

DREAM HOUSE

Content Standard:

- Find the area of two-dimensional figures.

Process Standard:

- Self-reflect on their work.

Task:

You will be creating a dream house using the shapes we have studied this chapter. You must make a dream house/vacation getaway/paradise hotel/etc. using at least TEN shapes. However, you may not just use, for example, 10 rectangles of different sizes. I want to see at least FIVE different shapes represented. Try to use as many shapes as possible to create a more interesting looking house. You may also use these shapes to create landscaping or other objects outside of your house. Below is the list you may choose from:

Parallelogram	Triangle (any type)	Regular Pentagon	Circle
Rectangle	Square	Regular Hexagon	Semi-circle
Trapezoid	Kite	Regular Octagon	Sector of a circle

In the blank space at the bottom of the page, draw a brief sketch of your idea. Once you've done so, carefully draw your house on **graph paper** so that the dimensions (length/width/height/radius/etc.) can be easily figured out by counting the boxes on your graph paper. When your sketch on graph paper is finished, outline each shape in heavy black lines.

Once your house is finished, label each shape you used with a different letter. On a separate page, find the area of each shape and **SHOW YOUR WORK!** For example, say I used a trapezoid for the roof of my house and labeled it with an **A**. I would write:

(A) TRAPEZOID

$$\text{Area} = \frac{1}{2} h (b_1 + b_2) = \frac{1}{2}(9)(3 + 7) = \frac{1}{2}(9)(10) = 45 \text{ units}^2$$

After you have calculated each separate area, find the **total area** of your house (subtract the area of windows or other open spaces). Label this as "**MY TOTAL AREA**" and circle it. Be creative and color your house!

Criteria:

- Students create a house using 10 different shapes
- Students correctly find the area of each figure
- Students correctly find the area of just the house.
- Students are creative and neat with their work.

Rubric

Criteria	Poor	Unsatisfactory	Satisfactory	Excellent
Used 10 different shapes	Used less than 5 different shapes (0 pts)	Used 6 - 8 different shapes (1 pt)	Used 9 different shapes (2 pts)	Used 10 or more different shapes (3 pts)
Area of each figure	Found the area correctly for less than 50% of shapes (0 - 5 pts)	Found the area correctly for 50 - 75% of shapes (6 - 8 pts)	Found the area correctly for 76 - 99% of shapes (9 - 11 pts)	Found the area correctly for all shapes (12 pts)
Area of house	Did not find the area of the house (0 pts)		Tried to find the area of the house but was unsuccessful (1 pt)	Found the total area of the house correctly (3 pts)
Neatness and Creativity (Needs to be done on graph paper)	Was not on graph paper and not colored (0 - 1 pts)	Was either not on graph paper or was not colored (1 pt)		Was on graph, colored, and neat (2 pts)

Total _____/20