PLTW Launch

Launch Log

Grades 3–5

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Name _____

Module _____

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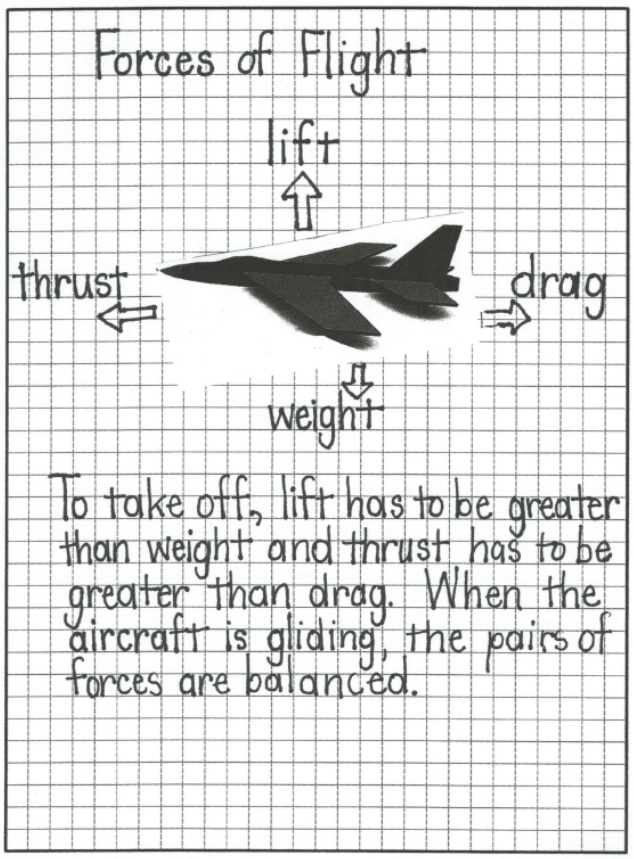
Using Your Launch Log

Engineers and scientists keep a record of their work as they design solutions and develop explanations. This record includes sketches with detailed descriptions and notes they take as they work toward a solution.

As you work on the activities, project, and problem in this module, use this Launch Log to keep a record of your work. In your Launch Log, you can create labeled sketches or include pictures you take, record notes on new ideas, answer questions about your work, and reflect on your progress.

The example below shows one way a student used the Launch Log to record their learning about the forces of flight.



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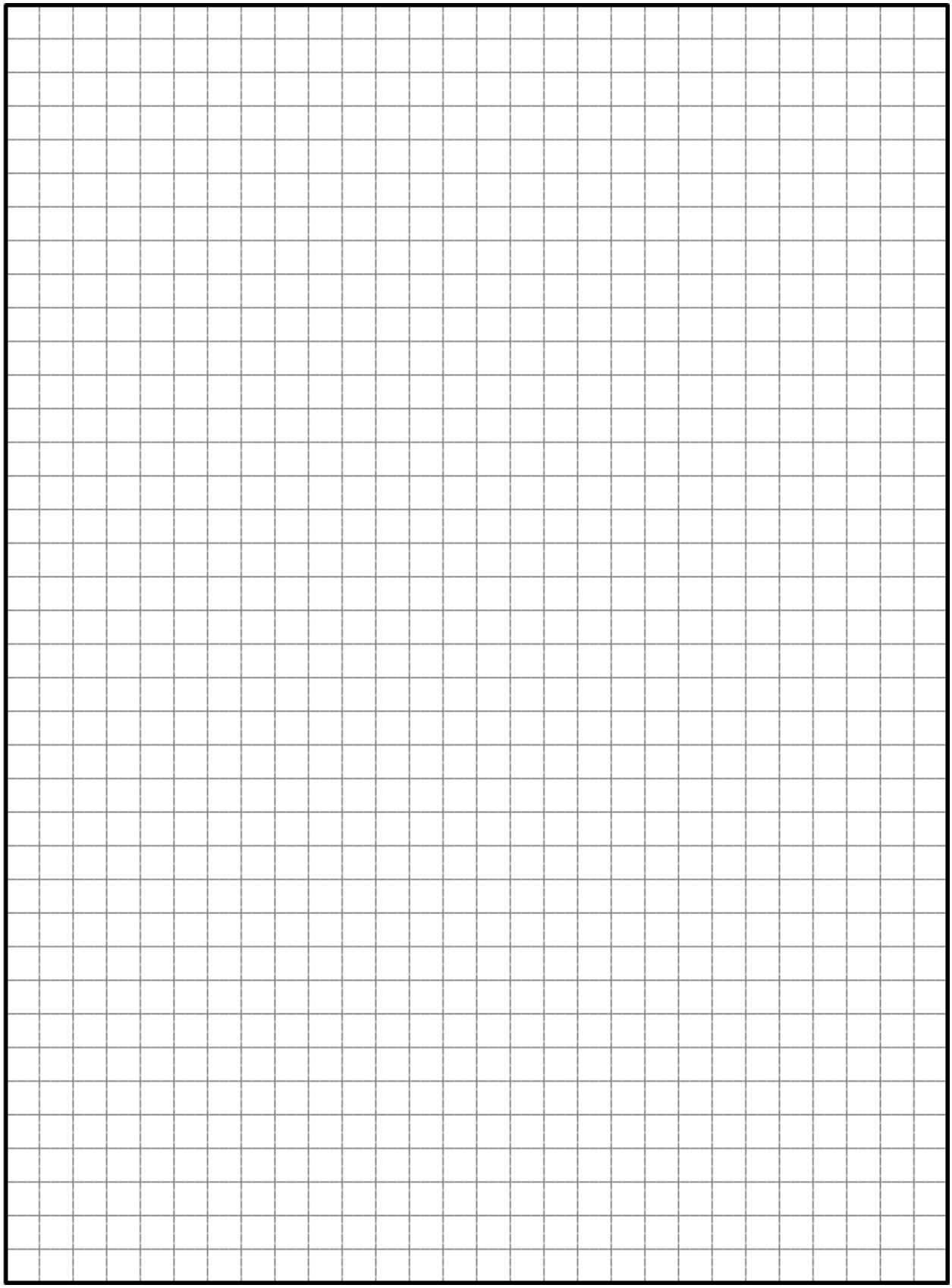

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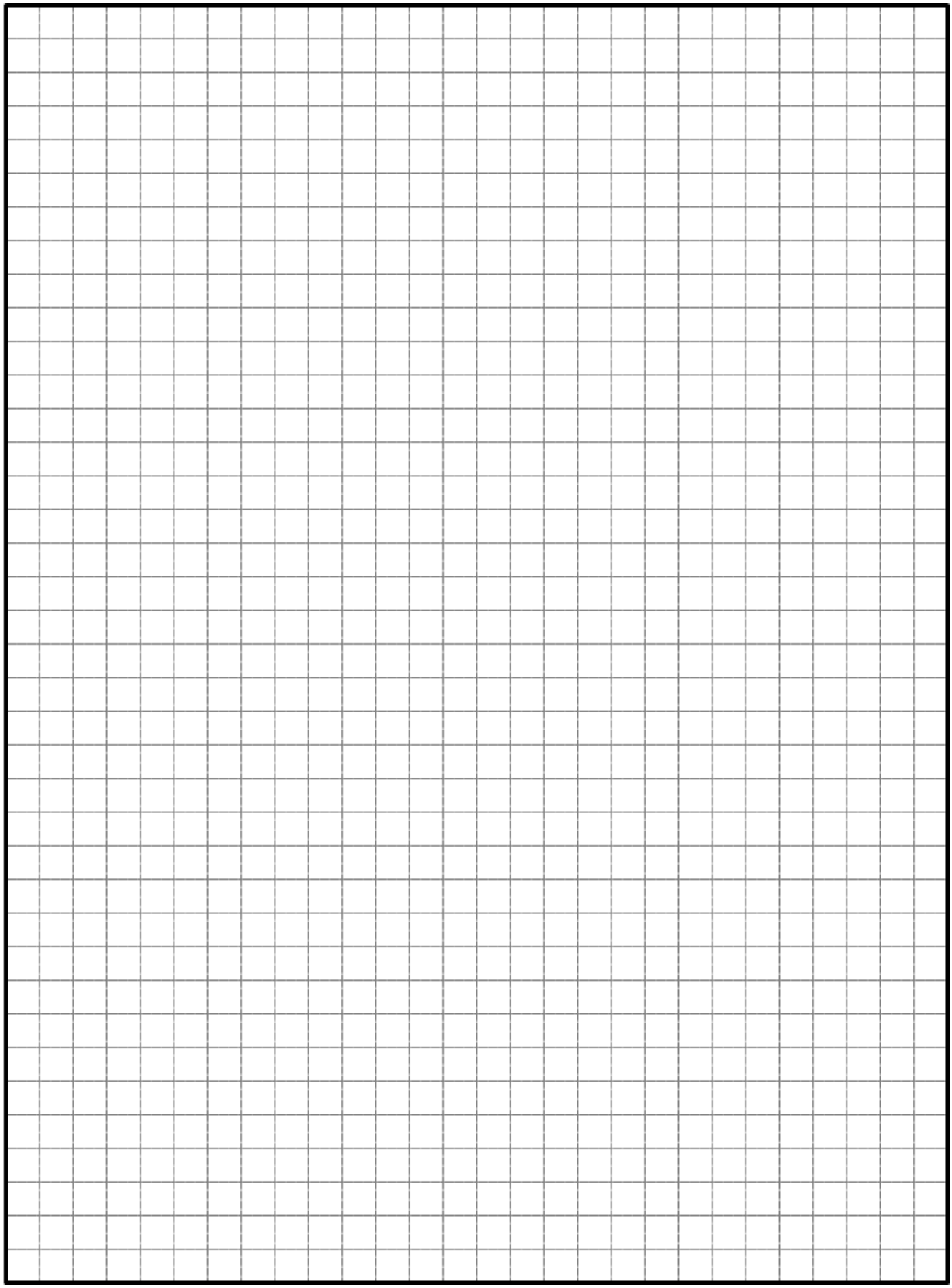

