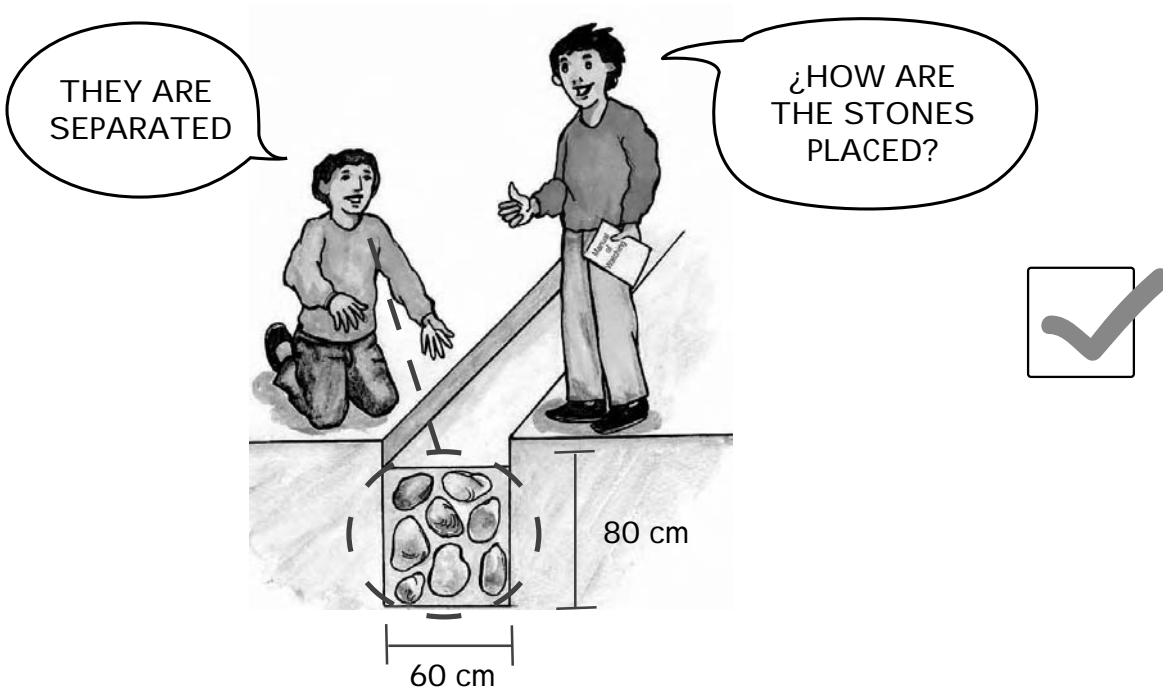
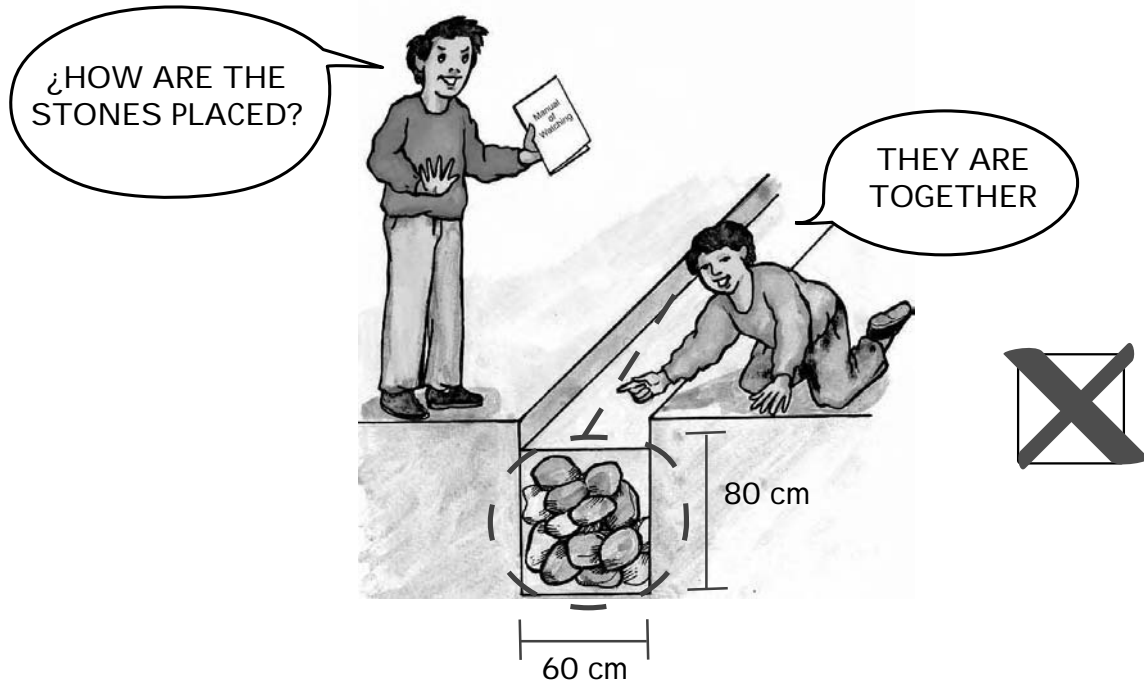


3.3 FOUNDATION WORKS

3.3.1. RUNNING FOUNDATIONS

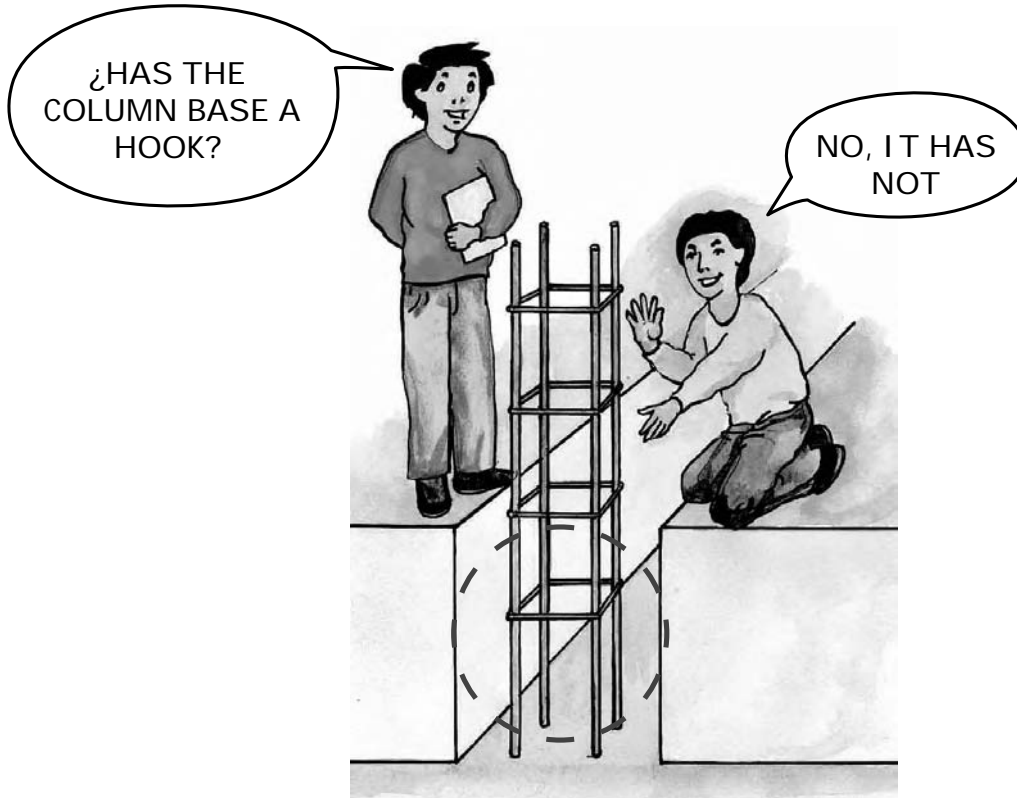
The concrete used for the foundations is named cyclopean concrete, which is composed of concrete and stones of regular size.



