

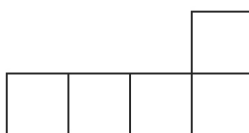
Chapter 5 Gifted and Enrichment

1. The volume of a rectangular prism is 0.15 m^3 . Its square base is 0.1 m by 0.1 m . What is its surface area?

2. Is it possible to have a rectangular prism that has a base that comprises 12.5% of its surface area? Explain.

3. A standard six-sided die is a white cube of side length 15 mm with black circular dots of diameter 3 mm . Find the surface area of the white portion of the die.

4. A pentomino is a shape made of five identical squares that share at least one common side. This is one pentomino that folds to make an open box.



Find all the other pentominoes that will fold to make an open box.

5. Did you know that a large block of ice melts slower than the same mass of ice cubes because a large block has less surface area? Complete this table to show how the surface area changes as the same amount of water is made into increasing numbers of ice cubes.

Number of cubes	Number of faces per cube	Dimension of one face	Total surface area
1	6	1×1	
8			
27			
64			
125			

How does the amount of surface area change when a large block is "cut" into smaller cubes?