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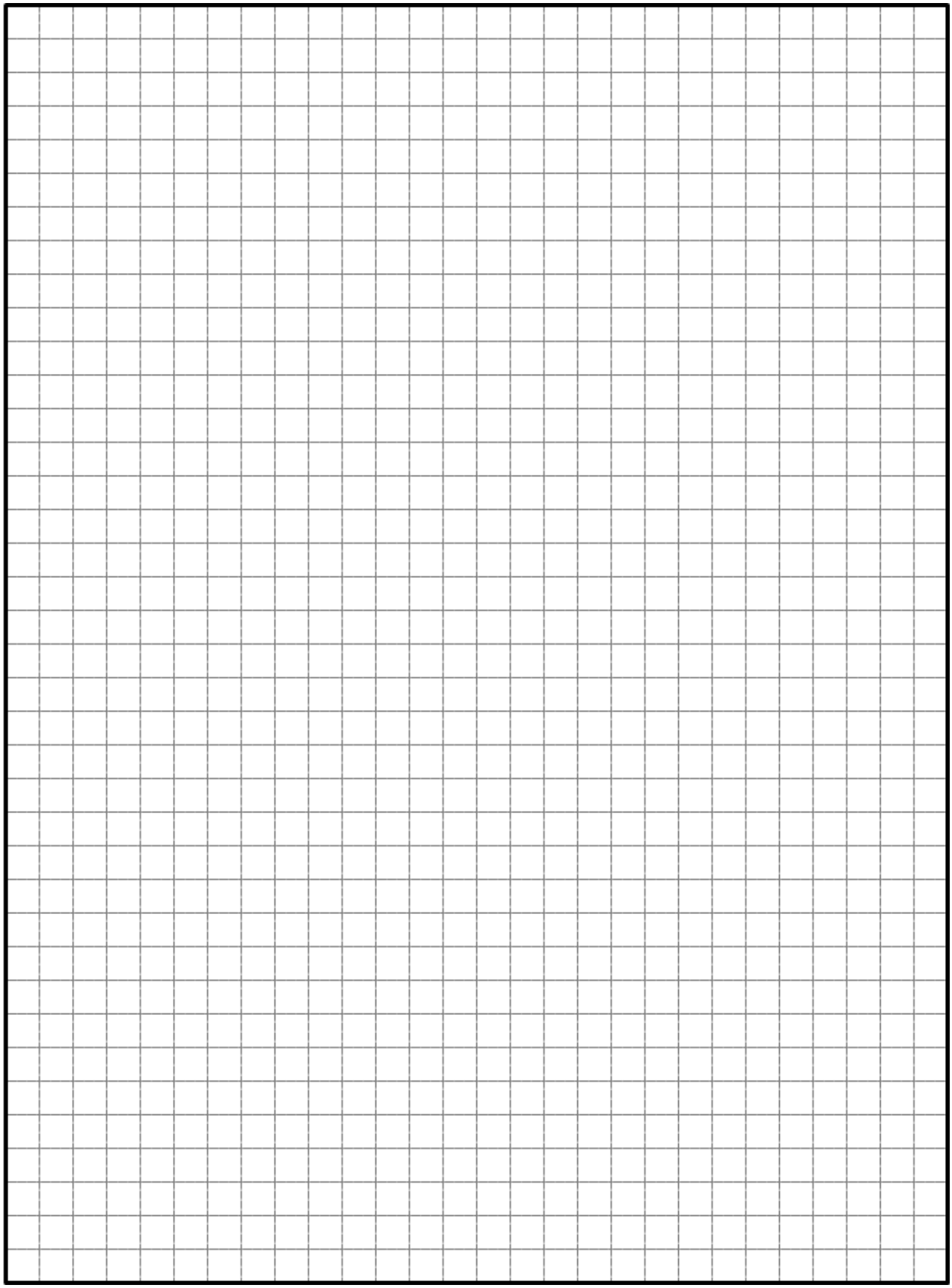

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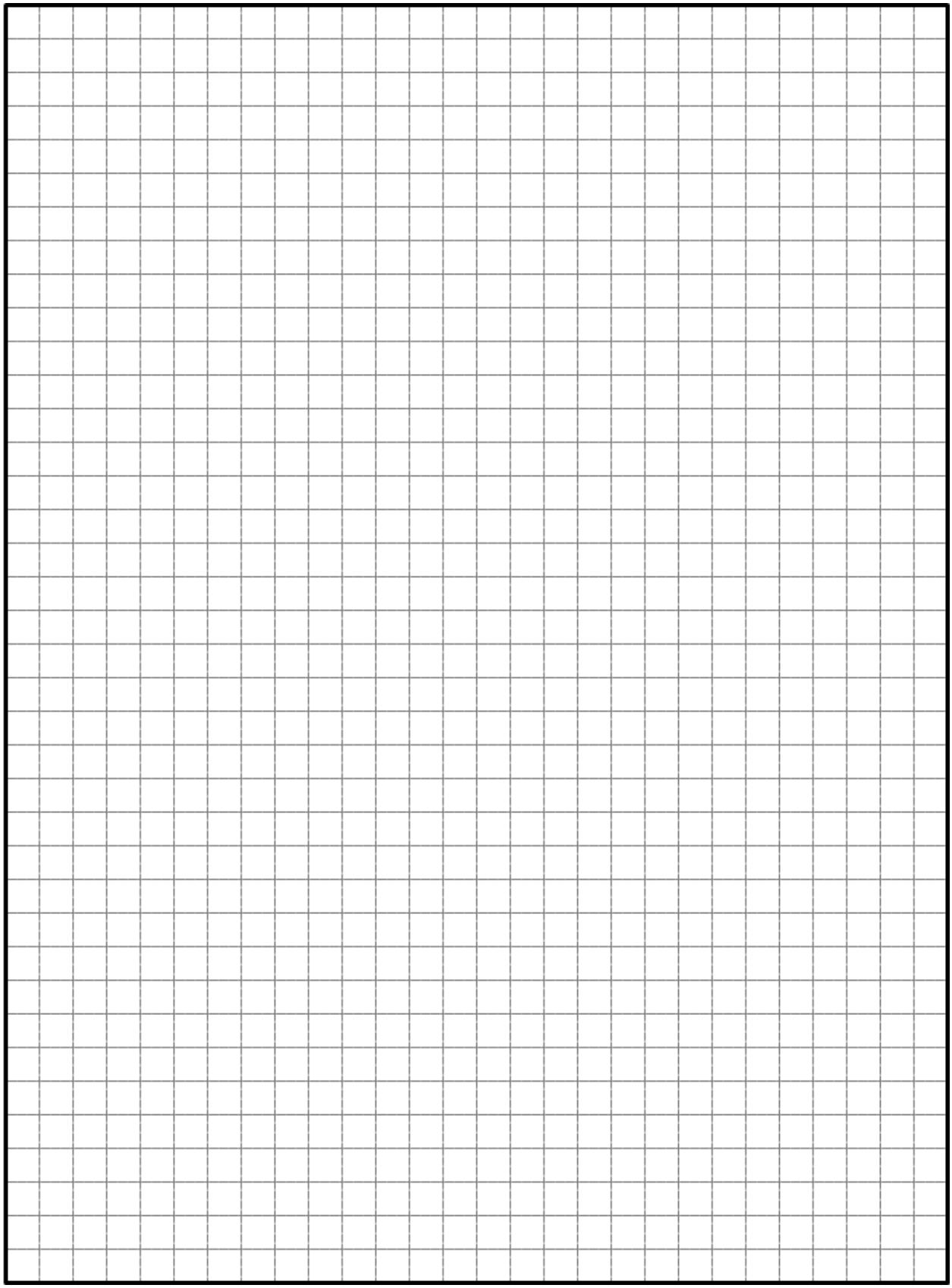

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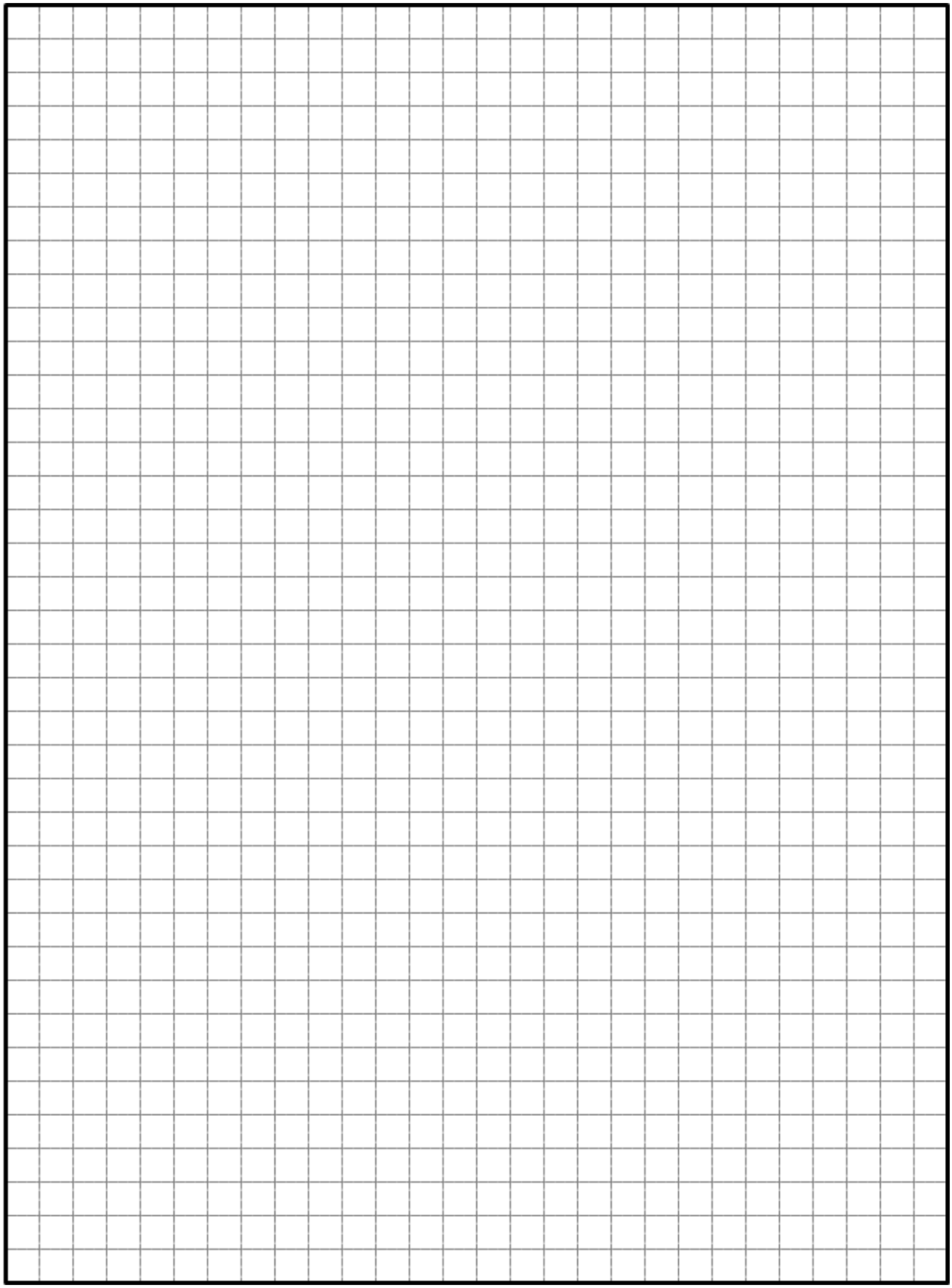