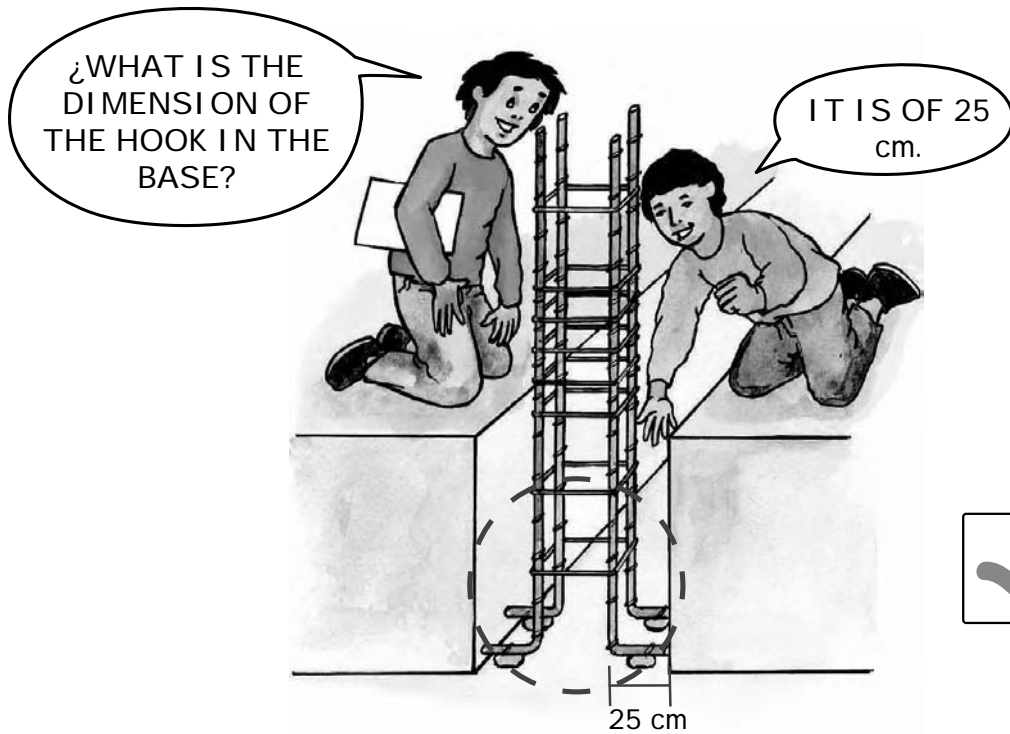
¿What is the watching result?

GOOD	BAD
------	-----

STEEL HOOK AT THE FOUNDATION



The steel in the foundation bottom should have a hook, never put the steel without a hook*



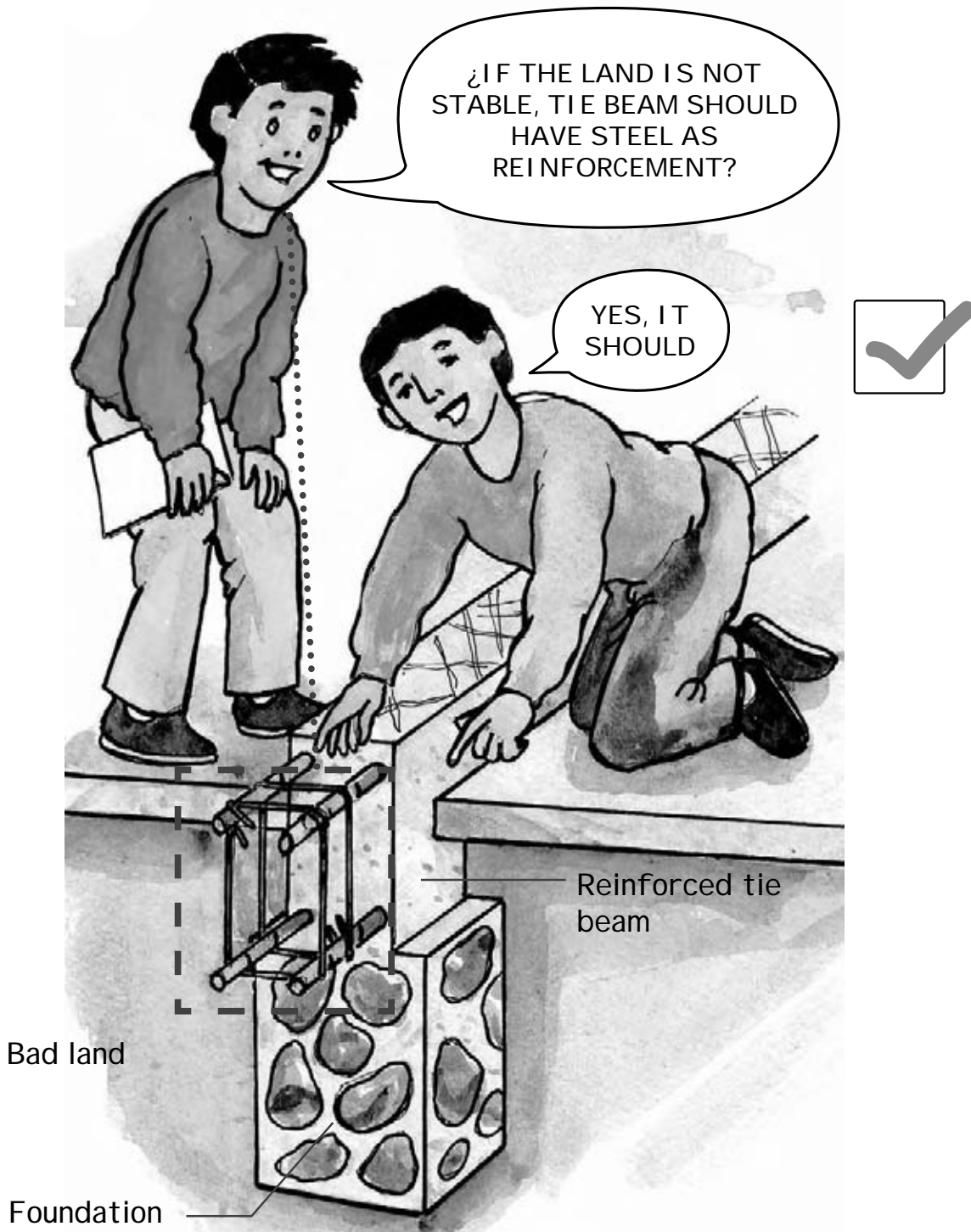
*See minimum requirements at the section 3.1 of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

3.3.2 TIE BEAM

Tie beam could be built using steel reinforced (reinforced footing) in case you do not have a stable land or a simple footing without steel (without reinforcement) if you do not have a regular and good land.



See minimum requirements at the section 2.2a of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

EXAMPLE OF SIMPLE TIE BEAM

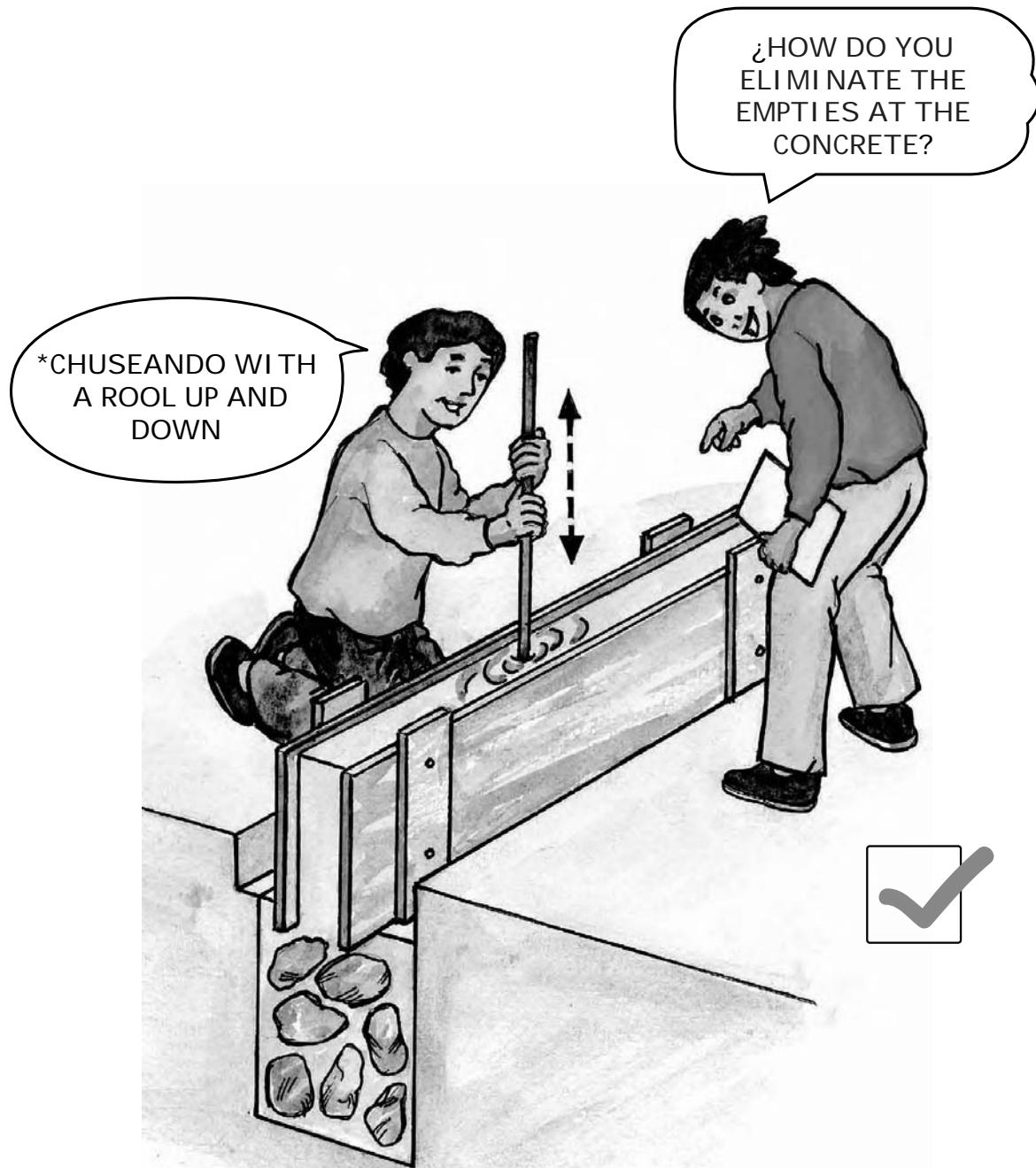


See minimum requirements at the section 2.2a of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

