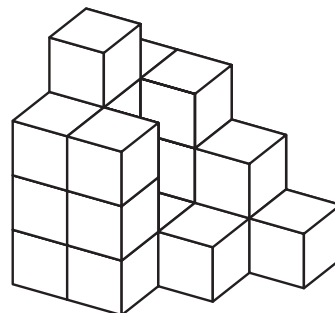


Painting Cubes

- 1 Some cubes are joined together to make this figure, which is then painted yellow on all of its sides. When it is taken apart, some faces of the cubes are painted yellow while others are not .



- (a) How many cubes are there in the figure?

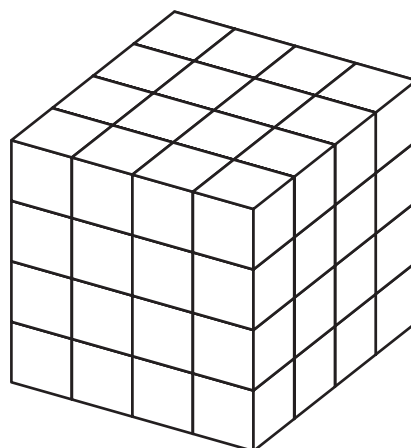
Answer: _____

- (b) Make a table to show how many cubes have 0, 1, 2, 3, 4 or 5 faces painted.

- (c) Have you included all of the cubes?

Answer: _____

- 2 A wooden cube is painted so that two opposite sides are green, another two opposite sides are yellow and the last two opposite sides are red. The cube is then cut into 64 smaller cubes.



- (a) How many of the smaller cubes have one face painted green, one face painted yellow and one face painted red?

Answer: _____

(b) How many of the smaller cubes have only two faces painted?

Answer: _____

(c) How many are red and green?

Answer: _____

(d) How many of the smaller cubes have only one face painted?

Answer: _____

(e) How many are yellow?

Answer: _____

(f) How many of the smaller cubes have no paint?

Answer: _____

(g) Are there any smaller cubes painted in other ways?

Answer: _____

(g) No, all 64 smaller cubes are accounted for.

- (a) 8
- (b) 24
- (c) 8
- (d) 24
- (e) 8
- (f) 8
- (g) 8

0	0	0	9	6	4	2
0	0	0	III	I	III	II
0	1	2	3	4	5	

(c) Yes, there are 21 cubes.

Answers:
1 (a) 21
1 (b) 24