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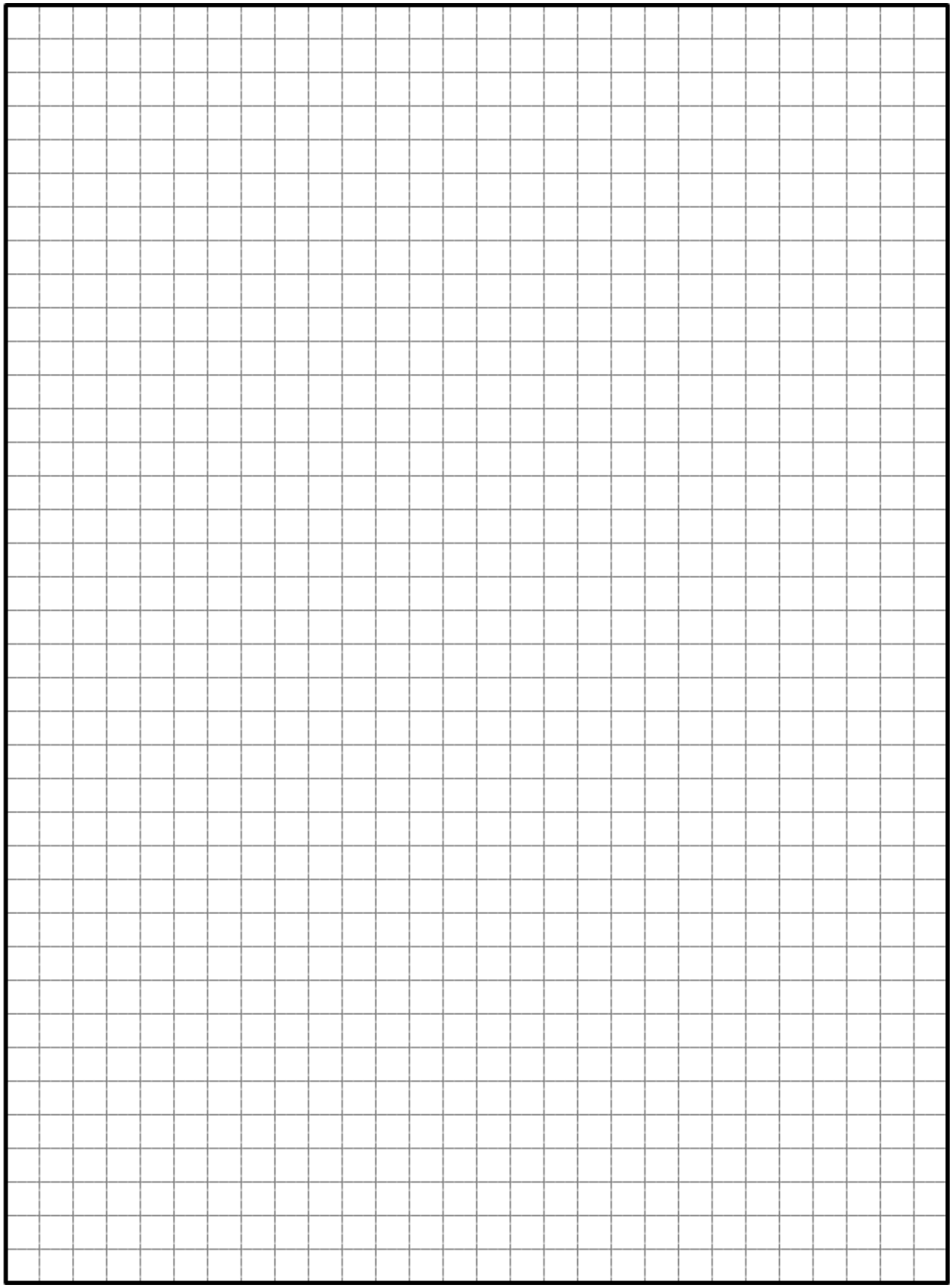

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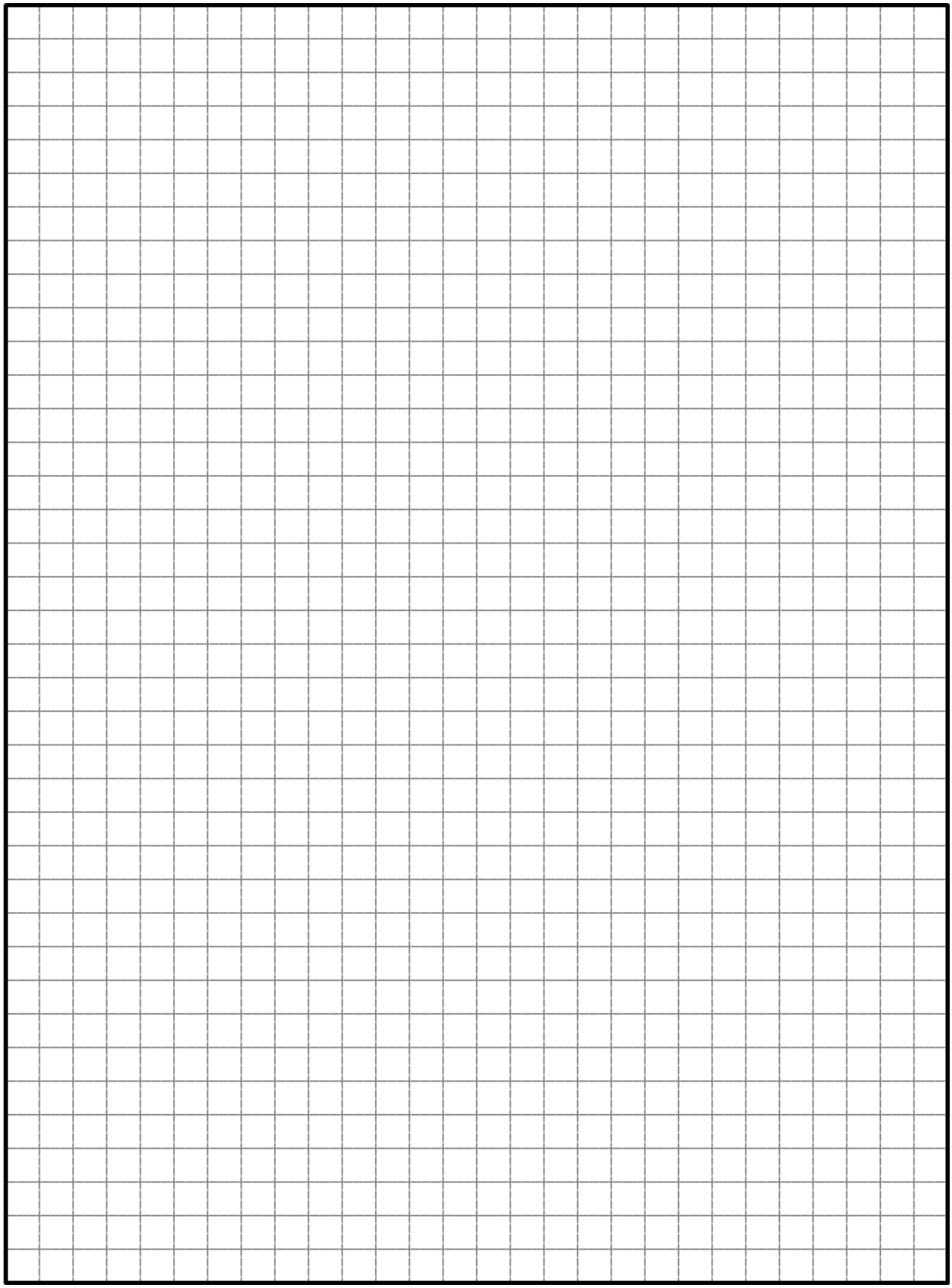