AVOIDING EMPTIES AT THE CONCRETE MIXTURE



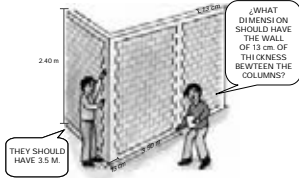
See minimum requirements at the section 1.1d of the Poster

* Chusear is the action of move using a rod inside the concrete to avoid emptiness at the concrete

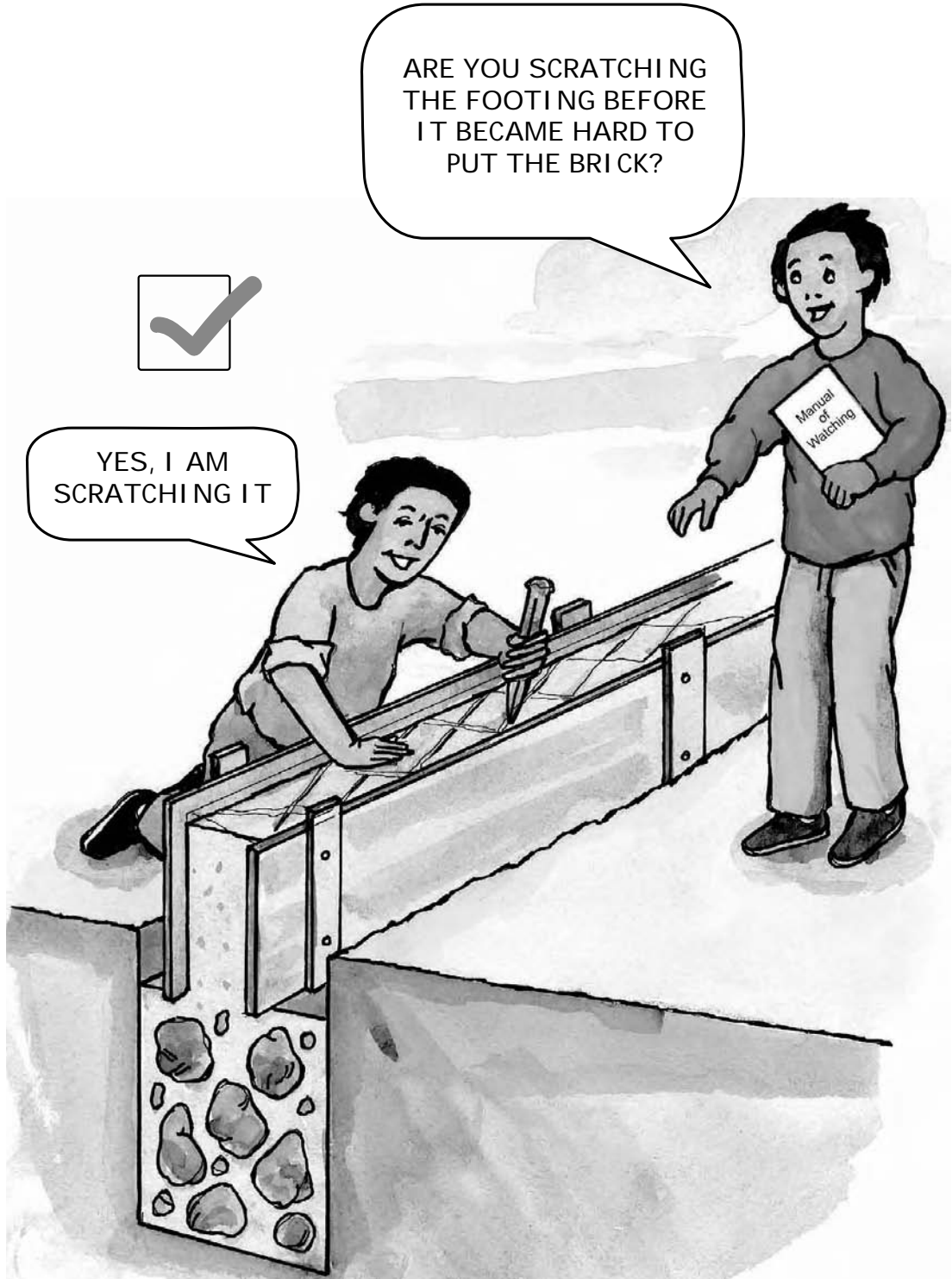
¿What is the watching result?

GOOD	BAD
------	-----

3-A7-29



3.4 MASONRY WORKS



¿What is the watching result?

GOOD	BAD
------	-----

CORRECT MIXTURE AND BRICKS PREPARATION

¡NO!

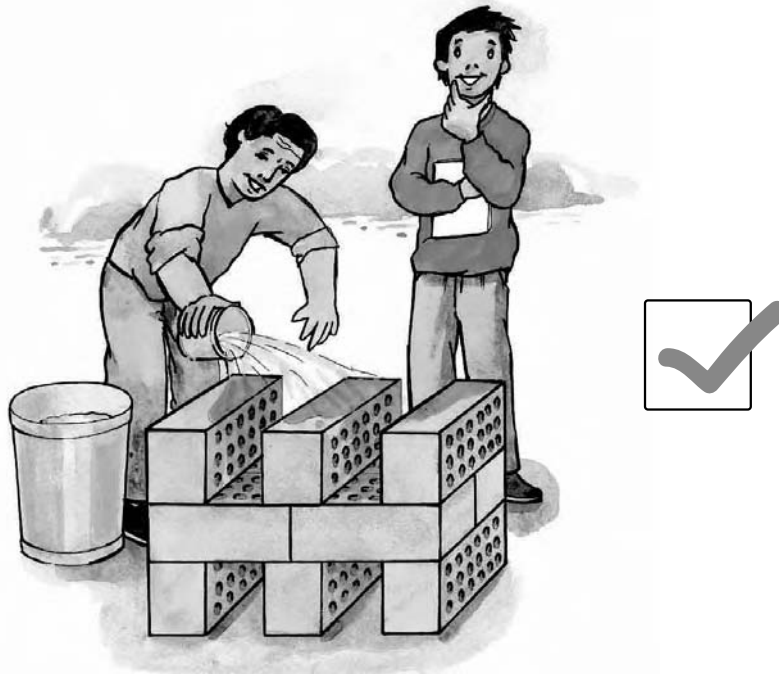


It is not recommended a mixture too softly*

¡YES!



Mortar mixture uniform and easy to work*



The bricks must be wet to avoid that they absorb the water of the mortar and have good adherence

*See minimum requirements at the section 1.1b of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

