

How large of an HDTV should I get?

Whether you are in middle school or high school, someday you are going to be moving out and you might need to select the right size HDTV for your living space. I found this guide that helps buyers pick the correct size HDTV for their room. Take a look at the table. What questions do you have? What do you notice?

| Viewing Distance in feet | Viewing Distance in inches | Min Size | Max Size |
|--------------------------|----------------------------|----------|----------|
| 4 | 48 | 19 | 32 |
| 6 | 72 | 26 | 46 |
| 8 | 96 | 32 | 63 |
| 10 | 120 | 40 | 80 |
| 12 | 144 | 46 | 96 |
| 14 | 168 | 52 | 112 |

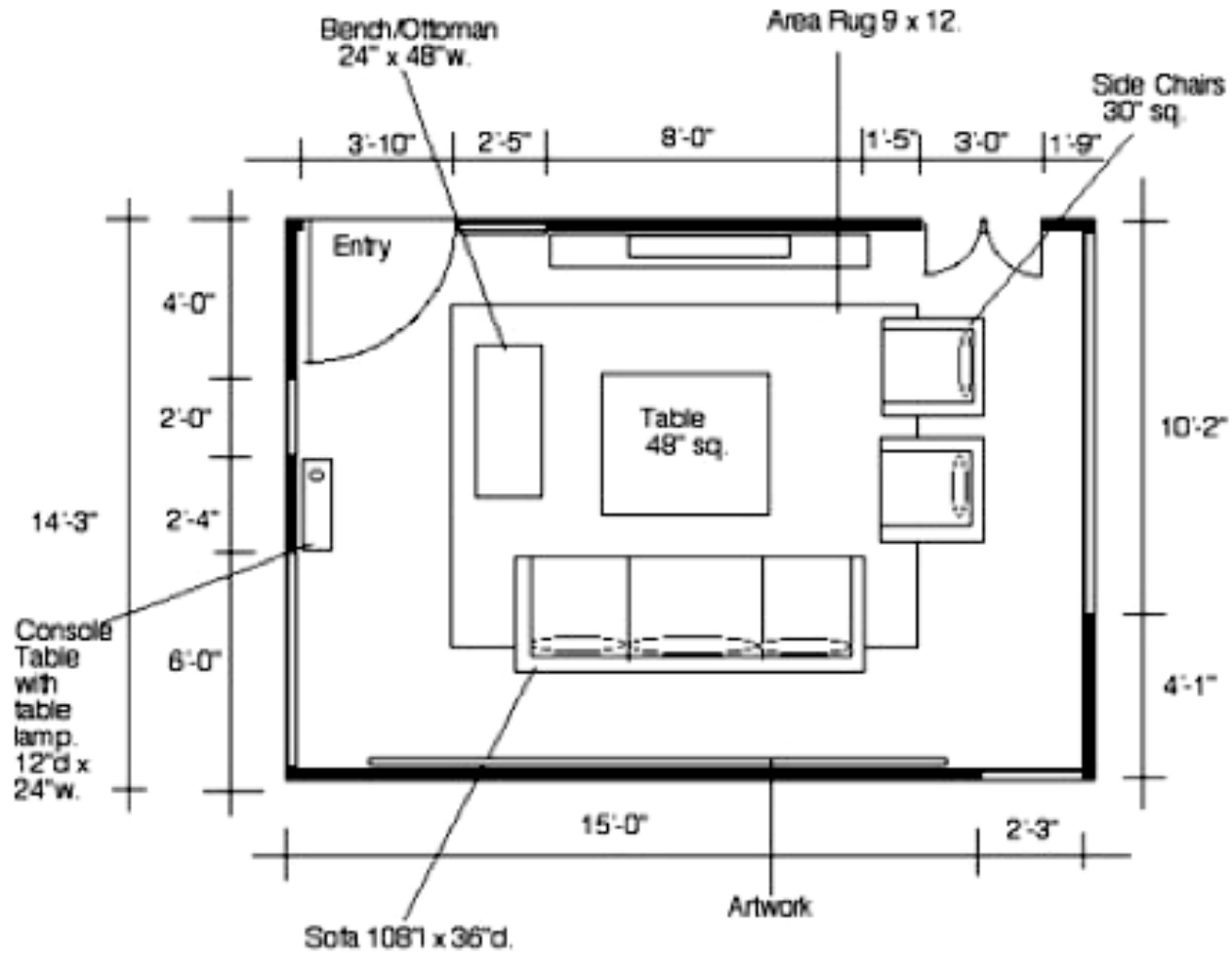


1. Check out the floor plan to the left. Your task is to place an HDTV in the Great Room (kind of like a living room). Be sure to place and roughly draw to scale all of the furnishings for the room, including the TV. This is necessary so that you can determine the distance between the viewer and the HDTV. Be sure to tell what size TV you selected.

TVs are sized by the length of their diagonals. For our purposes you can just assume that including the frame of the TV, your width will be close to the diagonal measurement of the set.

