

Building beehives:

Objective definition:

1. Firstly, I will take constants which are

$WIDTH_AND_HEIGHT = 12 * 24$

$COST_OF_EACH_WOOD = 24.99$

$BORDER_HEIGHT = 6$

$SIDES_PER_HEXAGON = 6$

2. I will put user input of side_length & num_of_hexagons

3. Then I will Calculate the area of hexagon from the formula below

$hexagon_area = (3 * (3^{1/2}) / 2) * (side_length ** 2)$

4. Then I will calculate the needed sheets & cost of wood

5. For the extension I will calculate the border area with the following formulas

$border_area_per_hexagon = BORDER_HEIGHT *$

$SIDES_PER_HEXAGON$

$total_border_area = border_area_per_hexagon * num_of_hexagons$

$border_sheets_needed = total_border_area / WIDTH_AND_HEIGHT$

$border_cost = border_sheets_needed * COST_OF_EACH_WOOD$