CORRECT MIXING AND WET BRICKS



Mortar easy to work for the settling of the bricks

MAXIMUM THICKNESS OF THE JOINT FOR THE SETTLING OF THE BRICKS

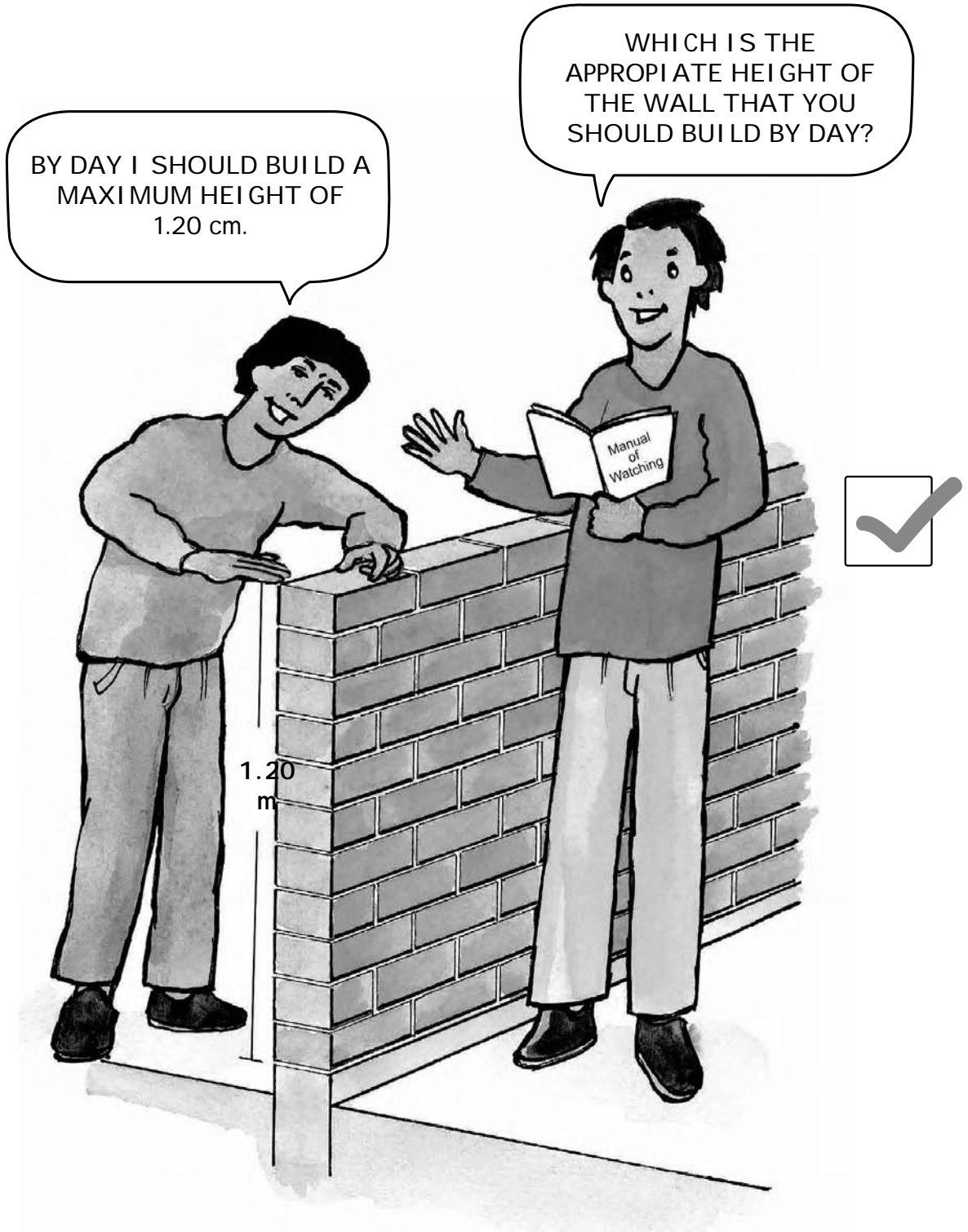


*See minimum requirements at the section 3.4 of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

MAXIMUM HEIGHT TO BUILD BY DAY



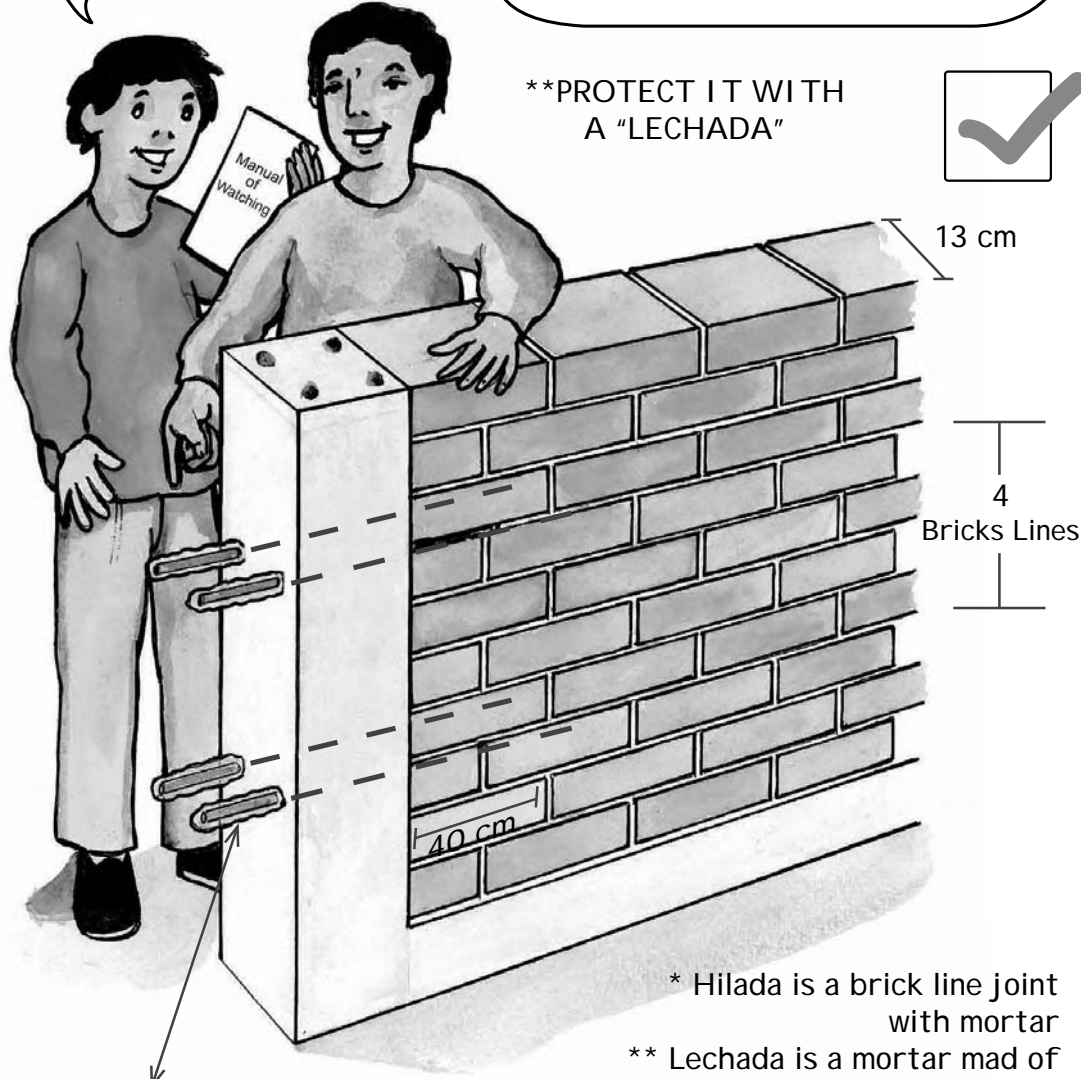
¿What is the watching result?

GOOD	BAD
------	-----

PLACEMENT OF FUSES FOR FUTURE EXPANSIONS

¿HOW DO YOU LEAVE THE FUSES?

I PUT TWO STEEL FUSES EVERY 4 * BRICK LINES TO TIE IT WITH THE COLUMN AND THEN I PROTECT THEM WITH A MIXTURE OF CEMENT (LECHADA)



Protect the rod using a mortar made of cement and water

* Hilada is a brick line joint with mortar
 ** Lechada is a mortar mad of cement and water

*See minimum requirements at the section 3.2 of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

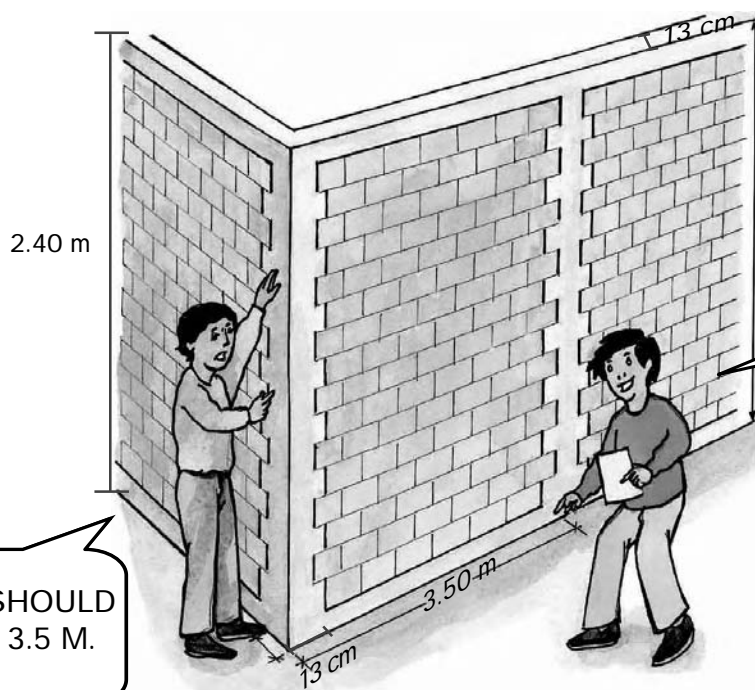
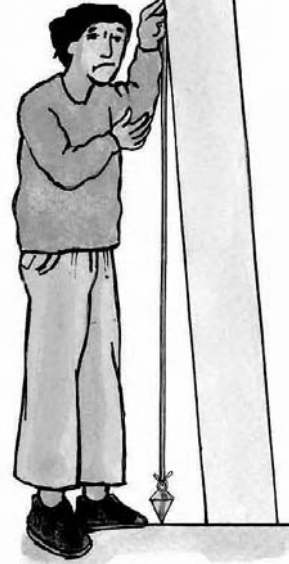
VERIFICATION OF DISTANCES

¡YES!



VERIFY THE WALL VERTICALITY DURING THE CONSTRUCTION

¡NO!



