BEDROOM DESIGN ACTIVITY

PROBLEM SITUATION:
You are moving to a new house that is being built for your family and a friend is also moving to a new house being built.   The same architect is being used by both families and needs information regarding your living style to determine the best design.   Time for some fun—Trading Places.   You and your friend have a challenge to design the optimal furnished bedroom for each other.   It can be a dream bedroom and you have a budget of $27,500 to design a rectangular bedroom with minimum dimensions of 120 square feet. However, the budget increases to $30,000 if you design a non-rectangular bedroom with a minimum area of 120 square feet.

YOUR CHALLENGE:
You and your teammates are to design a furnished bedroom.   You will build virtual and actual scale models of your bedroom, with furnishings.

CLARIFY the DESIGN SPECIFICATIONS and CONSTRAINTS:
To solve the problem, you design must meet the following specifications and constraints:
• The window area must be equal to at least 20% of the floor area.
• The minimum room size is 120 square feet.   The minimum height of all ceilings is 8 feet and the maximum is 12 feet.
• The bedroom will have two outside walls and two interior walls. In the actual scale model one interior wall can be removed for ease of access and seeing the design.
• The budget is $27,500 for a rectangular bedroom and $30,000 for a non-rectangular bedroom.
• The cost of basic construction is estimated at $150 per square foot of floor area.

Bedroom Design Day 1

After you read the problem statement please answer the following questions IN YOUR OWN WORDS:

1. To complete the project this is what I have to do:

2. What is the MOST amount of money I can spend on the bedroom?

3. What is the minimum size I can design my bedroom?

4. What dimensions would meet the minimum bedroom size? *(Circle all that apply)*
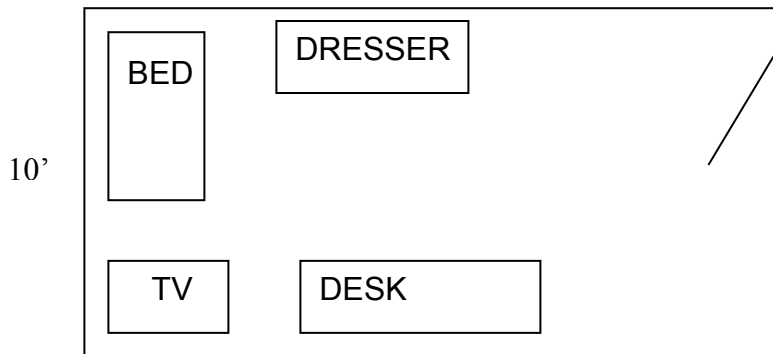**1" *means one inch***
1' *means one foot*

      8' x 10'   **10' x 11'**   **9' x 13'**   **10' x 12'**   **14' x 9**   **13'-6" x 8'**

5. What is the minimum ceiling height? _____ft

6. Based upon $150.00 per square foot for construction cost how much would it cost to build the following rooms:

10' x 12' $ _____

12' x 12' $ _____

12' x 14' $ _____

14' x 14' $ _____

10'-6" x 12'-6" $ _____

Now set up a spreadsheet to do this for you in excel, enter the formula

HOMEWORK: Measure your bedroom at home and calculate how many square feet you have. Draw a floor plan and label furniture. EXAMPLE BELOW