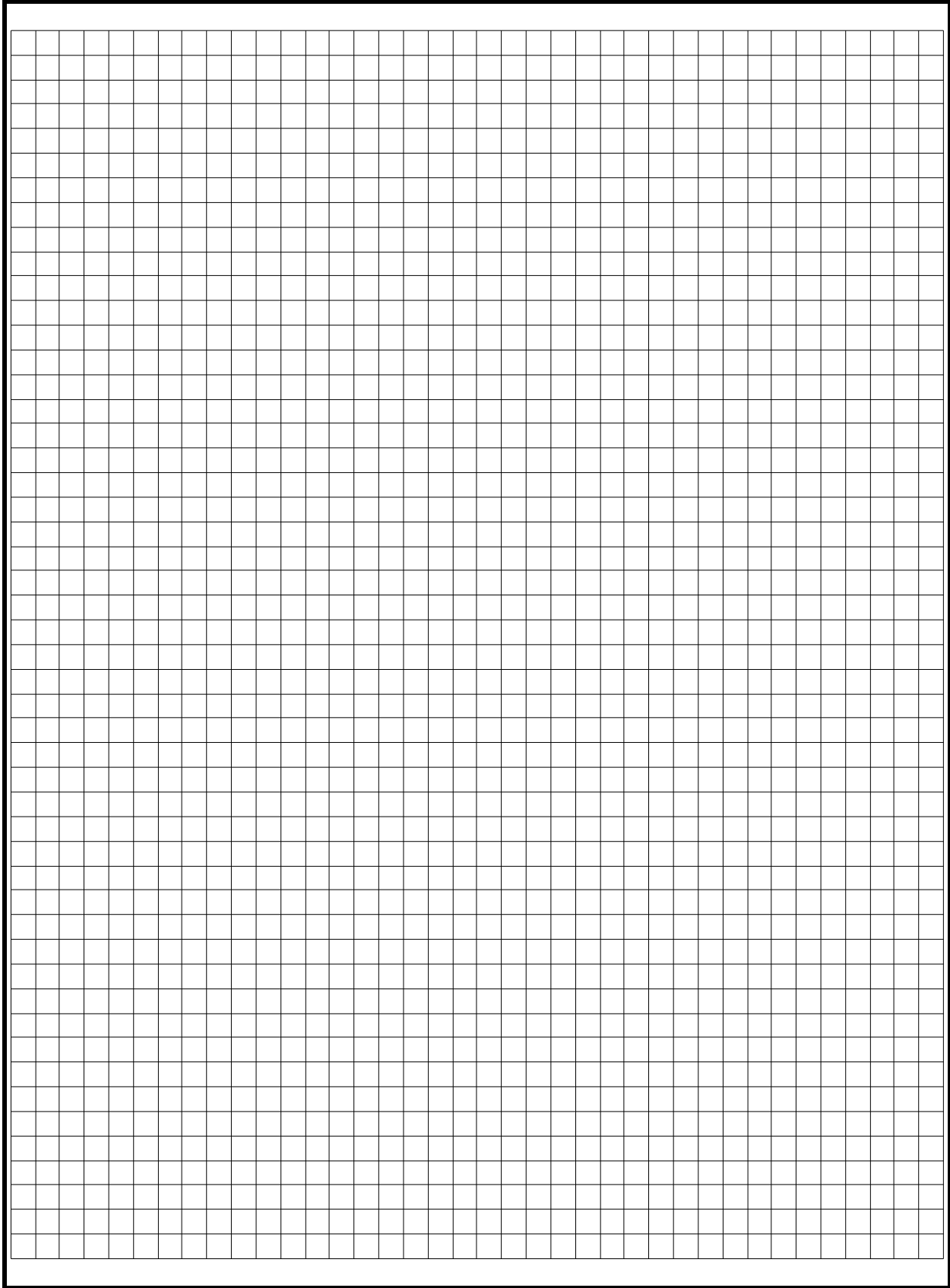
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