THEY SHOULD HAVE 3.5 M.

¿WHAT DIMENSION SHOULD HAVE THE WALL OF 13 cm. OF THICKNESS BEWTEEN THE COLUMNS?



*See minimum requirements at the section 2.3 of the Poster

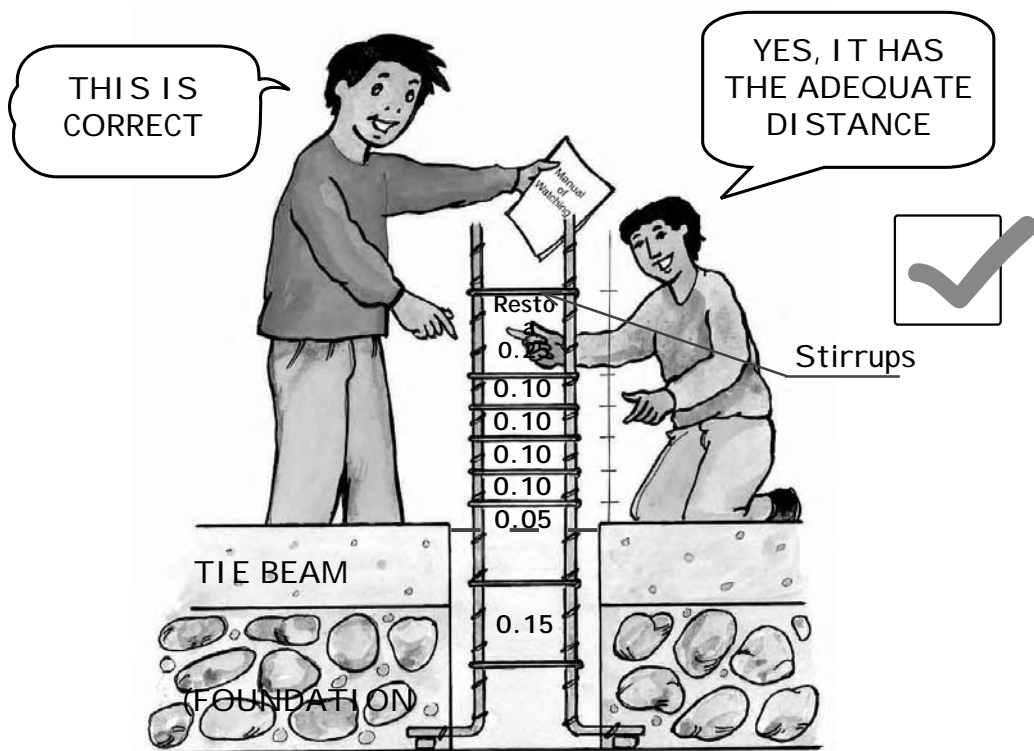
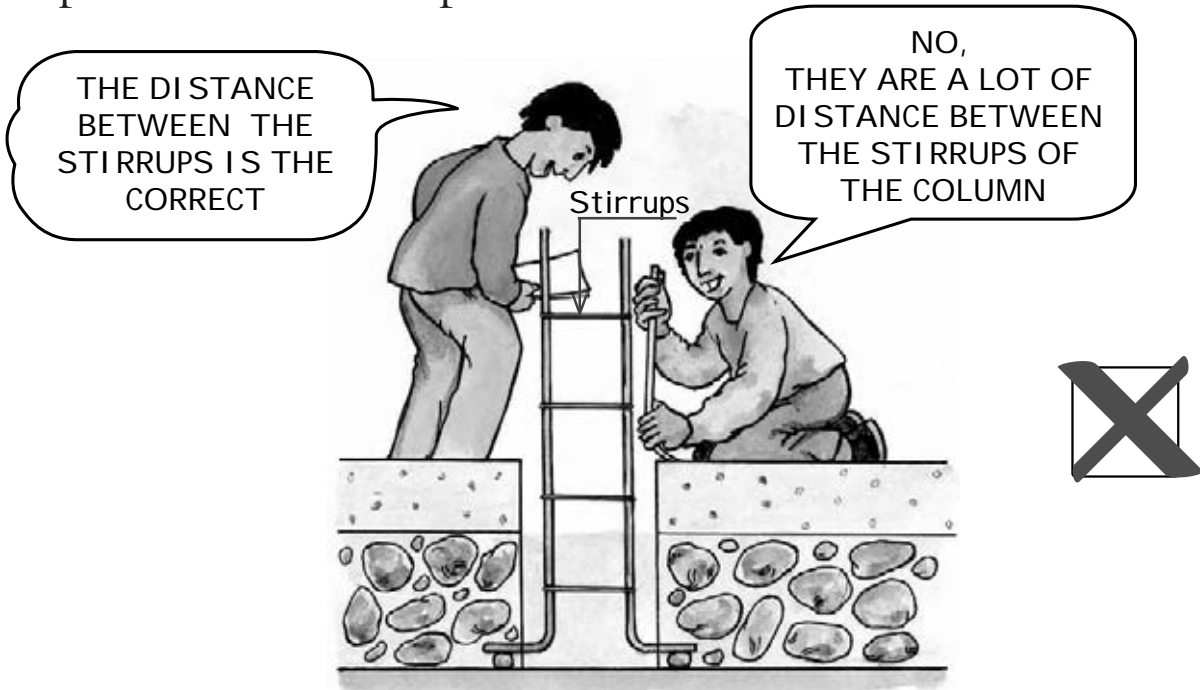
¿What is the watching result?

GOOD	BAD
------	-----



3.5 COLUMNS WORKS

Before to start the wall construction it is necessary to verify the separation of the stirrups

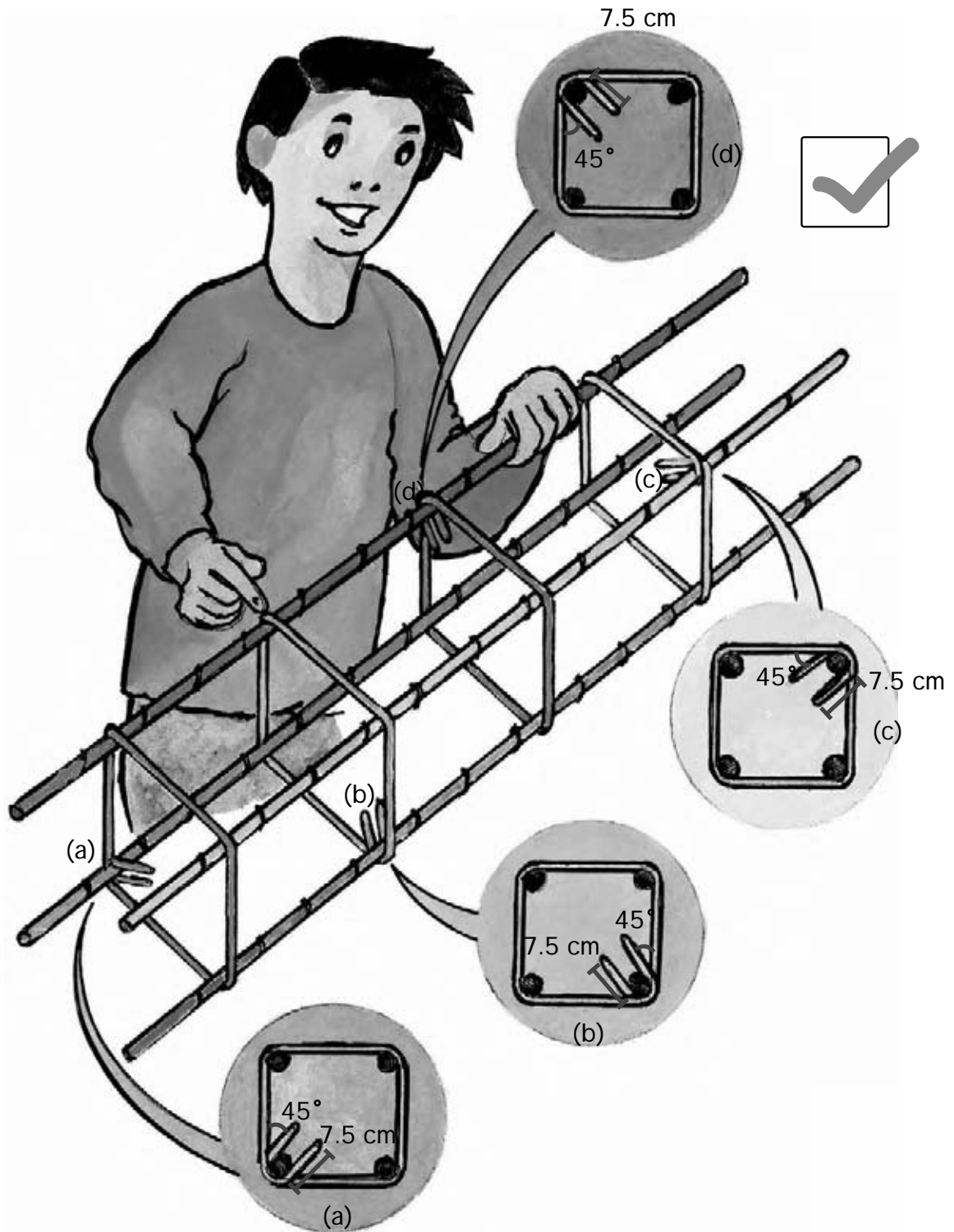


*See minimum requirements at the section 2.2c of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

The stirrups must have bent hooks to 45° and they must be placed as it is showed with a length of 7.5 cm.