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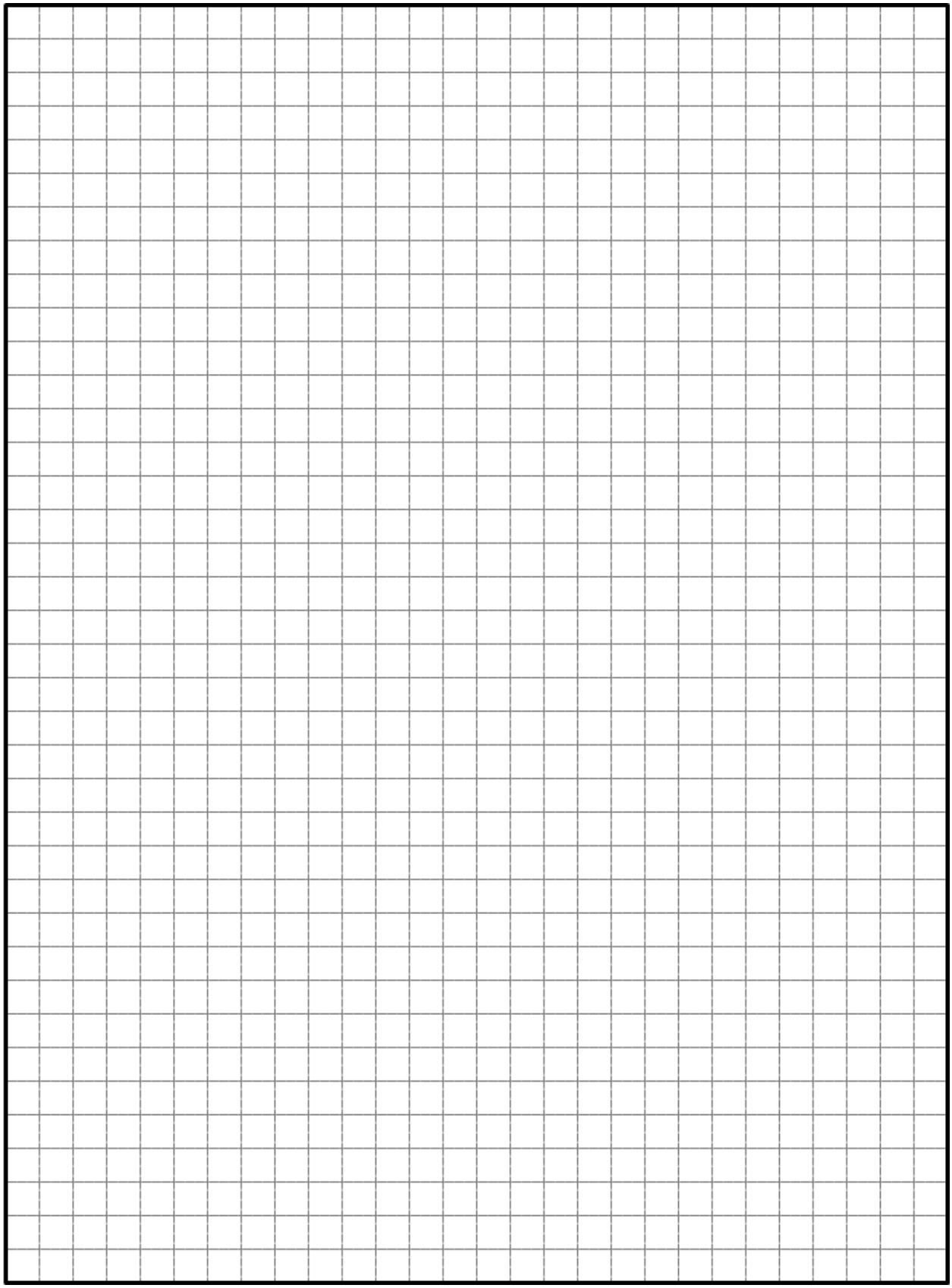

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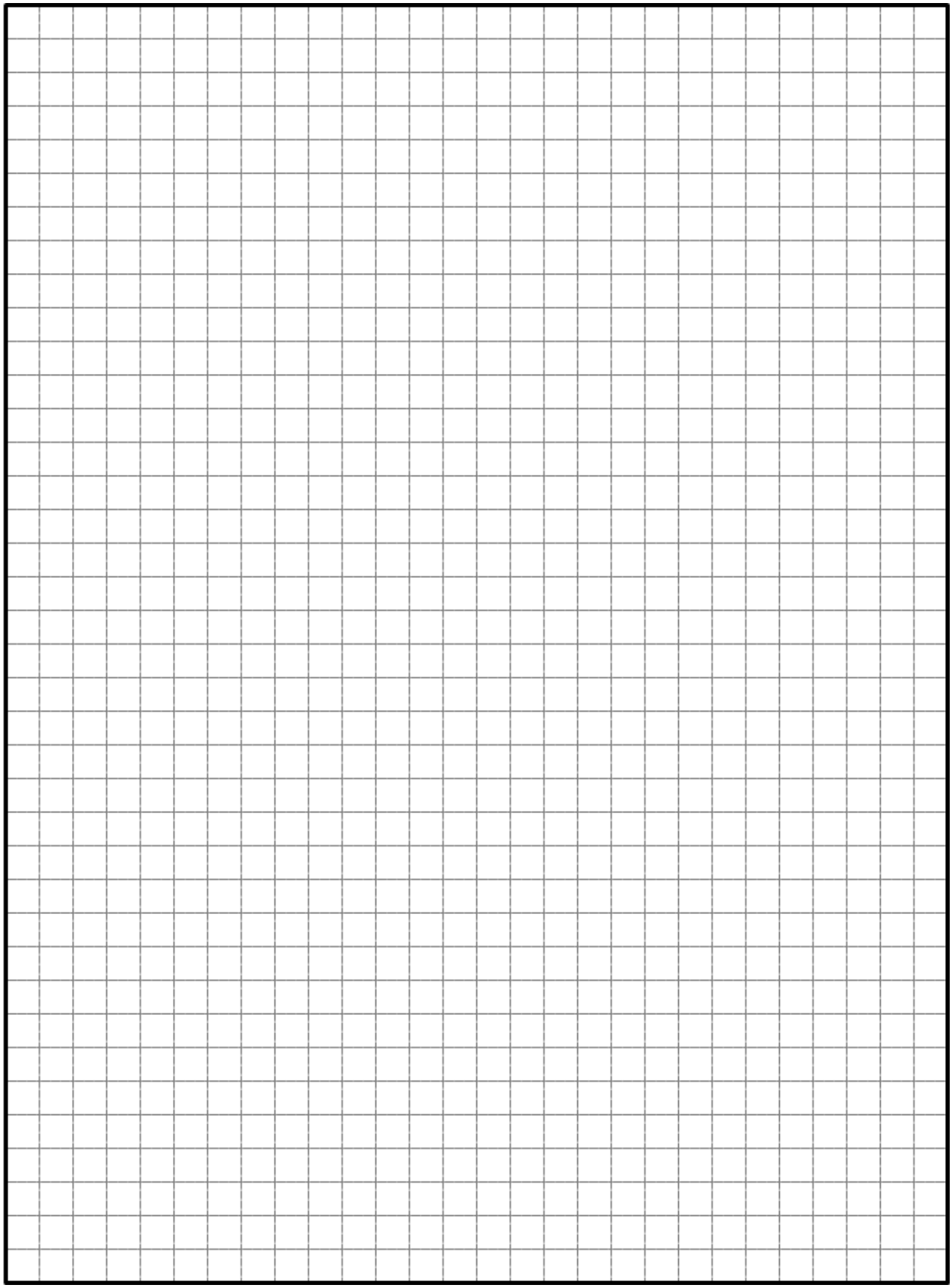

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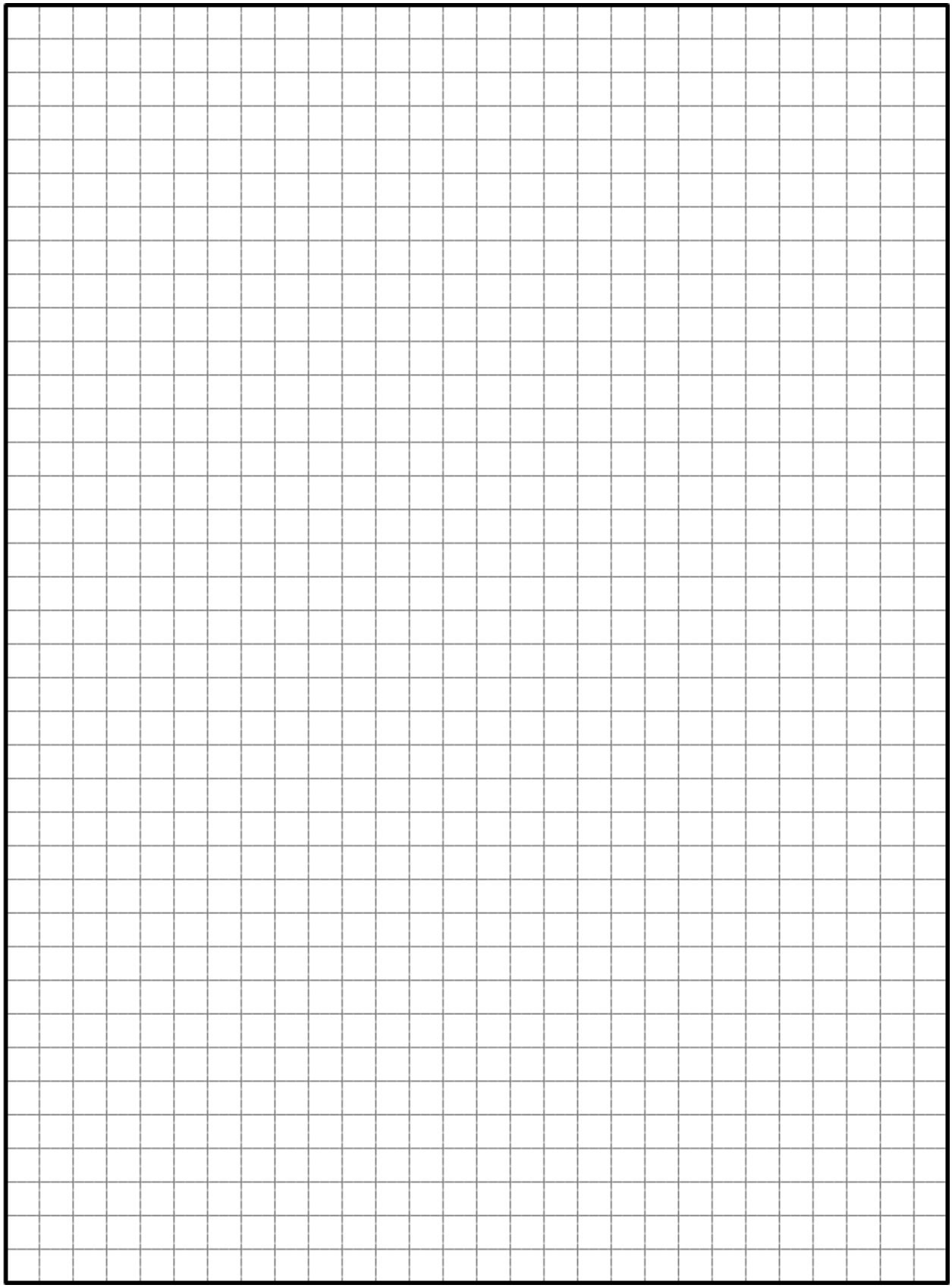

