



Bathroom Design

Student Activity

Name _____

Class _____

Open the TI-Nspire document *Bathroom_Design.tns*.

The Bathroom Design challenge allows you to design your own bathroom and determine the cost of tiling the floor of the bathroom.










Move to page 1.2

Press **ctrl** **▶** and **ctrl** **◀** to navigate through the lesson.

1. Choose the size and shape of the bathroom by adjusting the position and shape of the east wall.
 - a. Grab and drag point A to change the length of the south wall of the bathroom.
 - b. Grab and drag point B to change the length of the north wall of the bathroom.
 - c. Grab and drag point C to change the position of the corner on the east wall of the bathroom. Note that only positions marked with “red cross” are allowed for the corner C.
 - d. Grab and drag point D along the east wall to position the doors to the bathroom.
2. You are given four bathroom pieces: a bathtub, a shower stall, a toilet, and a sink. These will become permanent fixtures after you install them. Place bathroom pieces inside your bathroom.
 - a. Grab and drag the black point on each bathroom piece in order to move it.
 - b. Grab and drag the white point on each bathroom piece in order to rotate it.
3. Use provided tiles to cover the floor of the bathroom around the bathroom pieces.
 - a. Grab and drag the green point on each tile piece in order to move it.
 - b. Grab and drag the white point on each tile piece in order to rotate it.



4. After you complete the tiling, record the number of different tile pieces you used and the fractional representation of each piece.

Tile piece	Fractional representation of the piece	Number of pieces used to tile the floor of the bathroom
	1	
		
		
		
		
		
		

5. Given that the tile is \$30 per piece, estimate the cost of tiling the floor of your bathroom.
- Calculate the total number of tiles you used to cover the floor. Show the process you used to do the calculations.
 - Estimate the number of tiles needed to cover the remaining free space (if any). Explain the process you used to do the estimation.
 - Estimate the total number of tiles, and determine the approximate cost of tiling the floor of the bathroom.