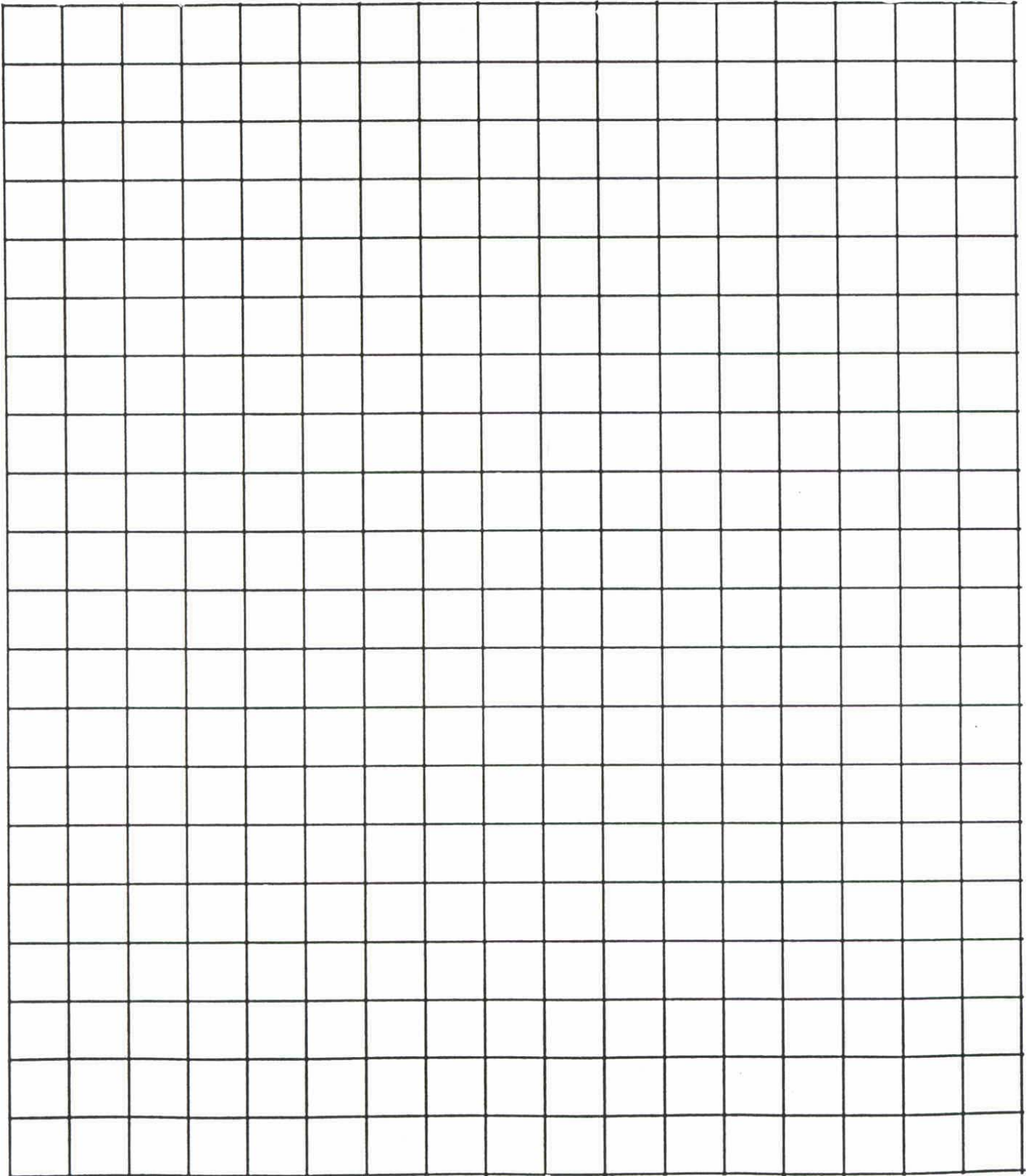
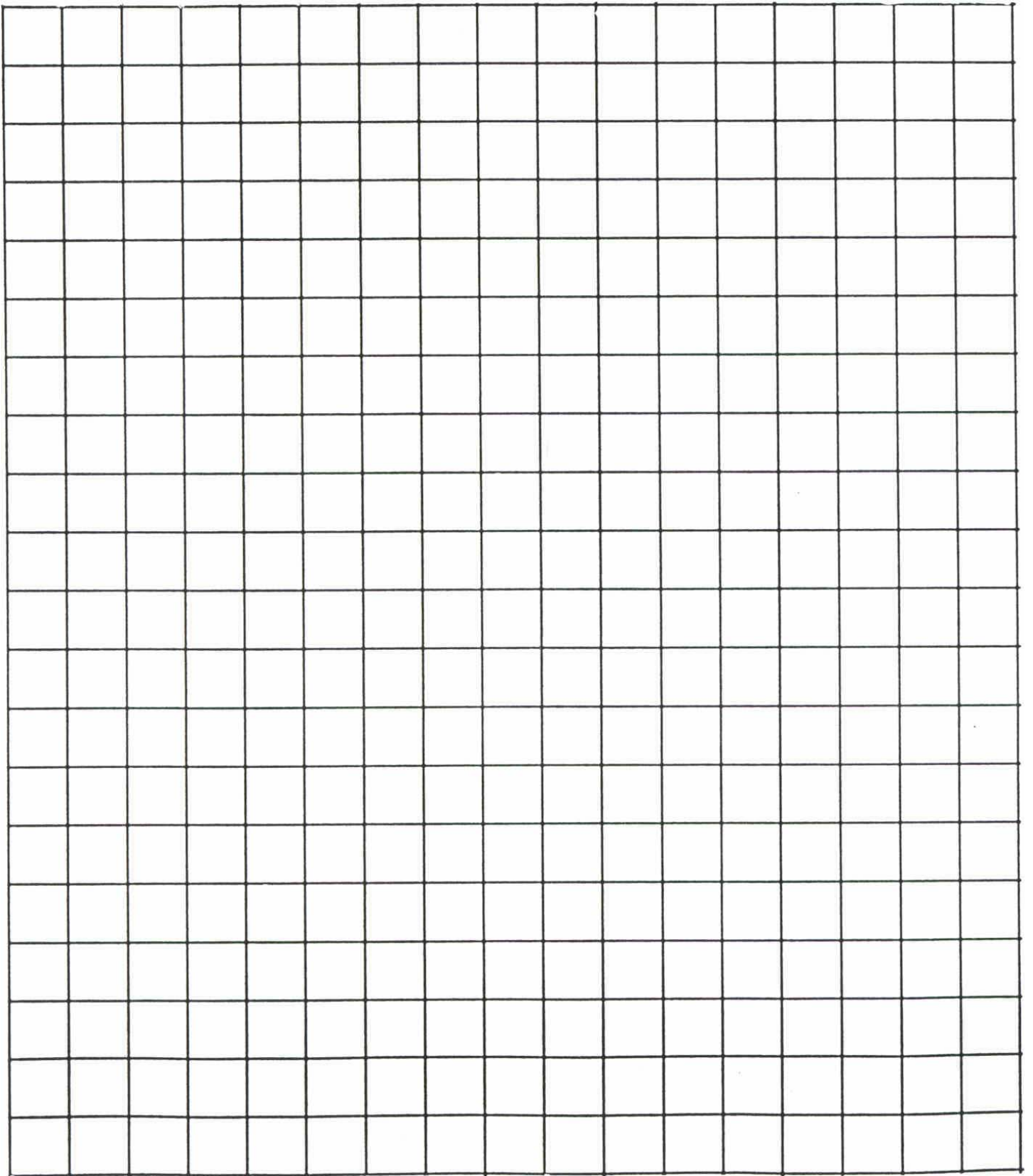