¿What is the watching result?

GOOD	BAD
------	-----

When the concrete is emptied inside the column it is necessary to hit the form to provoke that the concrete downs to the bottom and do not leave empty spaces



*See minimum requirements at the section 1.1d of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

3-A7-39

After to remove the wood formwork and when the concrete is dry, it is necessary to wet the column surface during 7 days, this action will improve the resistance and durability of the concrete.



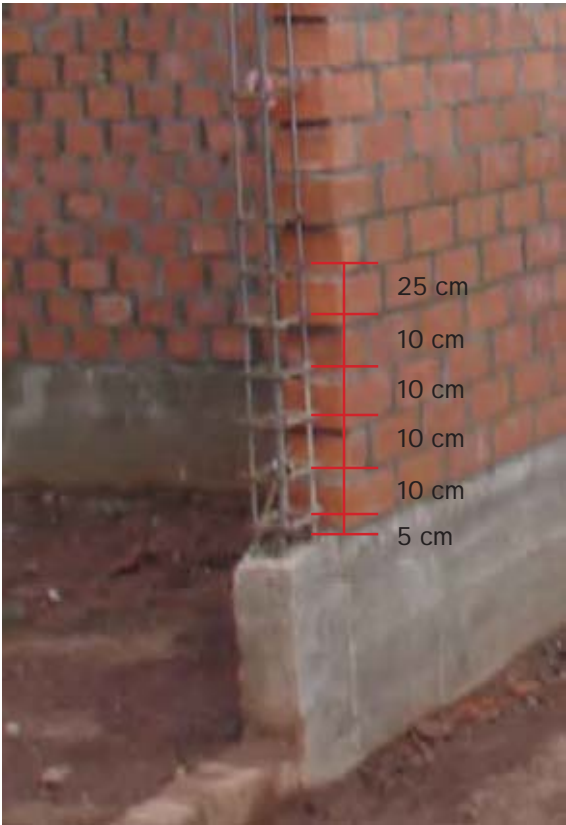
¿What is the watching result?

GOOD	BAD
------	-----

IMPORTANT CHARACTERISTICS OF THE STIRRUPS AT THE COLUMNS

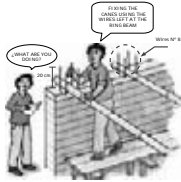


As it is shown, the stirrups should have a hook of 7.5 cm. in a corner



It is shown the column with the separation according to the minimum requirement, steel stirrups of 1/4" spaced 1 each 5 cm, 4 each 10 cm and the rest spaced each 25 cm.

See minimum requirements at the section 2.2c of the Poster



3.6 WORKS AT THE RING BEAMS

The ring beam must be poured with a dense mixture and it should be moved using a rod in order to avoid empties. With this action the concrete is joint with steel rods and the brick wall

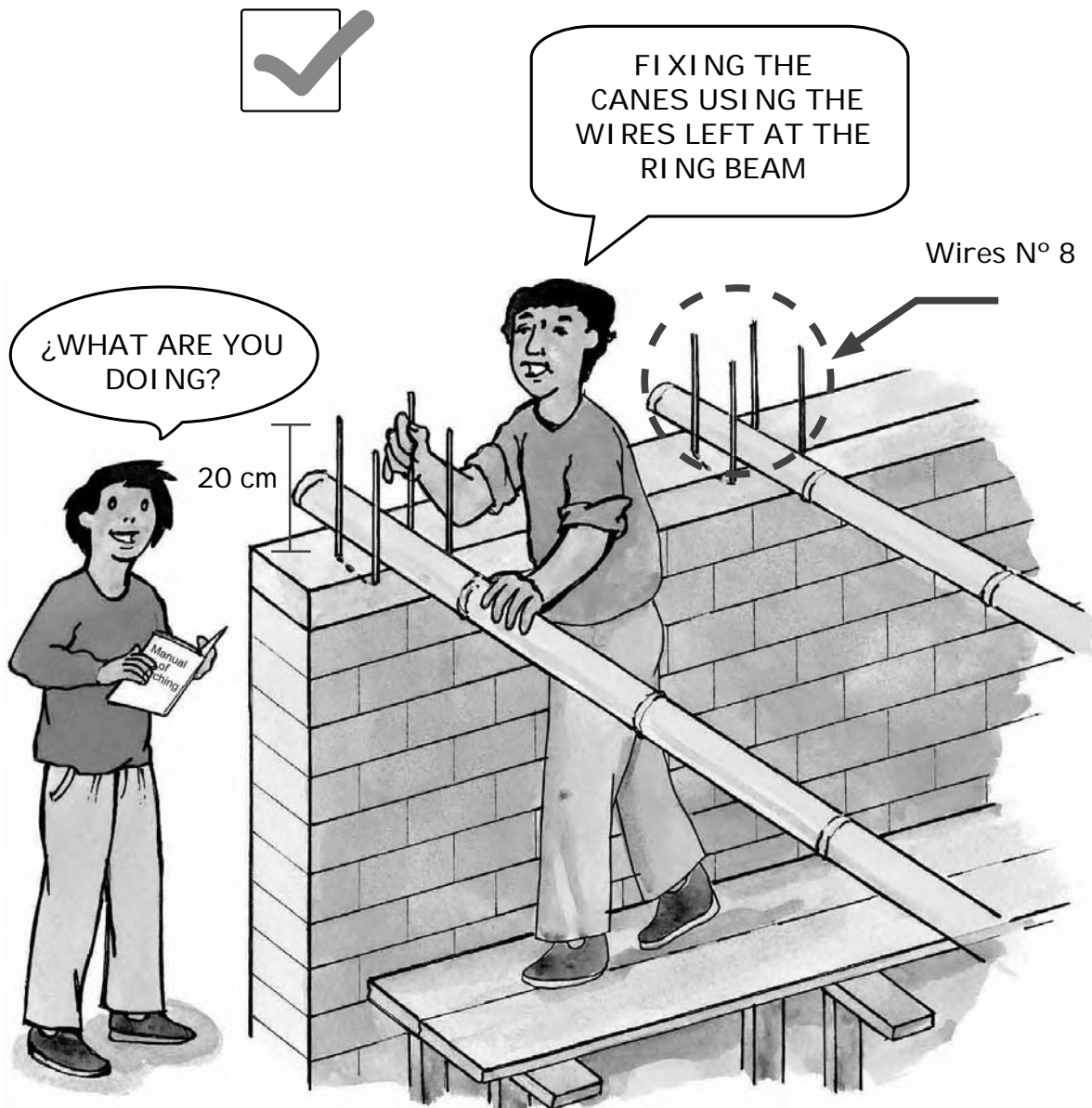


See minimum requirements at the section 1.1d of the Poster

¿What is the watching result?

GOOD	BAD
------	-----

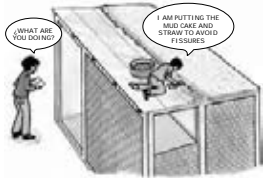
Do not forget to leave wire N° 8 of 20 cm. of length al the ring beam to joint the canes and to have a stable roof.



¿What is the watching result?

