Directions: You’re the designer. The required volume or area of each item in the new hotel is listed below. Using what you know about squares and cubes, write an equation that models the volume or area. Then, solve the equation to determine the necessary length of each side or edge.

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| --- | --- |
| Rug  400 ft2 |  |
| Soap  8 in3 |  |
| Water cup  27 in3 |  |
| Coaster  16 cm2 |  |
| Room card  4 cm3 |  |
| Sugar cube  2 cm3 |  |
| Foot stool  27 ft3 |  |
| Patio  49 ft2 |  |
| Pillow case  4 ft2 |  |
| Bathroom mirror  25 ft2 |  |