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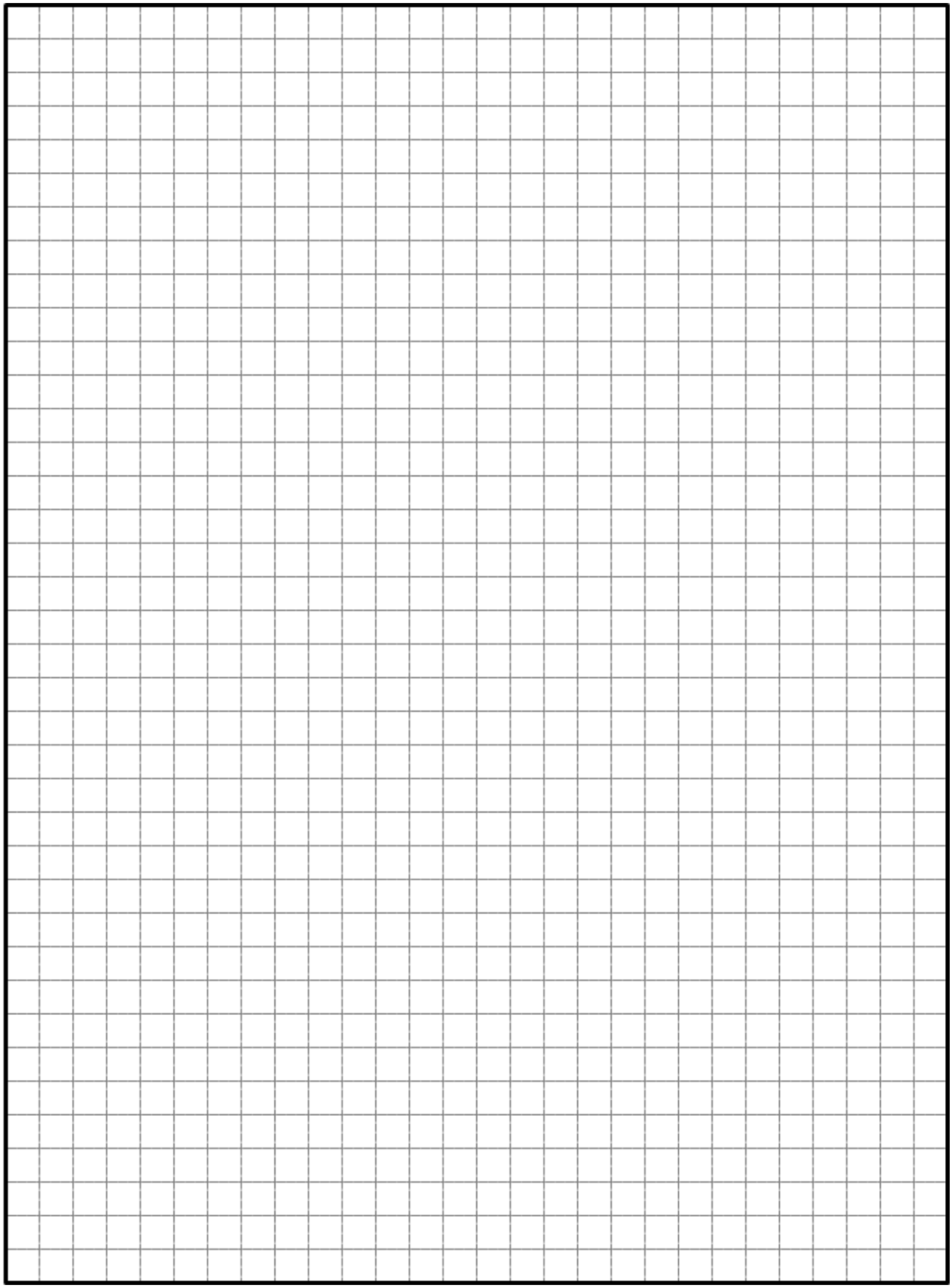

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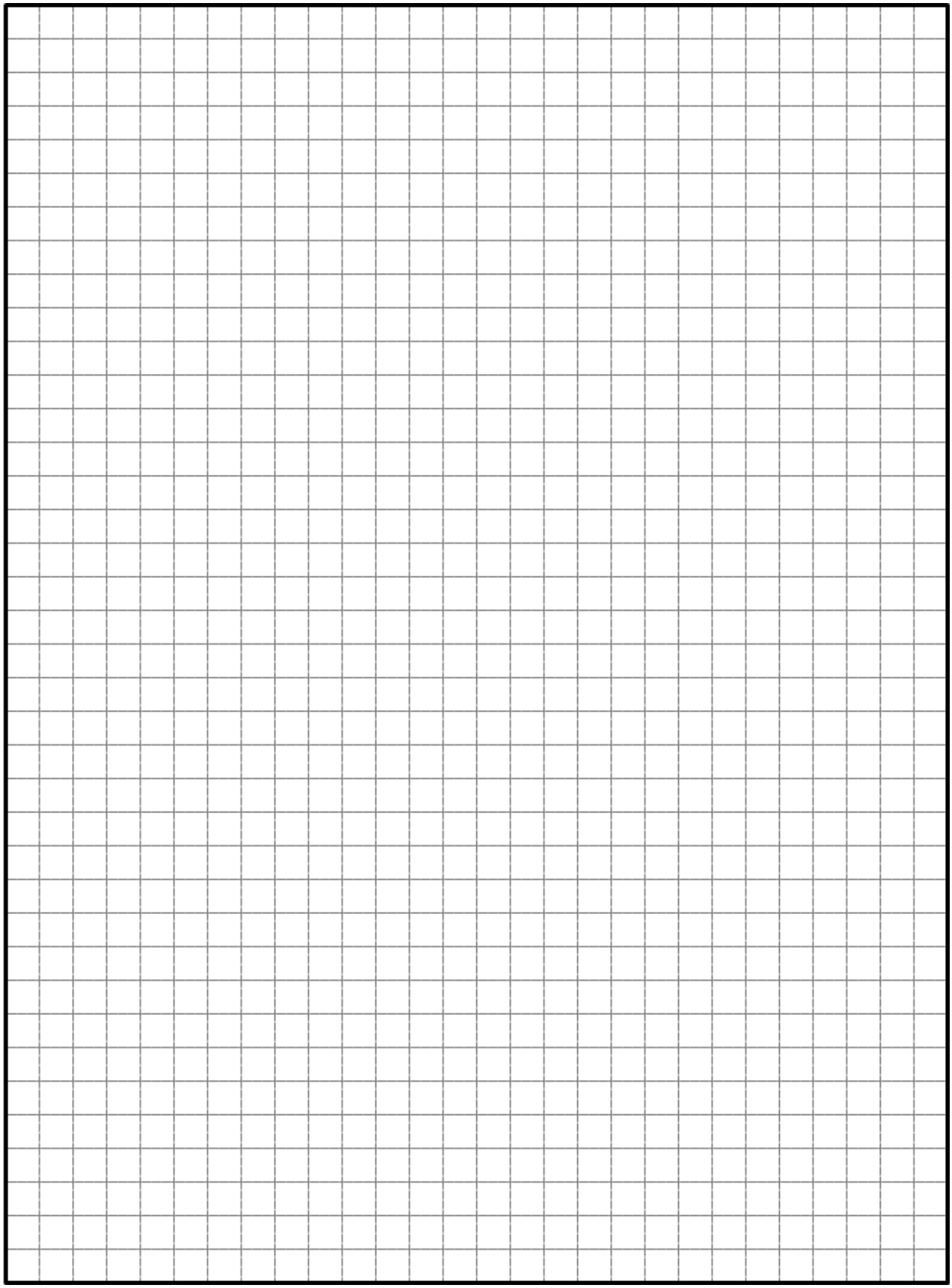

