1 Building with Bricks

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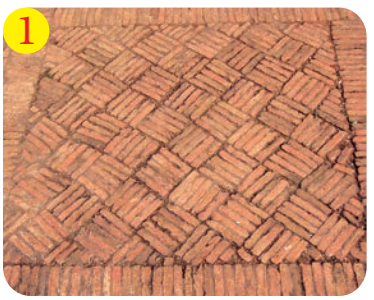
Brick Patterns for Jagriti School

This is the true story of Jagriti School in Murshidabad (West Bengal). When its building was being made, there was a plan to make brick patterns on the floor and walls. Jamaal, Kaalu and Piyaar were the masons for the brick work. They wanted to get new ideas for the school building. So they took their other friends to see the old tomb of Murshid Kuli Khan. (See photos.)



This building has a big floor with about two thousand beautiful brick patterns. These were made by masons long back – about three hundred years ago.







Look how the bricks are arranged in these five floor patterns.







Which floor pattern do you like the most? _____

Have you seen such patterns anywhere?

The masons came back excited. Jamaal said — Ah! In those days they had made so many interesting brick patterns. We had forgotten these! Let us make some nice designs on the floor of this school.



Each mason made a different brick pattern. The school is proud to have such a beautiful building! Children play and sing on it and also make new patterns themselves.

























- Which pattern is made in a circle?
- In which pattern can you show mirror halves? Draw a line.
- Now you draw some new floor patterns.

How to Draw a Brick?



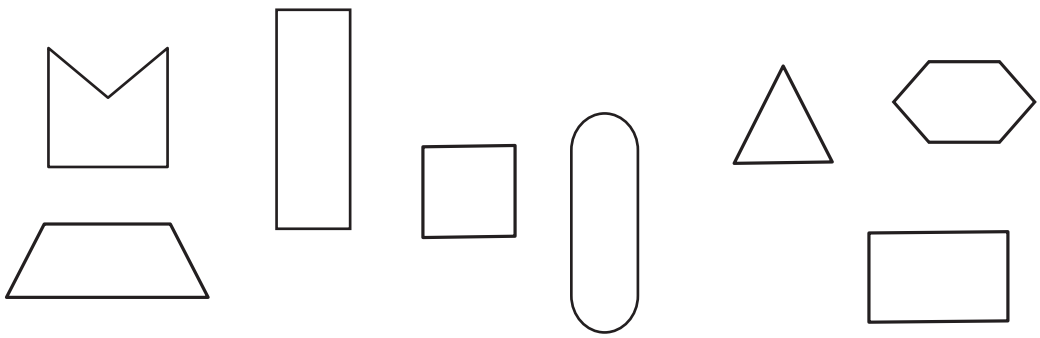
These are two photos of the same brick.

In one photo we can see only one **face** of the brick. In the other we can see three faces. Circle the photo showing three faces.

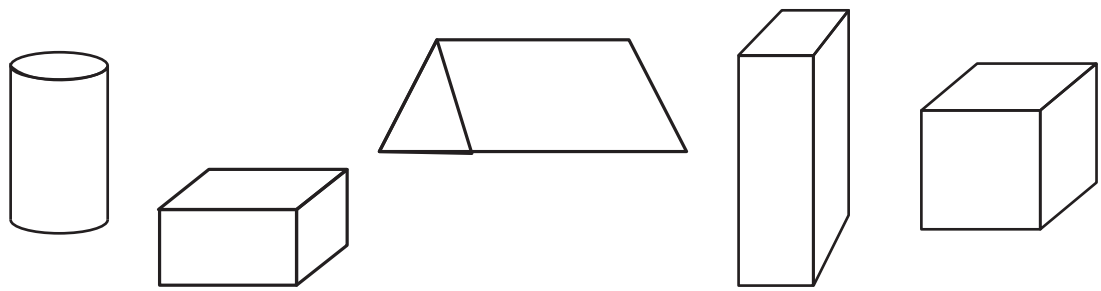


- How many faces in all does a brick have? ____
- Is any face a **square**?
- Draw the smallest face of the brick.

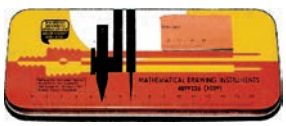
- Which of these are the faces of a brick? Mark a (✓).



- Which of these is a drawing of a brick? Mark a (✓).



- Make a drawing of this box to show 3 of its faces.



- Can you make a drawing of a brick which shows 4 of its faces?

A Wall that will not Fall

One day Muniya and Zainab are playing with bricks and making their walls. Each makes a different wall.



Zainab



Muniya

Zainab says her wall will not fall easily. Masons too do not put bricks one on top of the other, as Muniya has done.

What do you think? Which wall will be stronger?

Look for walls where you can see different brick patterns.