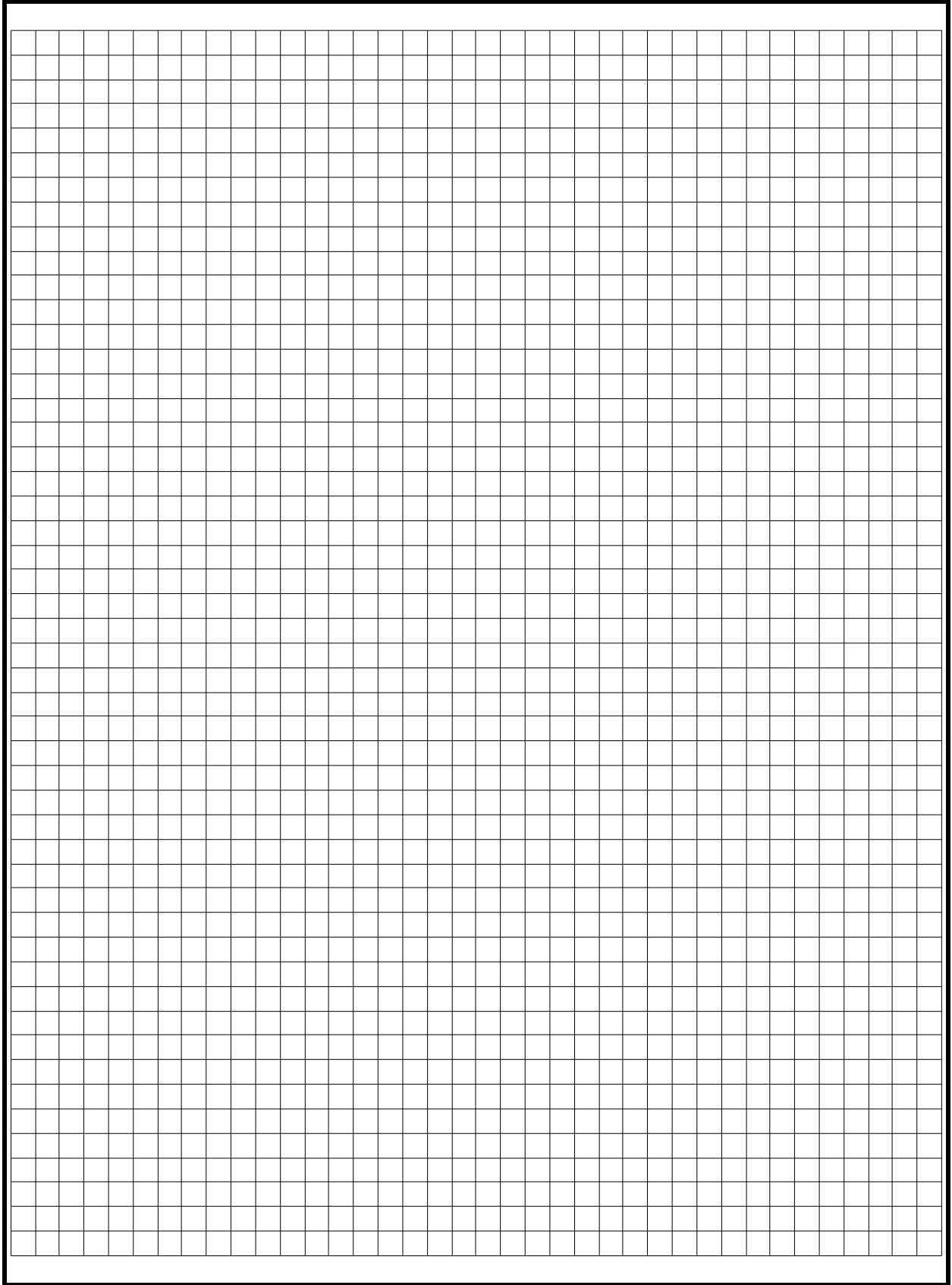
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