Designing A Floor Plan

You are in charge of setting up a floor plan of a family room. The room measures 20 x 17 feet, but use this 20 x 17 square centimeter grid to arrange your model floor plan.





Furniture Items

Your job as an interior designer is to best organize the room with all of the following furniture items. The area measure of each furniture item is given in square centimeters.

1. Lamp Table 4 cm²
2. Sofa 24 cm²
3. Coffee Table 10 cm²
4. End Tables (2) 2 cm² each
5. Computer desk 12 cm²
6. Bookcase 12 cm²
7. Big Screen TV 8 cm²
8. Stereo 14 cm²
9. Arm Chair (2) 9 cm² each
10. Pool Table 36 cm²
11. Plant Stands (2) 4 cm² each

What am I trying to accomplish?

Your goal is to set up the family room in a comfortable and practical way that would provide the maximum amount of walk space for the room. The furniture items can be designed in any polygonal shape as long as each furniture area remains the same. For example: The bookcase area = 12 cm², this can be 3x4, 2x6, 12x1, or a polygon measuring 12 cm².

Give It A Try !

Use two copies of the family room grid (20 x 17) to explore the many different ways to design the room. You'll use **one grid to design the furniture** and the **other grid to set up the room.** Here are some ideas to think about as you devise a plan.

What is the total area of the family room? (in cm² or ft²)

What is the total area of all the furniture items combined?

Written Results:

1. After you finish designing your furniture and arranging the family room, explain what you did to complete your task.
2. What worked and what didn't work? Why?
3. What is the total area of available walking space?
4. How did the concepts of area and perimeter help you?

Your completed project should include:

- A) Page 1, which shows your finished floor plan with all furniture in the best place to provide a comfortable and practical room. Each piece of furniture should be **clearly identified**, and **colored**.
- B) An attached sheet of notebook paper answering the questions 1-4 under "**Written Results**" in **complete sentences**, and in paragraph form.

Grading Criteria

Completed floor plan.....14 items/5 points each	70 points
Answered questions.....4 questions/5points each	20 points
Project turned in on time.....	10 points
Total	100 points