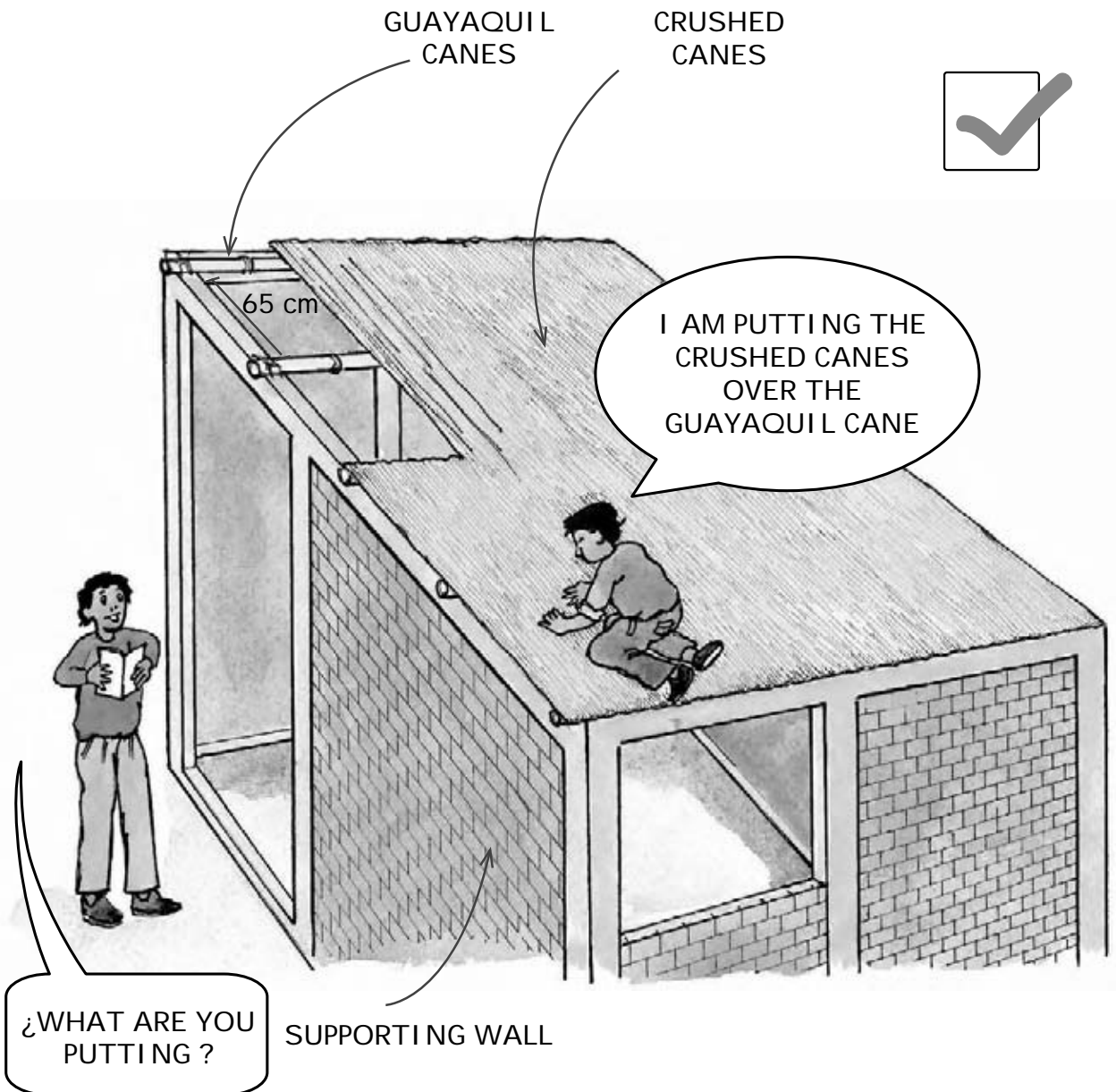
GOOD	BAD
------	-----

3-A7-43



3.7 WORKS AT THE ROOF

The Guayaquil canes will be spaces each 65 cm. The crushed cane should be firmly fixed over the canes, then it is necessary to put a plastic as waterproof material. Finally over the plastic put the mud with straw to avoid fissures at the roof.

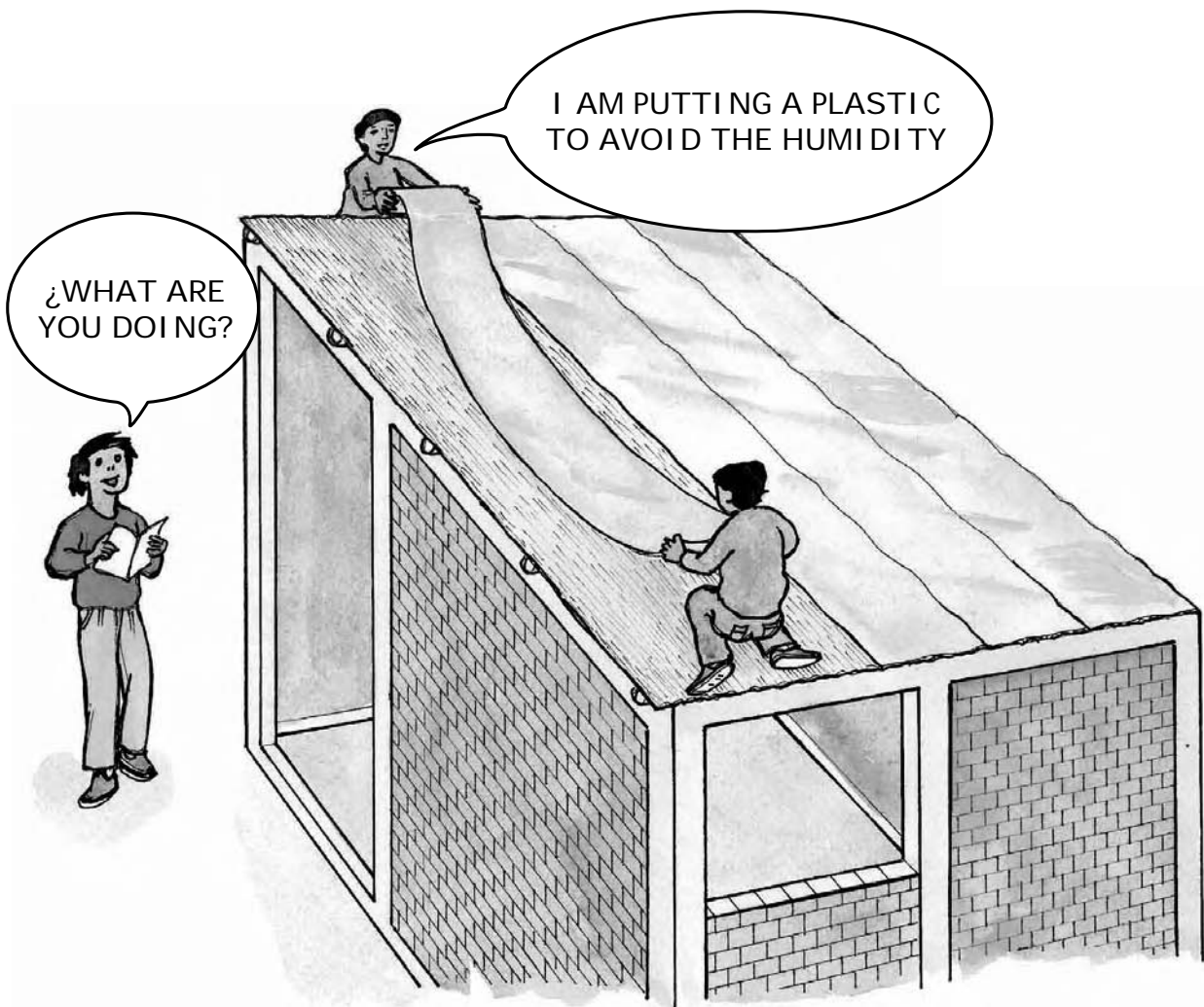


¿WHAT ARE YOU PUTTING ?

¿What is the watching result?

GOOD	BAD
------	-----

ROOF WATERPROOFING

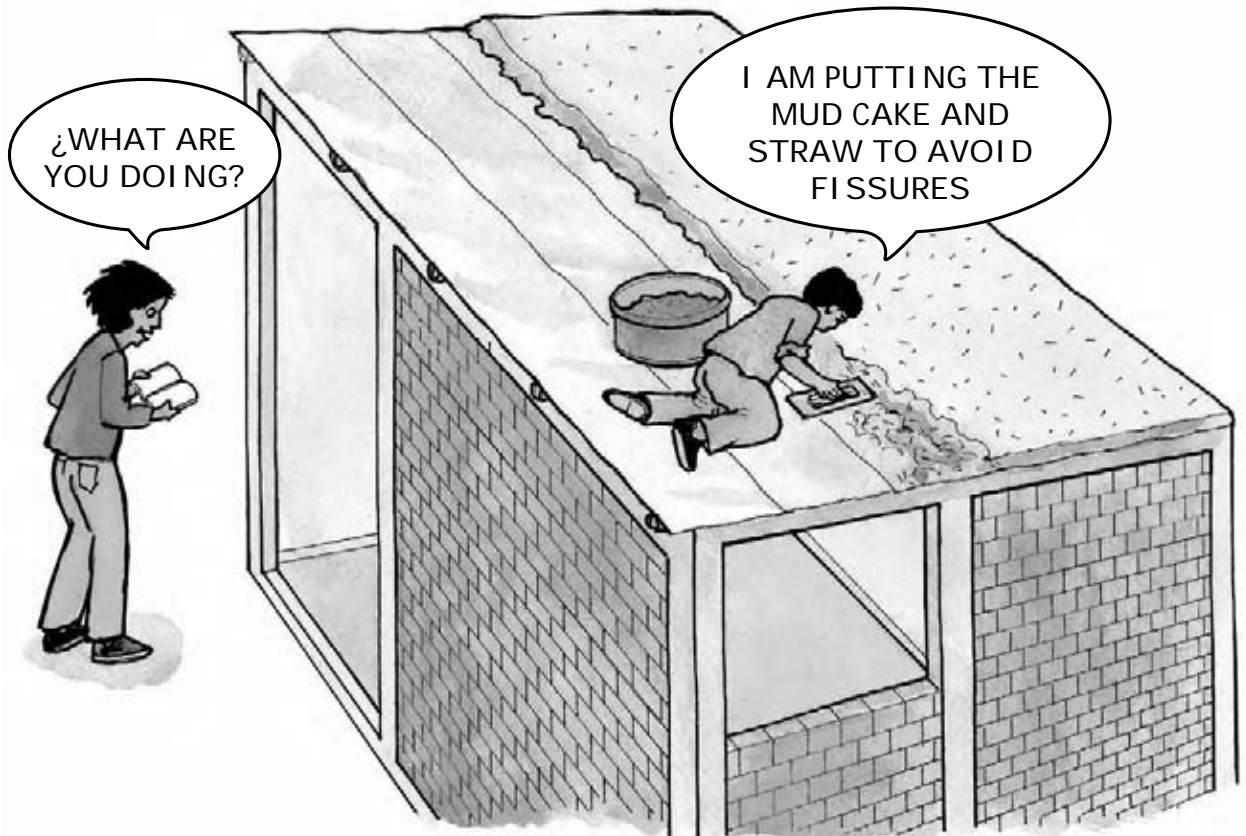


¿What is the watching result?

