

Cube Count

Can you count the cubes in each row?

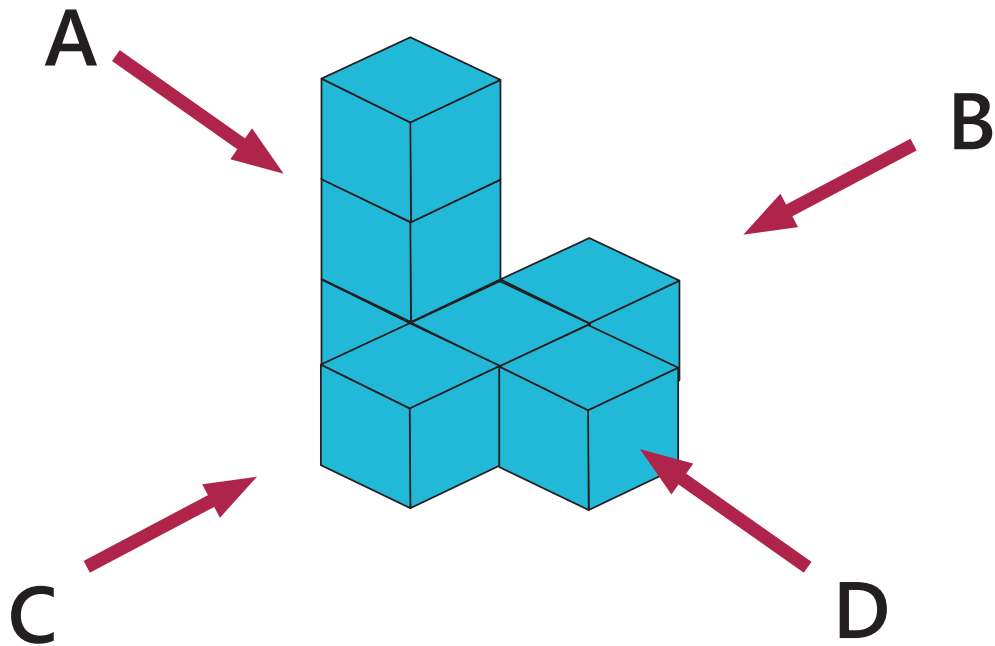
How many cubes in all?



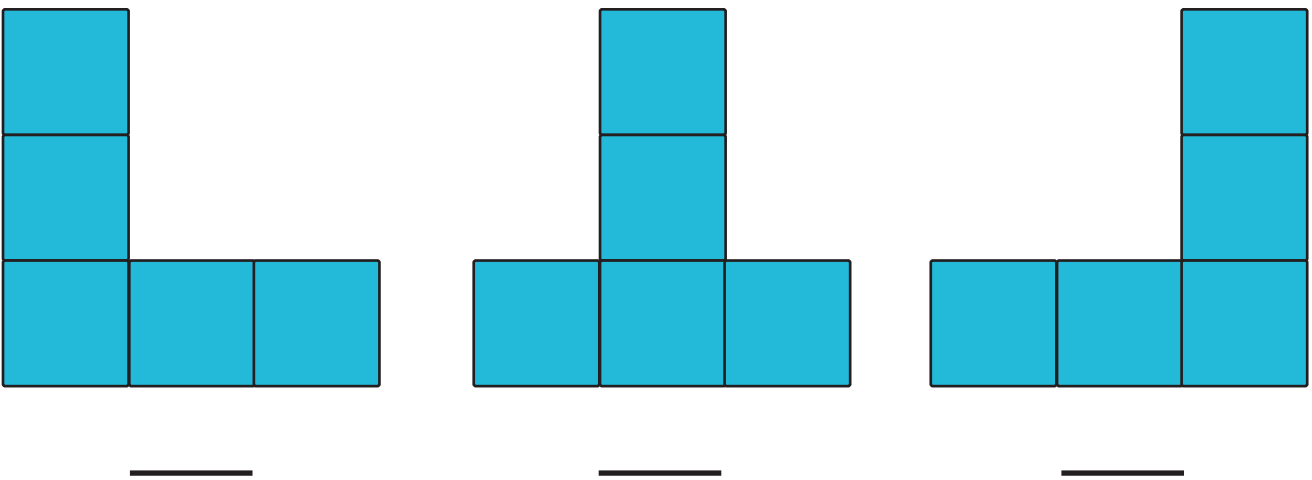
How many cubes if the building had ten layers?

Nice Views

This building is made with 7 cubes.



These are different views of the cubes.



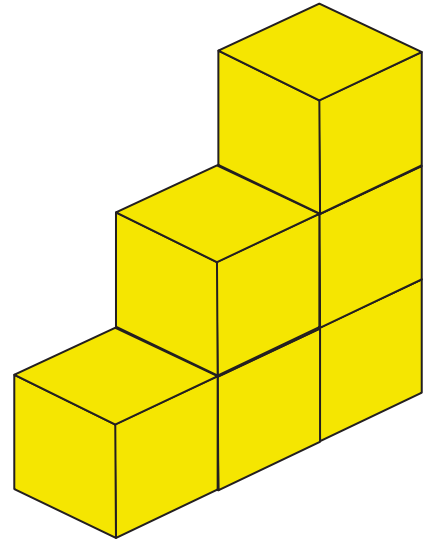
1. From which perspective (A to C) will you see each view?
2. Draw the view you would see from perspective D.
3. Make some more buildings with cubes, then draw pictures of the views from different perspectives.

