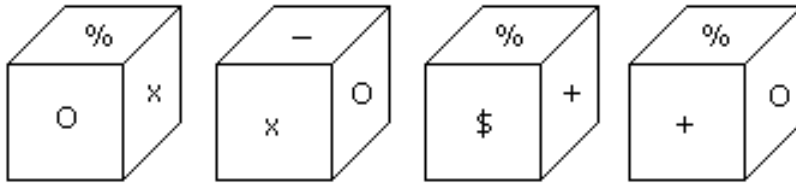


CUBES - I

- 1) Which symbol is opposite to '+'?



- a) \$ b) % c) X d) O
- 2) How many pieces obtained when a cube is cut into smaller but identical pieces by 27 cuts on a single plane, without placing any piece on the top of the other?
a) 03 b) 12 c) 09 d) 28
- 3) What is the maximum number of identical pieces get from a cube subjected to 16 cuts?
a) 252 b) 225 c) 192 d) 180
- 4) What is the minimum and maximum number of pieces obtained when a cube is cut into smaller pieces by 24 cuts?
a) 25, 91 b) 120, 520 c) 25, 729 d) 25, 127
- 5) What is the minimum and maximum number of pieces obtained when a cube is cut into smaller pieces by 19 cuts?
a) 20, 418 b) 20, 392 c) 20, 264 d) 20, 327
- 6) Find out the minimum number of cuts required to slice a large cube into 125 smaller but identical pieces?
a) 16 b) 15 c) 18 d) 12

Question 8 - 15:

A large cube is painted with orange colour on all faces and cut into 216 identical pieces. Answer the following questions based on the description.

- 7) How many smaller cubes have 3 sides painted?
8) How many smaller cubes have exactly two sides painted?
9) How many smaller cubes have no paint at all?
10) How many smaller cubes have at most one side painted?

Question 11 - 14:

A large cube is painted with brown colour on all faces and cut into 729 identical pieces. Answer the following questions.

- 11) How many smaller cubes have at least two sides painted?
12) How many smaller cubes have only one side painted?
13) How many smaller cubes have no paint at all?
14) How many smaller cubes have at most two sides painted?

Answers:

- 1) c (X)
- 2) d (28)
- 3) a (252)
- 4) c (25, 729)
- 5) b (20, 392)
- 6) d (12)
- 7) Ans: 8
- 8) Ans: 48
- 9) Ans: 64
- 10) Ans: 160
- 11) Ans: 92
- 12) Ans: 294
- 13) Ans: 343
- 14) Ans: 721