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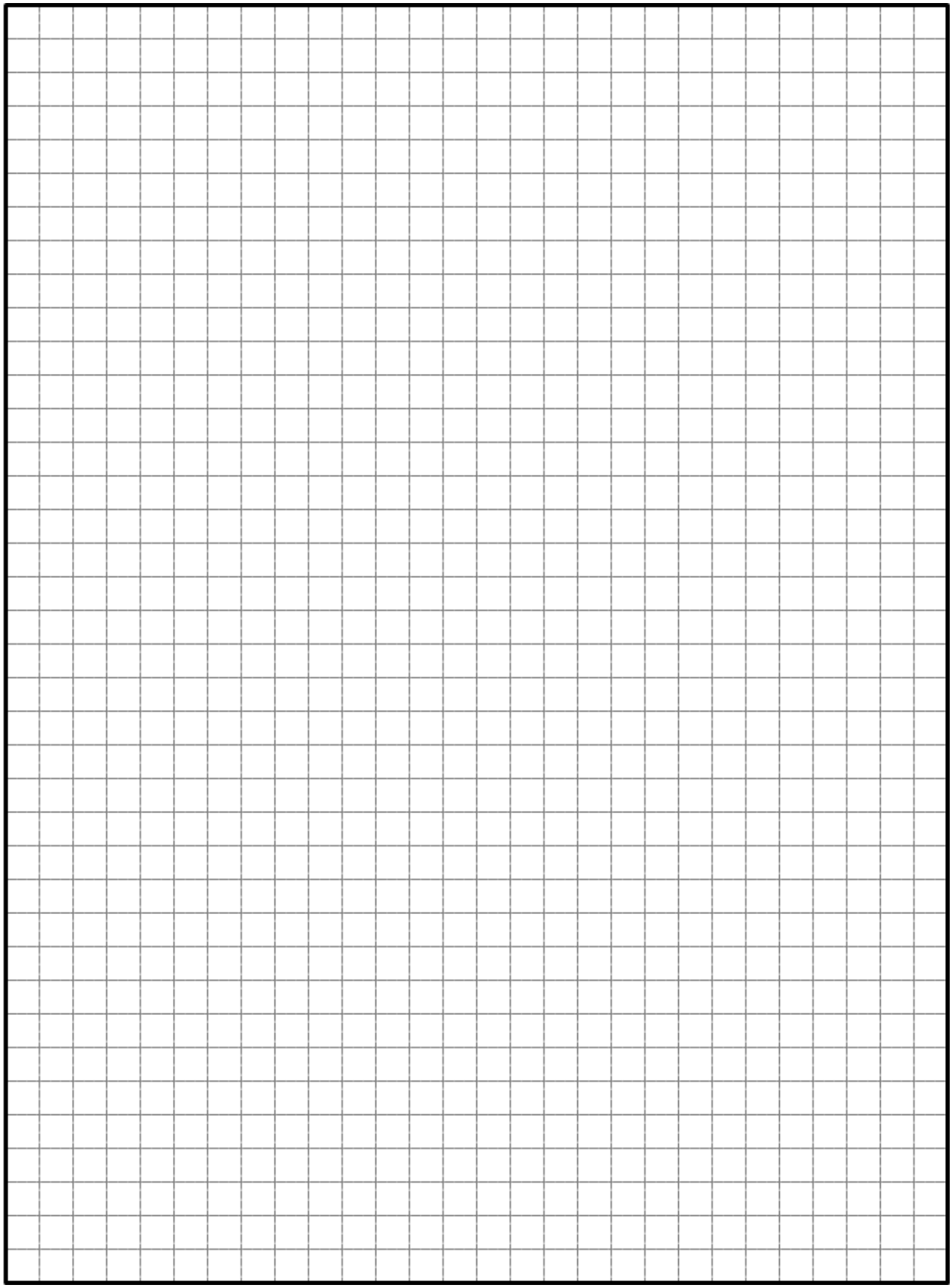

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Solving the Problem

Ask

What is the need or want that we are trying to fulfill?

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What will make the solution successful?

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What constraints will impact the solution?

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Self-Reflection and Teacher Feedback: Ask

Skill	Basic	Proficient	Advanced
Identify the need or want	I'm not yet able to explain how the problem addresses a need or want.	With some help, I'm able to explain how the problem addresses a need or want.	On my own, I'm able to explain how the problem addresses a need or want.
Explain a successful outcome	I'm not yet able to describe how the criteria and constraints will lead to a successful outcome.	With some help, I'm able to explain how the criteria and constraints will lead to a successful outcome.	On my own, I'm able to explain how the criteria and constraints will lead to a successful outcome.
Teacher Feedback			

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Explore

Investigate the problem. How have others tried to solve this problem in the past? Record your findings below.

Brainstorm ideas to generate solutions. Record your ideas below and include labeled sketches.

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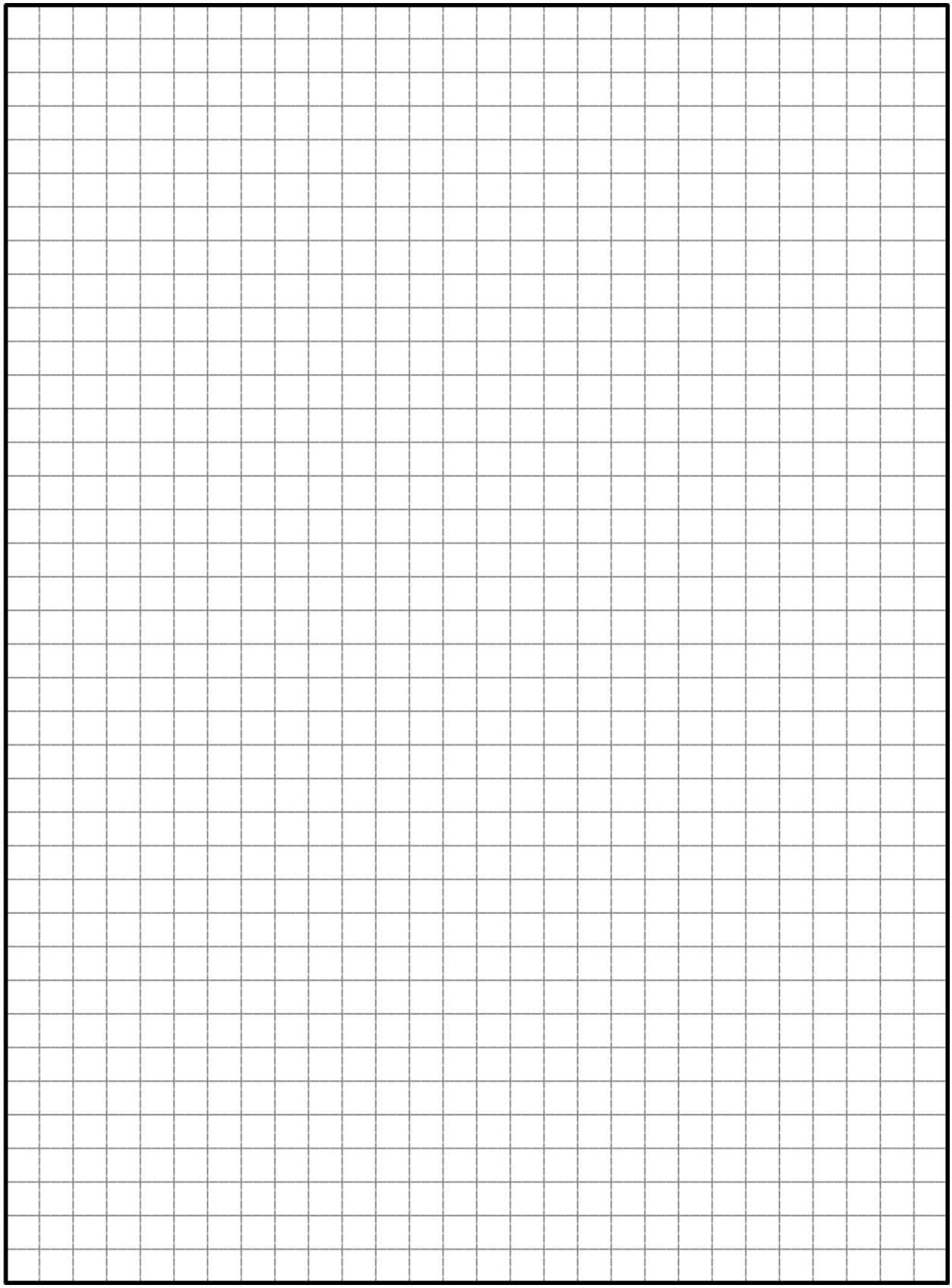

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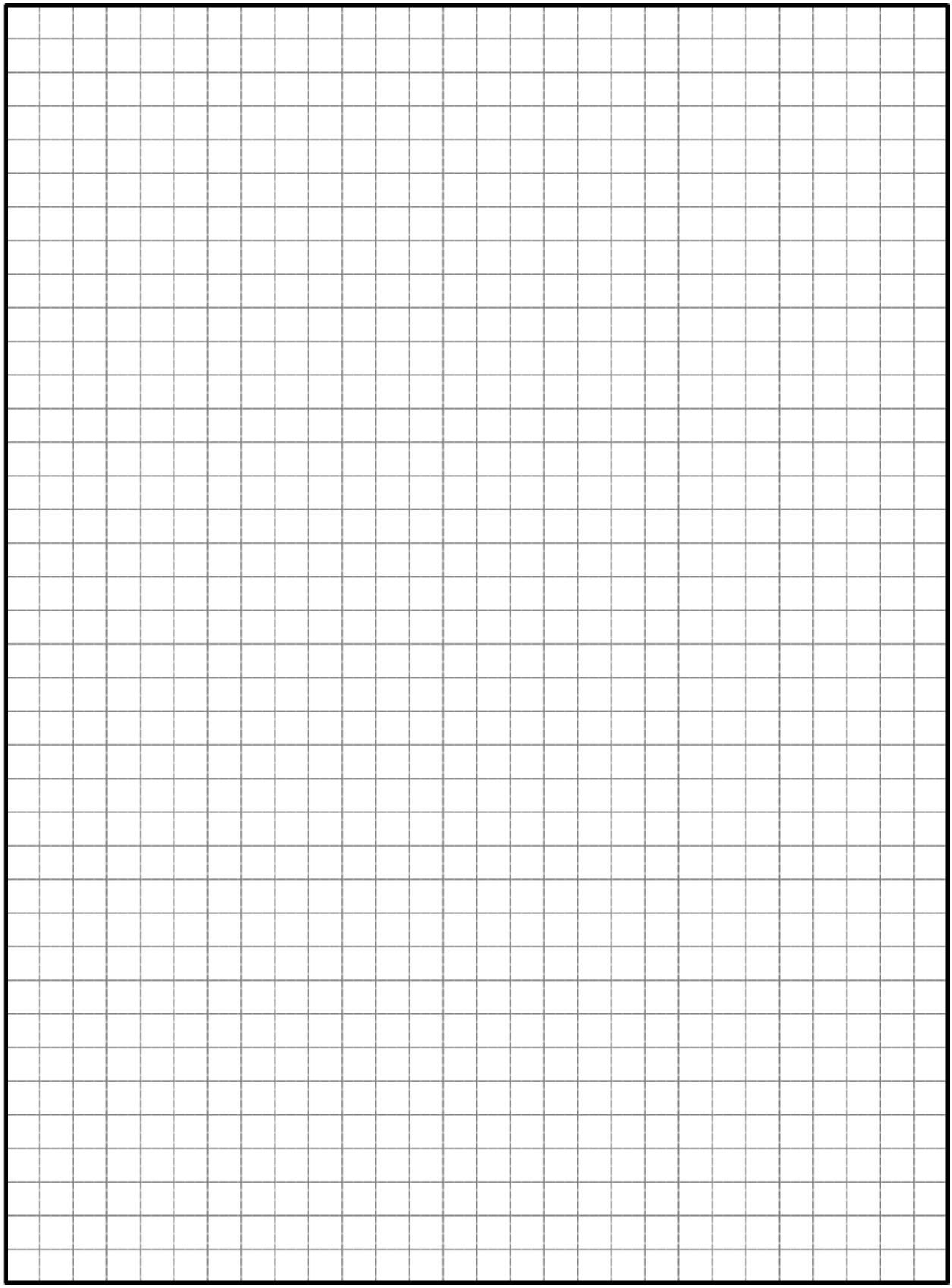