Different Wall Patterns

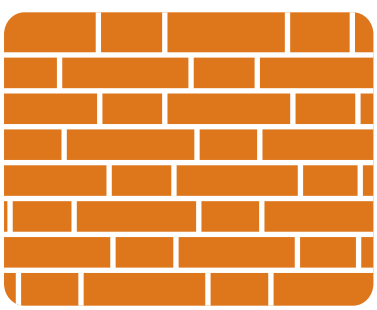
- Here are photos of three kinds of brick walls. Can you see the difference in the way the bricks are placed?

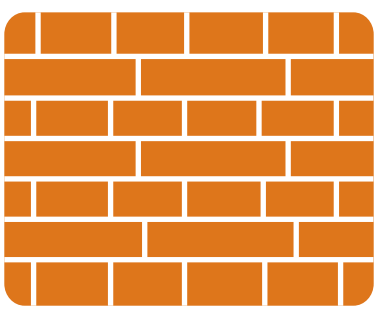


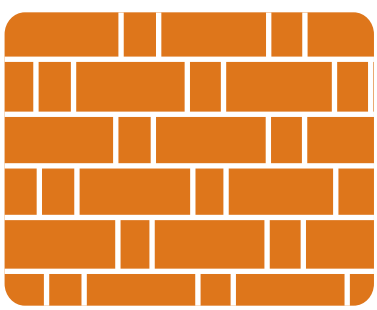




- Now match the photo of each wall with the correct drawing below:







Looking Through a Brick 'Jaali'

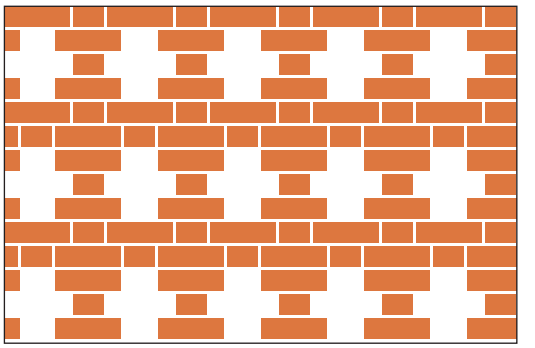
The masons who built Jagriti School had also made different *'jaali'* patterns on the walls.



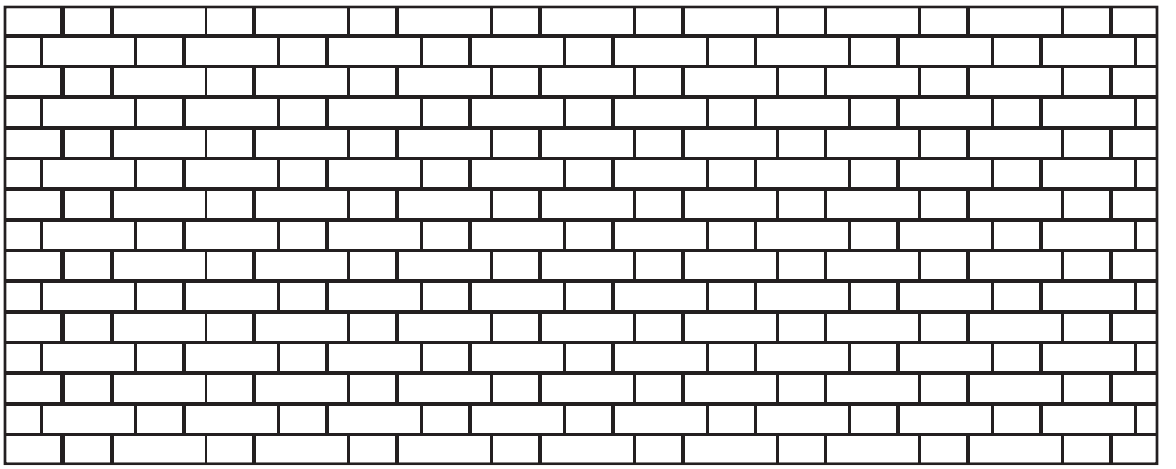


✤ How many different *'jaali'* patterns can you see in these two photos?

This is a drawing of another beautiful *'jaali'*.