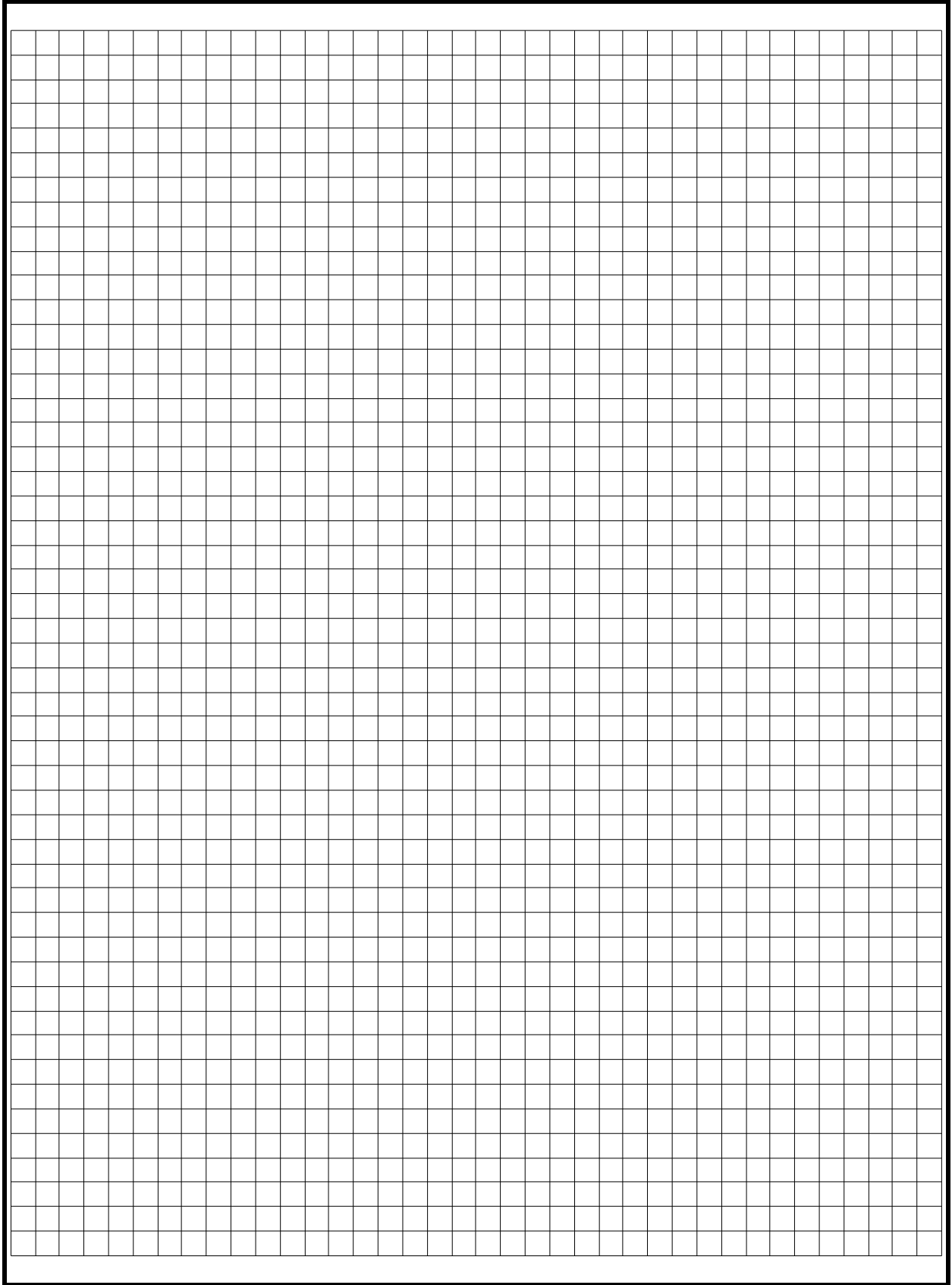
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