Staircases

This staircase is 3 steps high and needs 6 cubes to build it.

How many cubes would it need if it were:

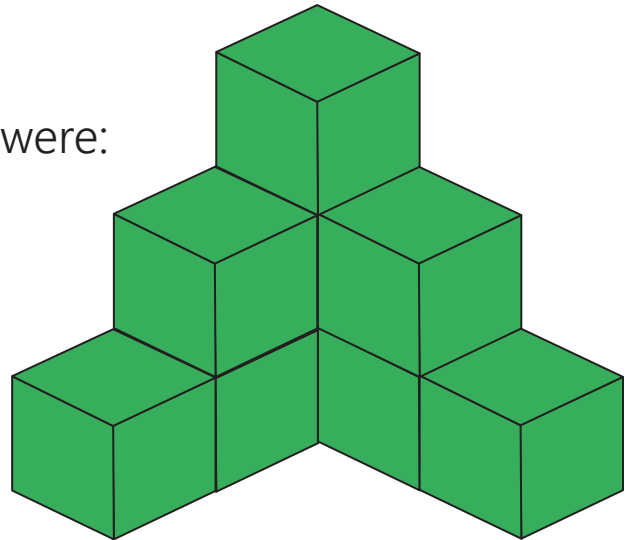
1. 5 steps high?
2. 10 steps high?
3. 20 steps high?



This staircase is also 3 steps high.

How many cubes would it need if it were:

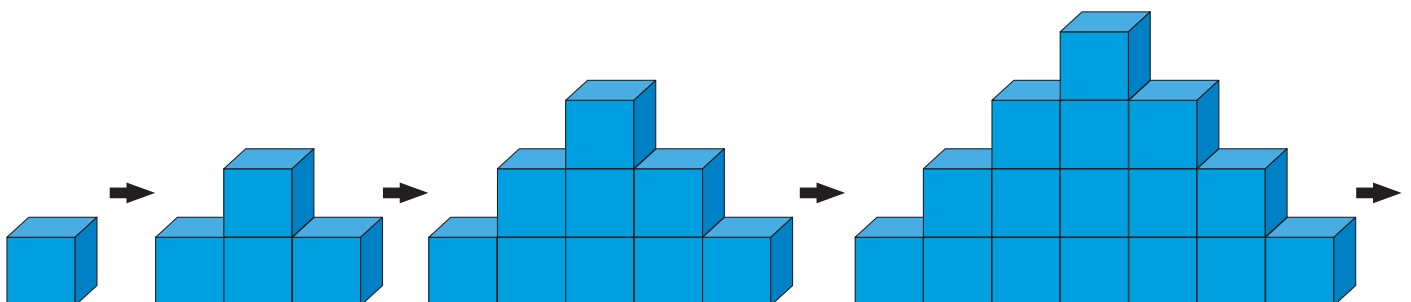
1. 5 steps high?
2. 10 steps high?
3. 20 steps high?



Find a quick way of working out how many cubes are needed for any height, for either of these two staircases.

Build & Count

How many cubes are there in each building?

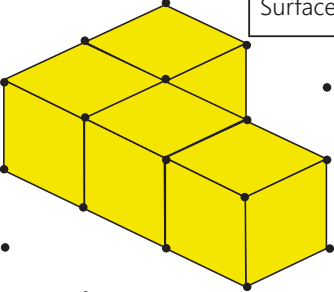


Continue the pattern.

Cube Buildings

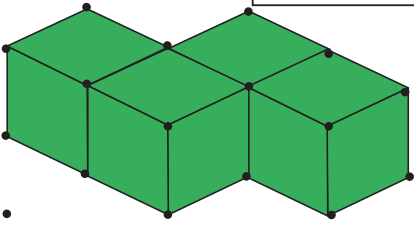
These buildings are all made from 4 cubes. Build them.
Write down the volume and surface area of each building.

A



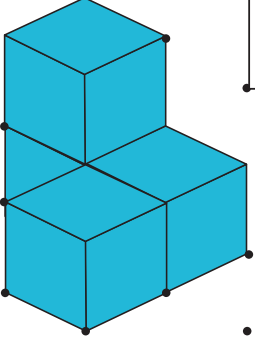
Volume = 4 units³
Surface Area = 18 units²

B



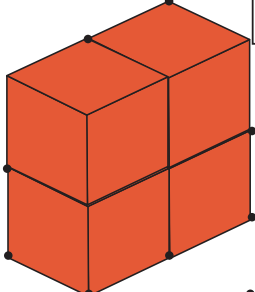
Volume = __ units³
Surface Area = __ units²

C



Volume = __ units³
Surface Area = __ units²

D



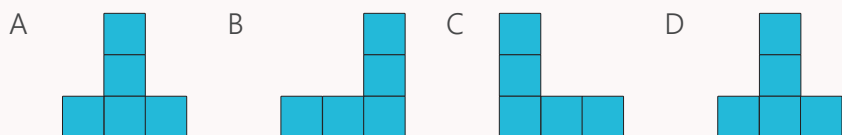
Volume = __ units³
Surface Area = __ units²

Answers

Cube Count

55

Nice Views



Staircases

Yellow: 15; 55; 210
Green: 25; 100; 400

Build & Count

1, 4, 9, 16

Build & Count

B, C: Surface area of 18 units².
D: Surface area of 16 units²
All have a volume of 4 cubic units.

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