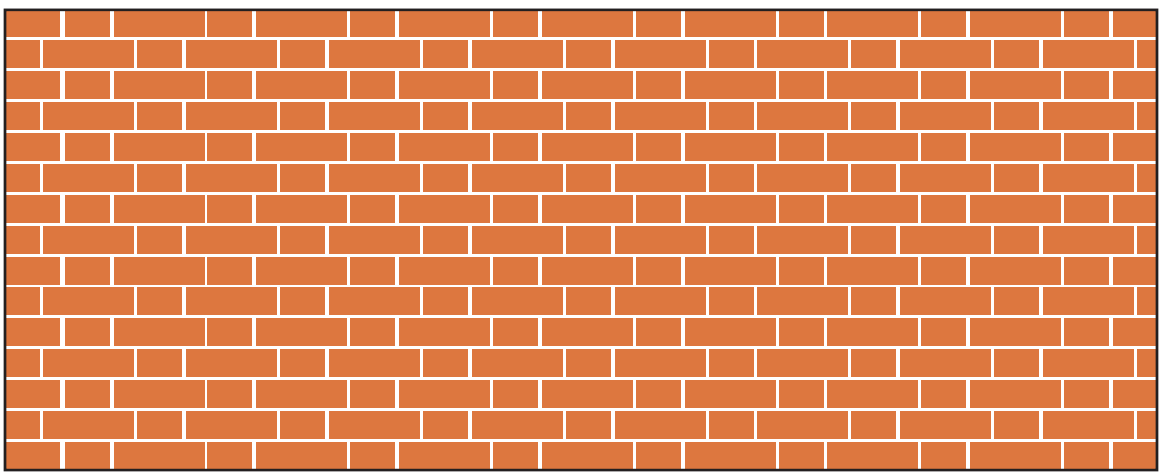
- Now colour some bricks red and make your own *'jaali'* patterns in the wall drawn below.

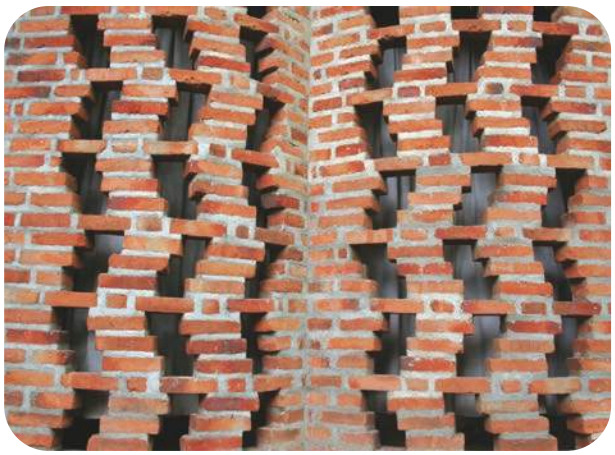


Can you see the window *(jharokha)* in this photo of the school?



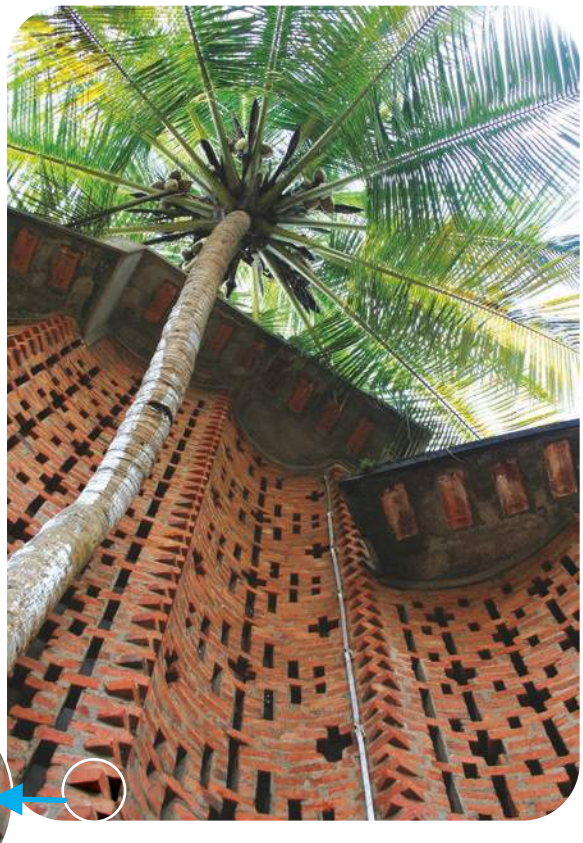
- Now draw some *jharokha* patterns on the wall here. You can shade it black.





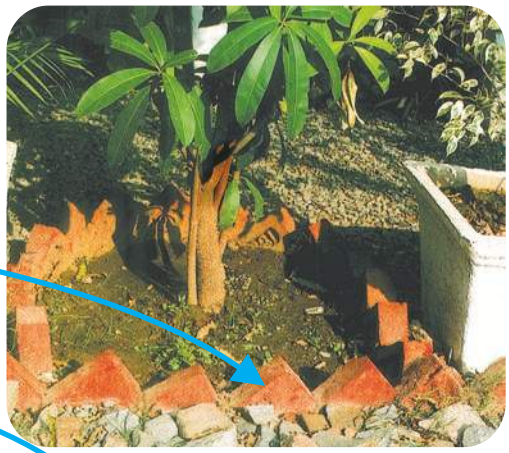
This *'jaali' is* from a library building in Kerala.