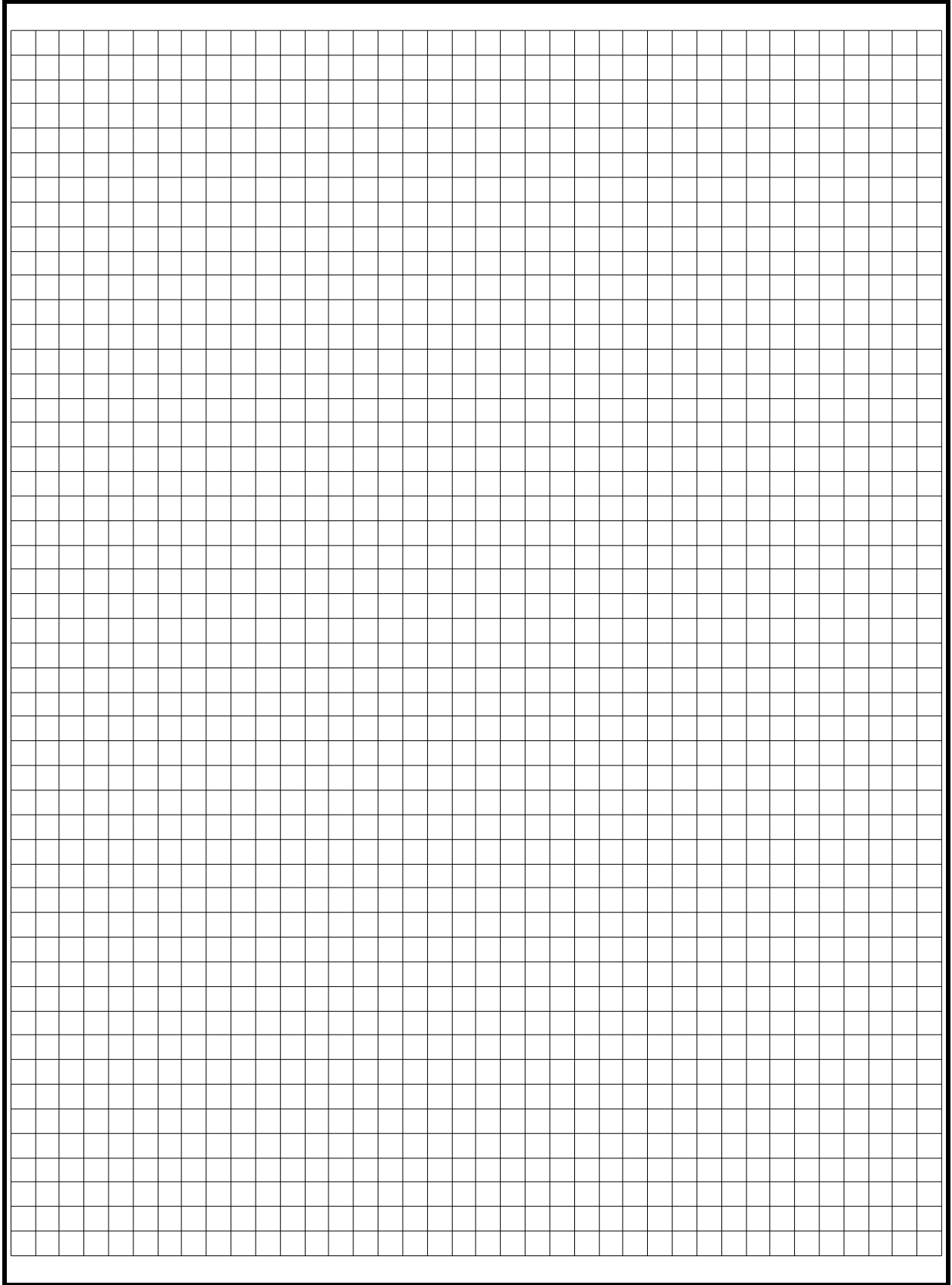
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