GOOD	BAD
------	-----

3-A7-45

PLACEMENT OF MUD CAKE + STRAW



¿What is the watching result?

GOOD	BAD
------	-----

ROOF WITH GUAYAQUIL CANE



The roof of this house shows the Guayaquil cane, the crushed cane and the mud cake

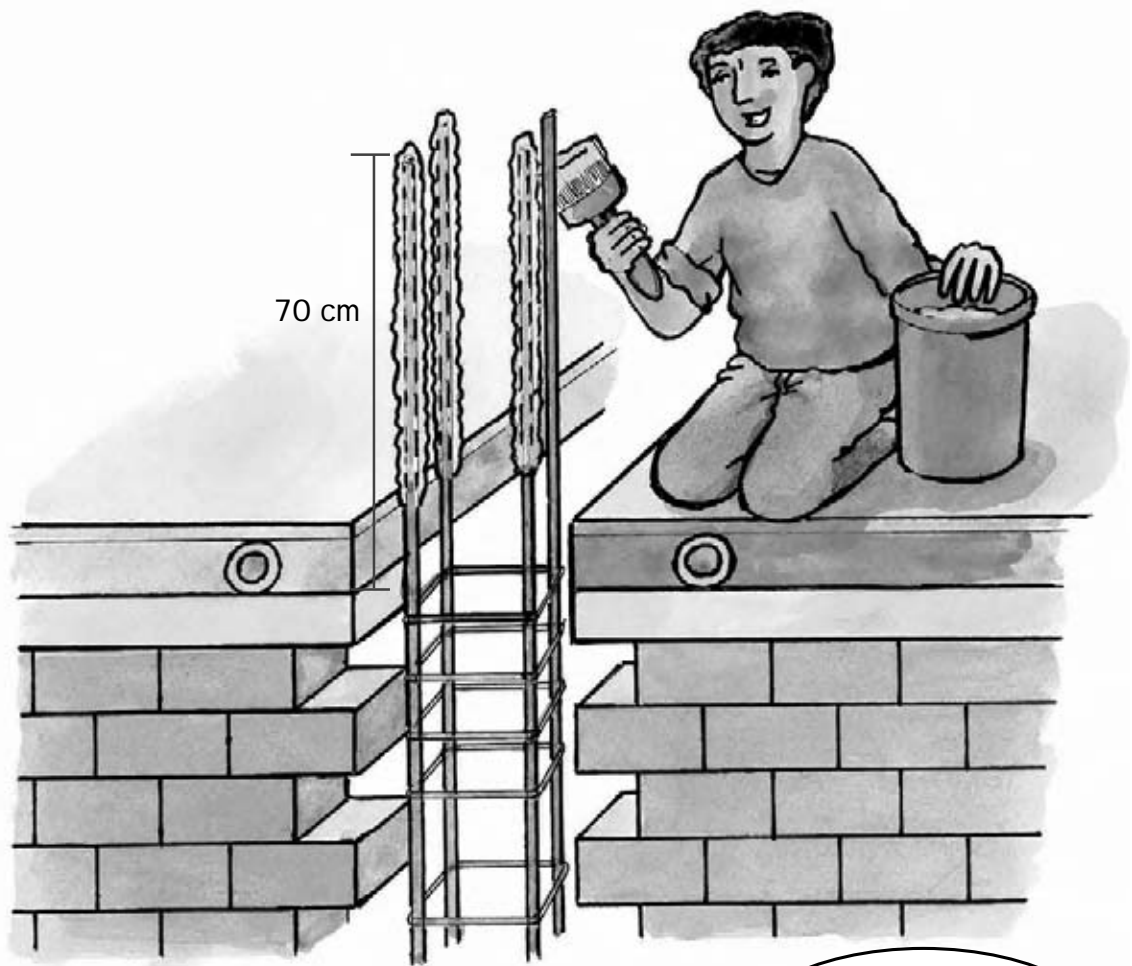


This roof shows the Guayaquil canes and over it the crushed cane



The column steels should be placed 70 cm above the ring beam and to avoid the corrosion of these steels it is necessary to protect them with a mixture of cement and water.

WE PROTECT THE STEEL BARS USING A MIXTURE OF CEMENT AND WATER



¿HOW WE CAN PROTECT THE EXPOSED STEEL BARS?

¿What is the watching result?

GOOD	BAD
------	-----



3.8 FINISHING WORKS

POURING AND FLOOR FLOATING



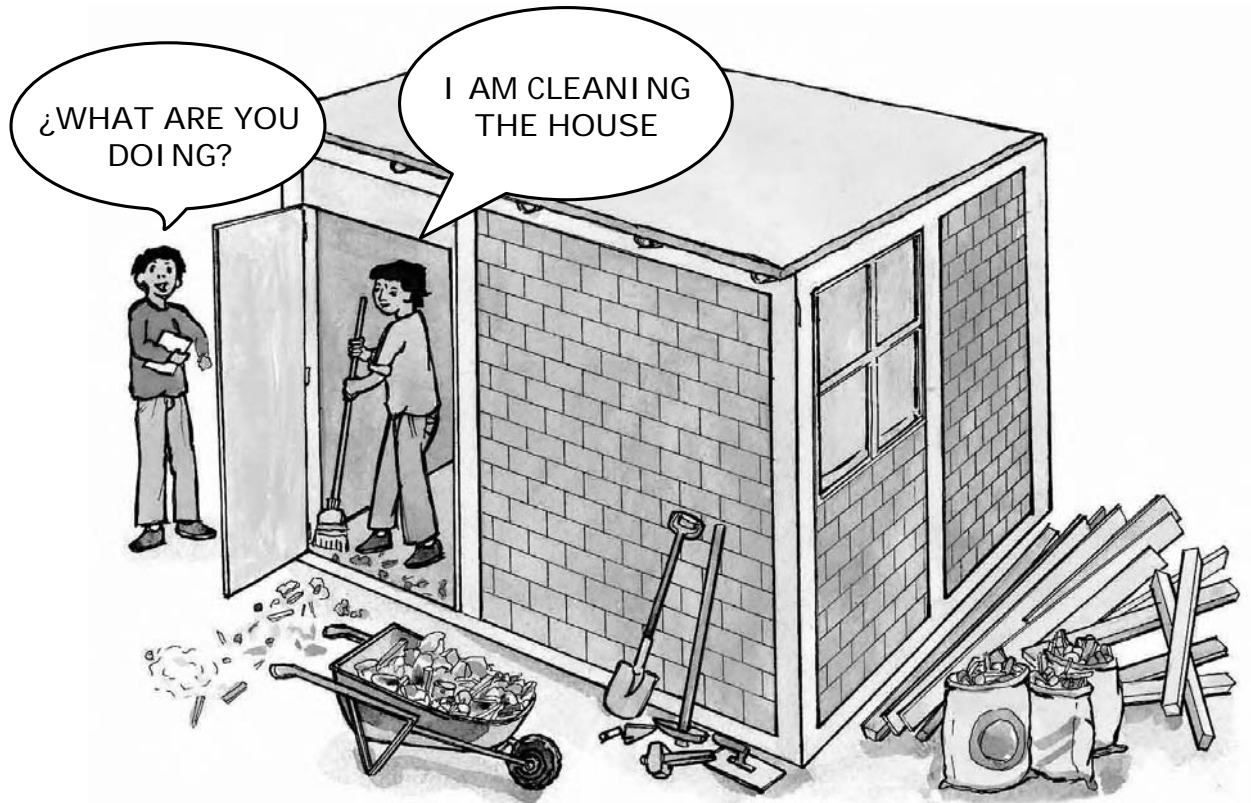
The thickness of the floor will be of 10 cm.

*Frotachando, is the leveling of the concrete floor surface in a rudimentary way and using wooden ruler.

¿What is the watching result?

GOOD	BAD
------	-----

CLEANING OF THE HOUSE AT THE FINISH OF THE CONSTRUCTION



¿What is the watching result?

GOOD	BAD
------	-----