See how the edge of the bricks is used to make a **triangle** in the wall.





Have you seen bricks that look like triangles? Look at the bricks around the tree in this photo.





Do you see the **arch** in this photo?

This is from a school in Faizabad.

Find out

Look for other arches around you and draw them.



Have you seen arches in a bridge?

- Where else have you seen an arch?

_____

A Special Arch

In this photo from Orchha, see how the arch is made. It has a nice name – *Ghoonghat Waali Mehraab* (the arch with a veil).



Isn't the *'jaali'* of this window beautiful? It is made of thin bricks. Have you ever seen thin bricks? Look around.

Jamaal and Kaalu, the masons of Jagriti School, said that their grandfathers used many different kinds of bricks. Some of these are shown in this photo.



- Which of these bricks have curved edges?
- How many faces do you see of the longest brick?
- Is there any brick which has more than six faces?

Find Out: The Size of a Brick

Have you seen bricks of different sizes?

- Take one brick and measure it.
  a) How long is it? _____
  b) How wide is it? _____
  c) How high is it? _____
- Muniya wants to make a wall 1 metre long. How many bricks will she need to put in a line? _____

Bricks and Bricks — Hot and Fresh!

Ganesh and Sahiba live near a kiln where bricks are made.



- Can you guess how high is the chimney here? Is it:
  a) about 5 metres?
  b) about 15 metres?
  c) about 50 metres?

Ganesh and Sahiba love to look at the pattern of bricks in the long, long lines kept out to dry. They also watch how bricks are made.



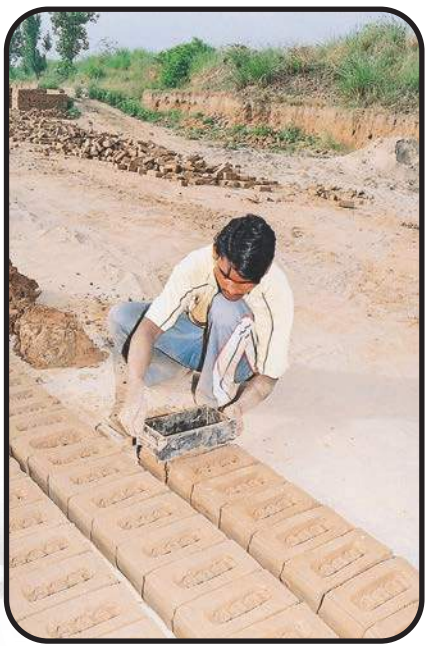
Here are four pictures from the brick kiln. These pictures are jumbled up. Look at them carefully.

Write the correct order. _____

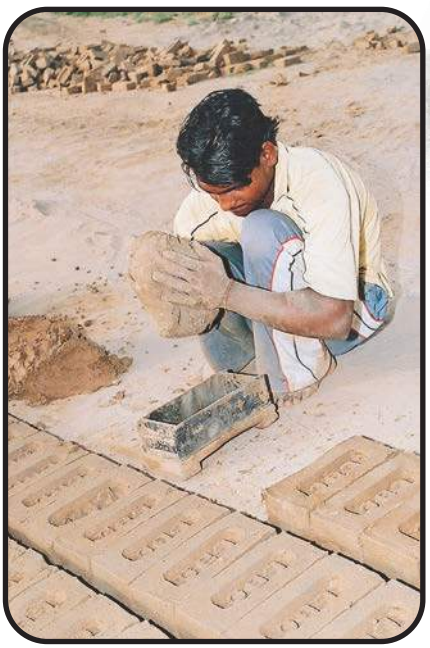
A



B



D



C



How do you think a brick is made out of soil dug from the earth? Look at the pictures and discuss in groups.

Have you seen a brick kiln? Did you try to guess the number of bricks kept there?

There are many, many brick kilns in India – thousands of them! More than **one hundred thousand**! Can you imagine how big this number is? This number is also called **one lakh (1,00,000)**. Can you try to write it? Ask your friends where they have heard of a lakh.

Find out

Look at these photos and guess how many bricks are carried by this truck.

Also find out from a truck driver how many bricks they can carry in one truck.





Mental Math: Bhajan Buys Bricks

Bhajan went to buy bricks. The price was given for one thousand bricks. The prices were also different for different types of bricks.

Old bricks	- ₹ 1200 for one thousand bricks
New bricks from Intapur	- ₹ 1800 for one thousand bricks
New bricks from Brickabad	- ₹ 2000 for one thousand bricks

Bhajan decided to buy the new bricks from Brickabad. He bought three thousand bricks. How much did he pay? _____

- Guess what he will pay if he buys 500 old bricks.