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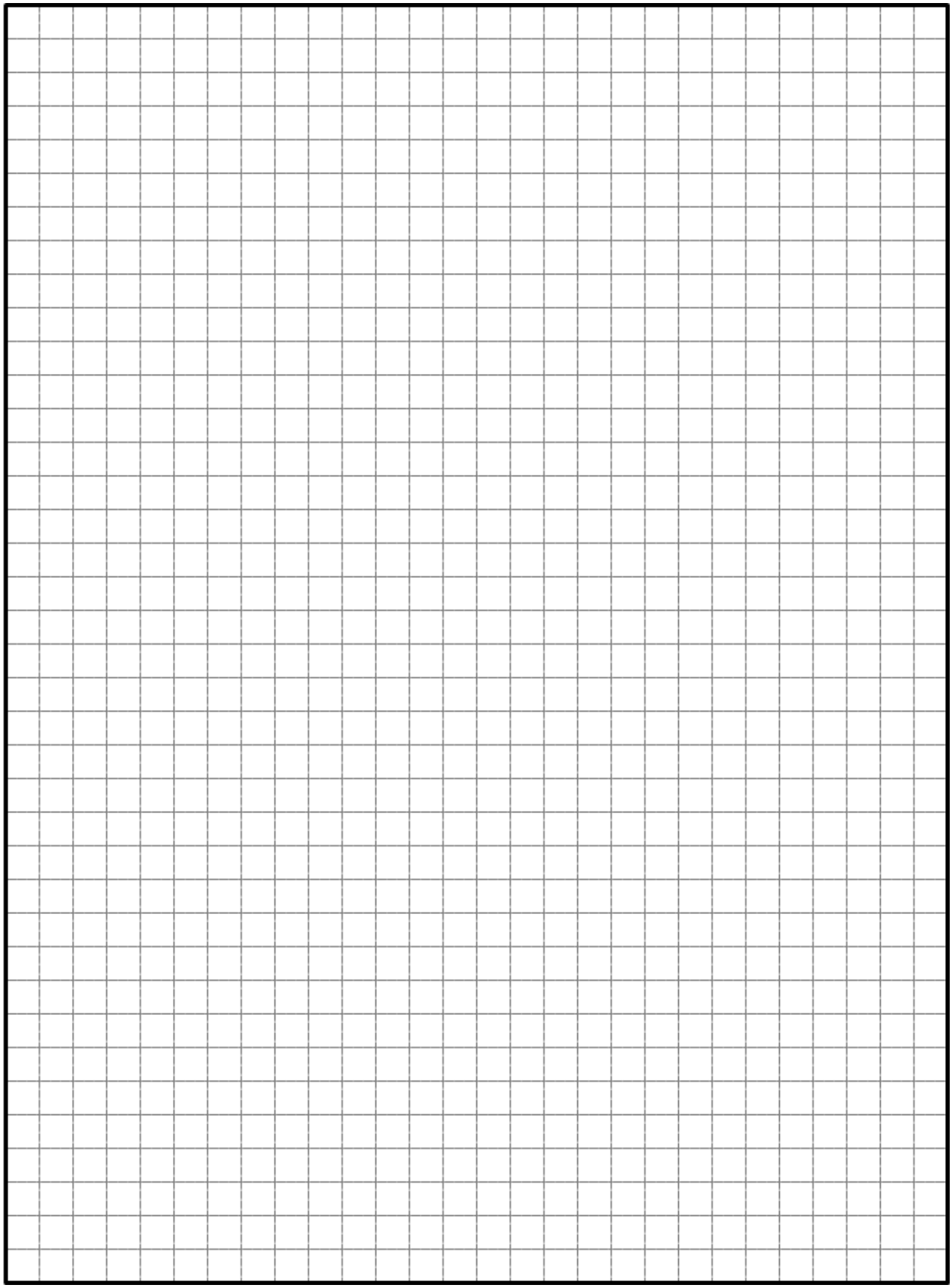

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Self-Reflection and Teacher Feedback: Explore

Skill	Basic	Proficient	Advanced
Investigate ways to solve problem	I'm not yet able to investigate or describe ways to solve this problem.	I'm able to investigate **or** describe how to solve this problem.	I'm able to investigate **and** describe how to solve this problem.
Brainstorm and sketch ideas	I have difficulty brainstorming 2-3 ideas or drawing a labeled sketch.	I'm able to brainstorm 2-3 ideas **or** draw a labeled sketch.	I'm able to brainstorm 3 or more ideas **and** draw a labeled sketch.
Teacher Feedback:			

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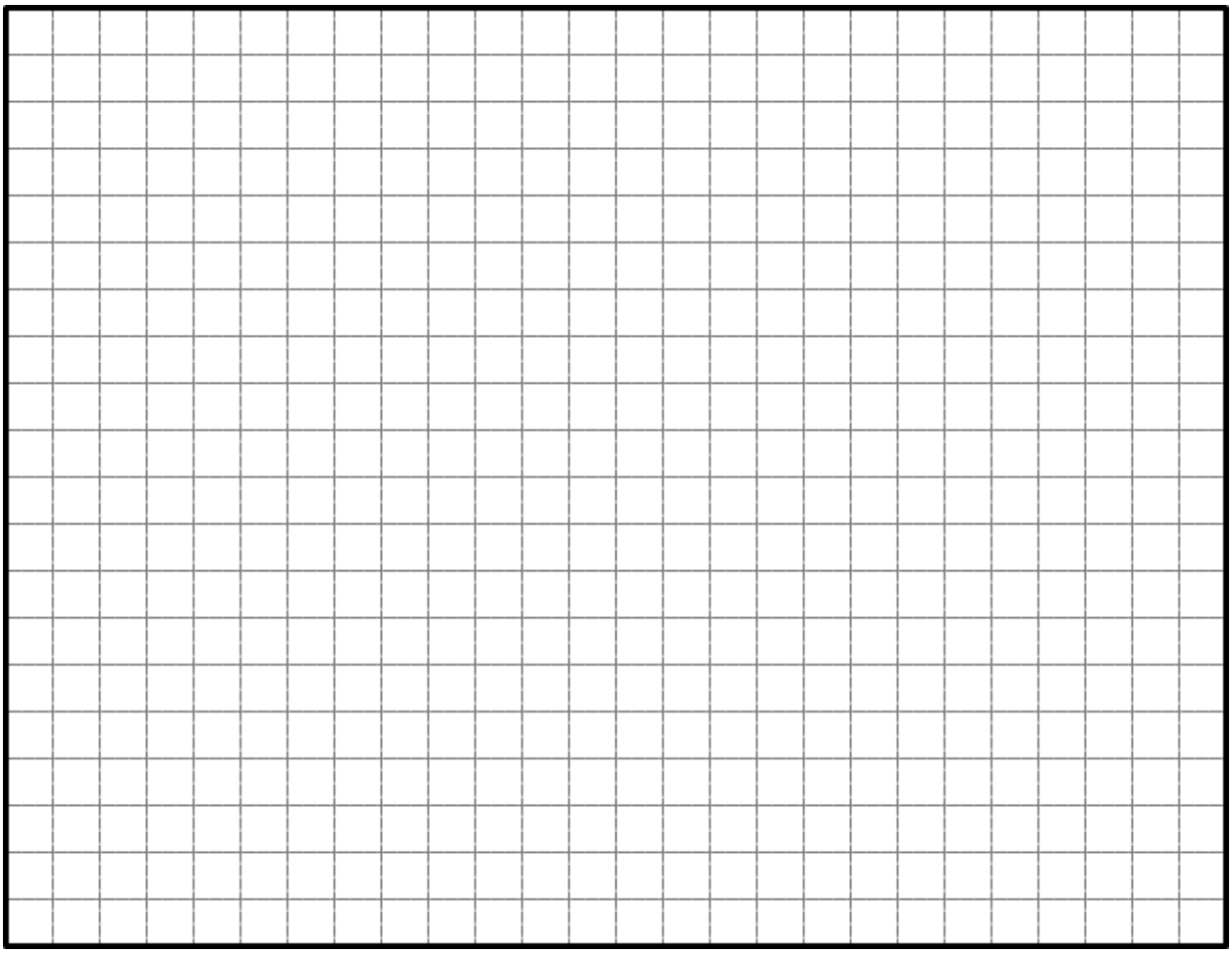
Model

Use the **Decision Matrix** to compare multiple solutions to see how well each meets the criteria and constraints. Complete the decision matrix below or cut and glue your own decision matrix over it. Use the scale provided by your teacher.

