Suggestions

(Introducing the problem) Before students attempt Question 1, teachers might:

A. Read the problem as a class.

B. Think, Talk, Share: Have the students in pairs to discuss the meaning of the task:

Have students look at the pictures and describe a hutch.

Negotiate for meaning as students come to common understandings or agreements regarding the use of formal and informal mathematical language. For example, students may need to agree on the following: "What constitutes a hutch? Is it a singular space or multiple stages? Although an illustration is provided, students may consider each pair of doors as one hutch, when actually each row is considered one hutch.

C. Ask students to write down three things they agree on, using words, phrases, pictures and/or diagrams on poster-sized paper. Put these up in front of the room. Have a reporter from each group to read their arguments.

D. Show the pictures without the words and ask students to describe what they see to each other.

Ask students:

What did we notice about hutch #1?

Hutch number 1 has two blocks, hutch #2 has three blocks. Why does it not have four blocks?

"Tell me something you notice about hutch #3. Have students begin with "I/We notice…"; "We think…"; or "I see…"

Write responses on chart paper and post.

(Suggestions for Question One)

A. Have students complete the table independently, then share the results with a peer.

B. Ask students to explain how they came to their particular results and to adjust their responses based on the new information, if necessary. This allows for more talk, justification, and peer teaching, and learning. This also encourages peer-to-peer teaching and learning as well as peer monitoring.

C. Ask students to describe any patterns they see in the table to another student. This is an opportunity for them to use words, the table (possibly augmented by more rows or columns, or annotations), diagrams, expressions, or equations in describing any regularities that they see. In particular, this is an opportunity to see repeated calculations, e.g. repeatedly adding 1 to get the number of blocks for the next hutch or repeatedly adding 2 to get the number of doors for the next hutch.

(Suggestions for Question Two)

Students are being asked to compare the result of applying Roger's rule for 1,2 and 3 with the entries that they made in their tables. Second, they are asked to apply the rule to a hutch whose picture is not shown. To help clarify the rule consider the following:

A. Ask a volunteer to read Roger's rule aloud to the class.

B. Have students work in pairs to share ideas about how they can show how they answered the questions.

C. Allow students to build or illustrate the hutches/doors/rabbits as they figure out how many of each will be needed for hutch #12. This is especially helpful for ELLs.

To assist students having difficulty with this task, use patterned language that supports the correct results. For example: "According to Sara's rule, hutch number four has five blocks. According to Sara's rule, hutch number five has six blocks. According to Sara's rule, hutch number six has _____? The whole class should respond, "Seven blocks."

Or, for a second example: "I agree with _____'s response because _____" or "I disagree with _____'s response because _____."

Here there is less scaffolding, which allows the students with more advanced fluencies and mathematics understanding to do the "heavy lifting" in the task.