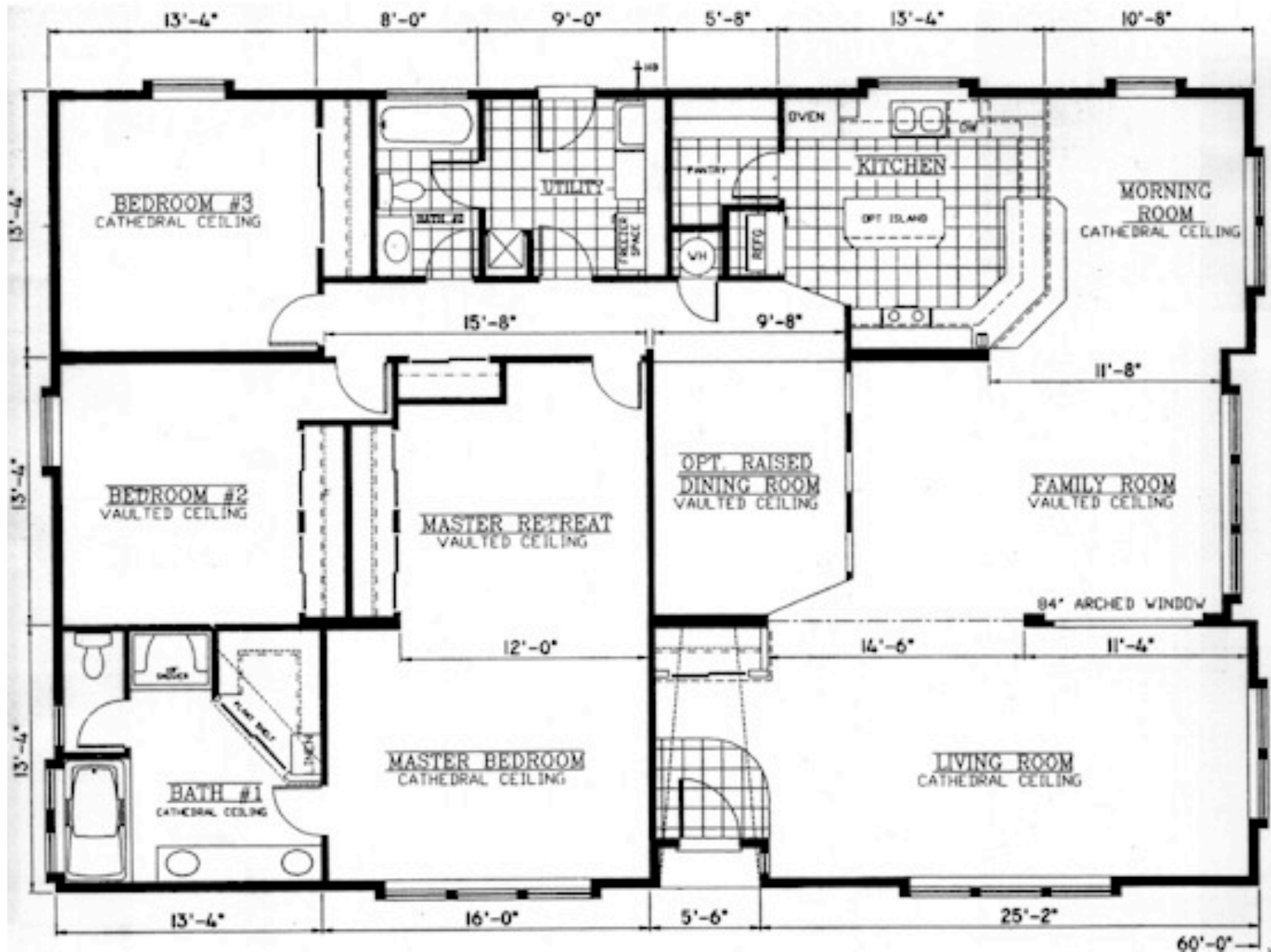
Picture adapted from Cozy Cabins LLC

2. Check out the finished floor plan below. You can see the HDTV drawn in on TV stand/cabinet at the top of the drawing, under the 8-foot line segment. Did the designer choose an appropriately sized HDTV?



Picture from Design Challenge, Jil Seidner Design

3. Here is an image of my mansion. I need you to help design my living room and select the right size HDTV for it. Repeat the same steps as in problem one. This time you will have to figure out how to create your own scale. Much information is given.



4. Aside from the table that you saw earlier in this activity, I also found this additional information about selecting the appropriate HDTV size.

To get the best picture quality, you'll need to choose the right TV dimensions based on the viewing distance you just determined. It just takes a bit of simple math to find your ideal TV screen size:

$$\text{Minimum TV dimensions} = \text{Viewing distance} / 3$$

$$\text{Maximum TV dimensions} = \text{Viewing distance} / 1.5$$

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How do these formulas compare to the information provided in the table? Do we see the formulas in the table and if so, how?

5. For homework either:
- Check your HDTV at home to be sure it is the correct size compared to distance from the viewing area.
 - Determine what size HDTV is appropriate for a particular room in your house. Be sure to bring your findings and information to share in class, such as a rough scale drawing, measurements or pictures.