				Total

Include a sketch of your group's chosen design below.



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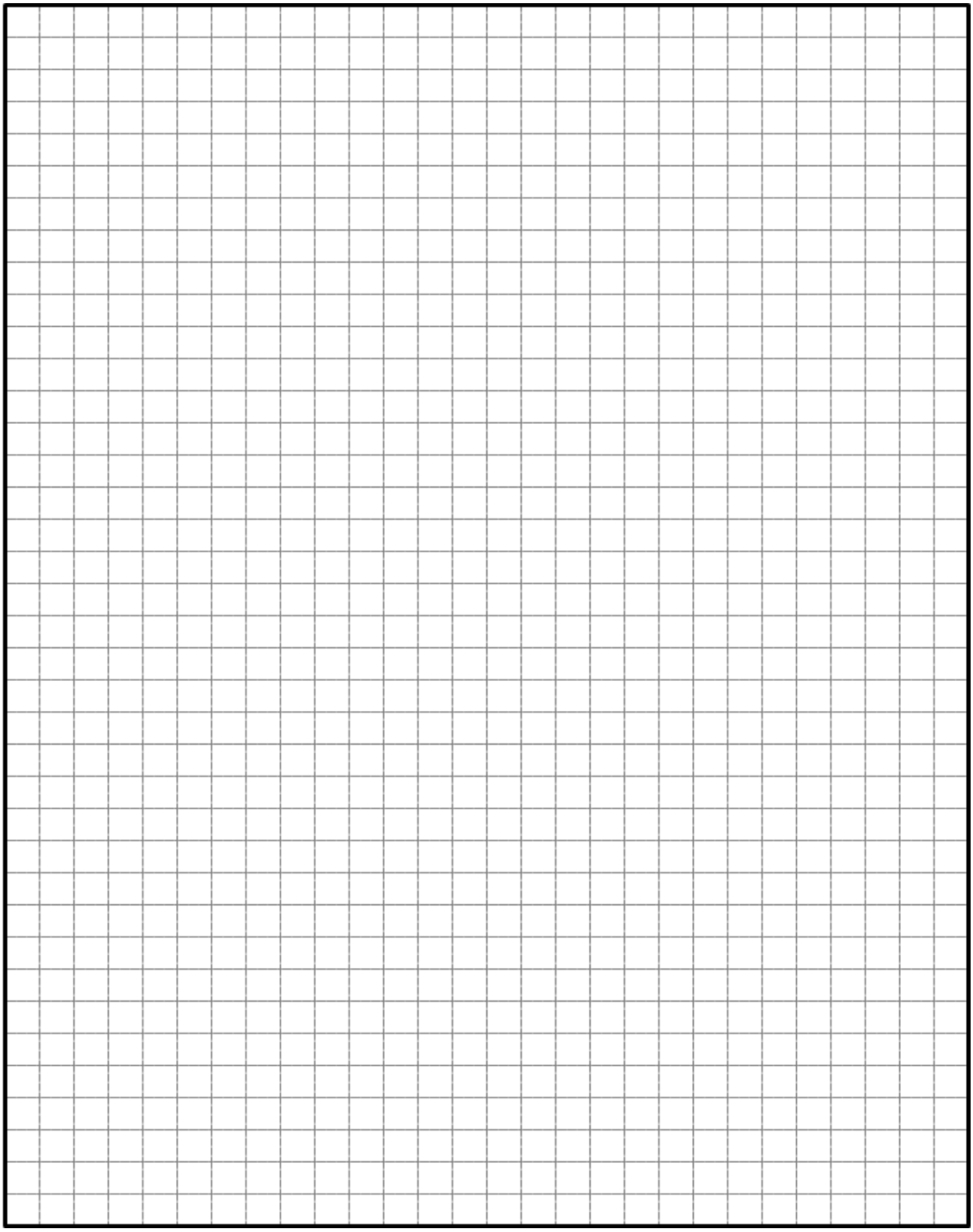
Include a sketch or image of your group's completed model below.



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Self-Reflection and Teacher Feedback: Model

Skill	Basic	Proficient	Advanced
Use a decision matrix	I'm not yet able to compare multiple solutions to see how well each one meets the criteria and constraints.	With some help, I'm able to compare multiple solutions to see how well each one meets the criteria and constraints using a decision matrix.	On my own, I'm able to compare multiple solutions to see how well each one meets the criteria and constraints using a decision matrix.
Sketch and create solution	I'm not yet able to sketch or create the best solution.	I'm able to sketch **or** create the best solution.	I'm able to sketch **and** create the best solution.
Teacher Feedback:			

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Evaluate

Describe how you will evaluate or test your solution.

Conduct a **fair test**. Document your findings. Use evidence to identify strengths and weaknesses of your design.

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Self-Reflection and Teacher Feedback: Evaluate

Skill	Basic	Proficient	Advanced
Plan how you will evaluate or test your solution	I'm not yet able to plan how I will evaluate my solution.	I'm able to plan **or** explain how I will evaluate my solution.	I'm able to plan **and** explain how I will evaluate my solution.
Conduct and document a fair test	I'm not yet able to conduct or document a fair test.	I'm able to conduct **or** document a fair test.	I'm able to conduct **and** document a fair test.
Identify strengths and weaknesses	I'm not yet able to identify strengths and weaknesses of my solution.	I'm able to identify strengths and weaknesses of my solution without using evidence.	I'm able to identify strengths and weaknesses of my solution using evidence.
Teacher Feedback			

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Explain

Summarize and share your solution.

Provide suggestions for improvement using evidence.

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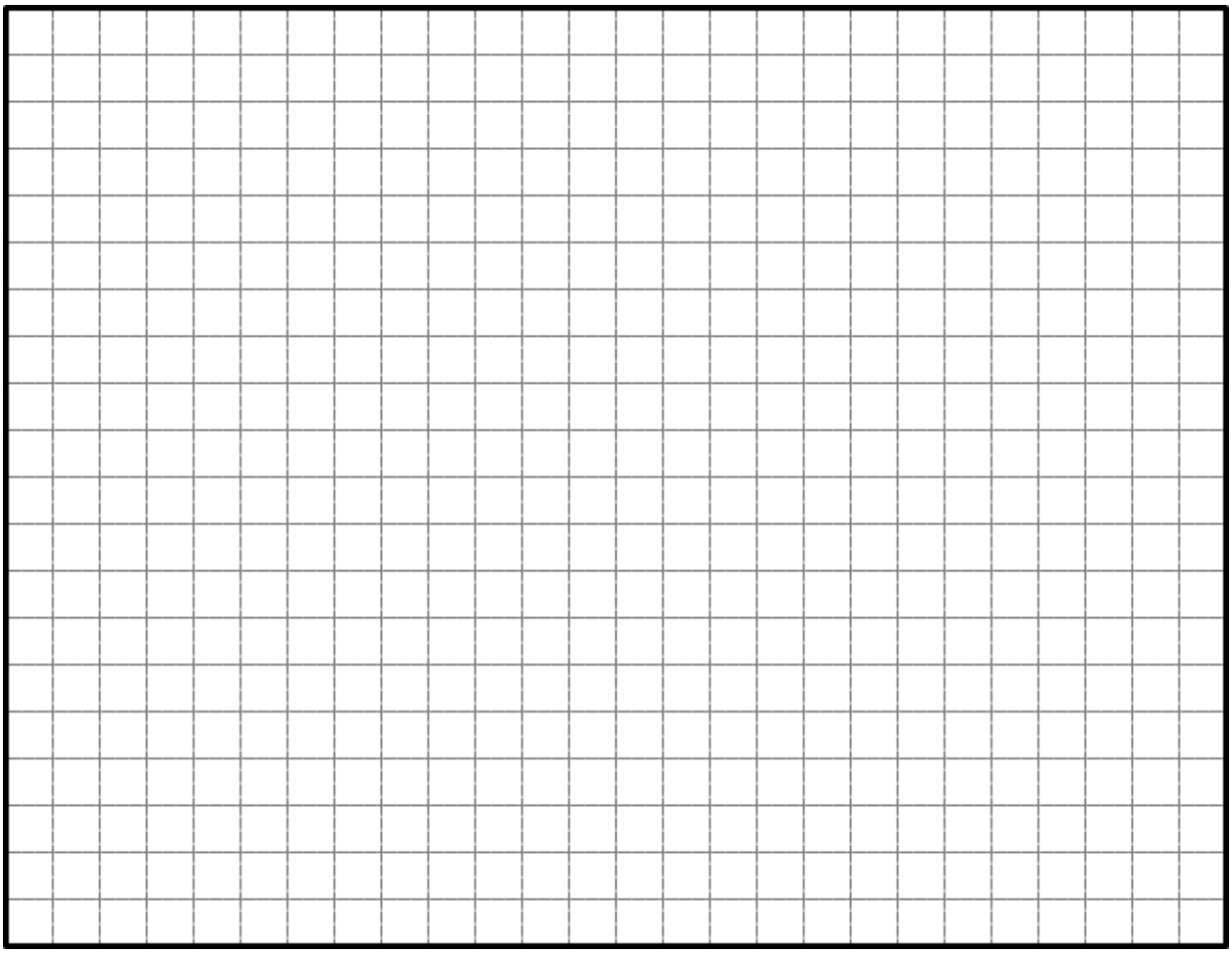
Self-Reflection and Teacher Feedback: Explain

Skill	Basic	Proficient	Advanced
Summarize and show results	I'm not yet able to summarize or share the results of the design process.	I'm able to summarize **or** share the results of the design process.	I'm able to summarize **and** share the results of the design process.
Suggest improvements	I'm not yet able to make suggestions for improvements.	I'm able to include suggestions for improvement without using evidence.	I'm able to include suggestions for improvement using evidence.
Teacher Feedback			



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