

**QUESTION and ANSWER ABOUT GRIDDABLES AND OPEN-ENDED QUESTIONS**

**Q: Why can some answers that are numbers be griddables and others are open-ended?**

**A:** This is happening most often in math. The reason is that those in higher academia than me have determined that when a math or science question, in order to be correct, requires the use of a label, it needs to be an open-ended answer and not a griddable. This is because the label is as important as getting the correct number. Another example deals with terminology. An “equation,” the word “solve” and the word “evaluate” mean different things. These examples are from 4<sup>th</sup> grade math, unit 2.

- a. Griddables do not require labels to be correct.  $10 - 2 = ?$  This is an equation; it uses an equal sign and has just numbers as the answer.
- b. Open-ended may require the student to evaluate, use labels, exchange labels, etc.

**EXAMPLES:**

10. Tammy cut out a piece of fabric so she could put a patch on a quilt. The size of the piece of fabric is the same as the figure below. The picture shows rulers next to the fabric with one side measure 4 inches and the other side measuring 3 inches. What is the perimeter of the piece of fabric in **inches**?

14. The picture shows Larry's after school snack package. If the height of the box is 7 cm and the length is 4 cm, **what is the perimeter of the front of the box?**

Question 10 gives the unit of measurement and question 14 does not. So whether the child knows to provide the unit of measurement is part of Question 14. If the student did not use a label, the answer should be marked wrong.

There is a similar example for question number 17 on this test. This time the unit of measure is in the legend. Now the student has to use a 10 by 10 cube of tiles. The legend shows a picture of the tile and the label reads: “Stands for 1 inch of rain.” The problem consists of groups of these blocks completely filled and some partially filled. The problem does not use numbers or the units of measure. The student has to know how to use the legend to get both the numeric answer and the unit of measure.

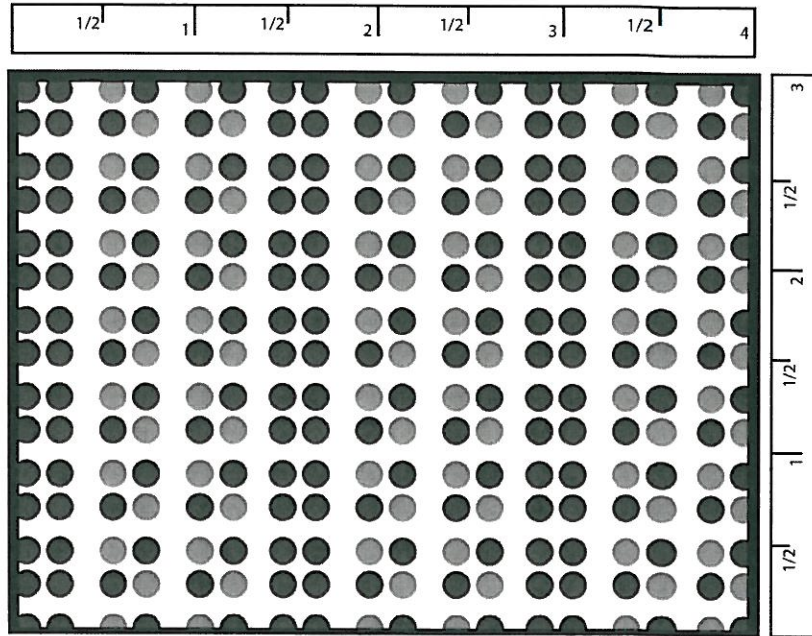
Both 14 and 17 are harder than question 10 and more specific. Also, this is setting the students up for knowing squared and cubed dimensions, as well as the difference between kinds of measurement perimeter, volume and surface area, liquid, length, mass, time, etc. The label is all important and really needs to be taught because pretty quickly the child will need to divide minutes into hours, days into years and so on.

These are the TEKS involved from grade 3 – 5:

- 3.15** *Underlying processes and mathematical tools. The student communicates about Grade 3 mathematics using informal language.*
- 3.15A** *The student is expected to:*  
Explain and record observations using objects, words, pictures, numbers, and technology.
- 4.15** *Underlying processes and mathematical tools. The student communicates about Grade 4 mathematics using informal language.*
- 4.15A** *The student is expected to:*  
Explain and record observations using objects, words, pictures, numbers, and technology.
- 5.15** *Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language.*
- 5.15A** *The student is expected to:*  
Explain and record observations using objects, words, pictures, numbers,

The 15B series is similar.

- 10 Tammy cut out a piece of fabric so she could put a patch on a quilt. The size of the piece of fabric is the same as the figure below.

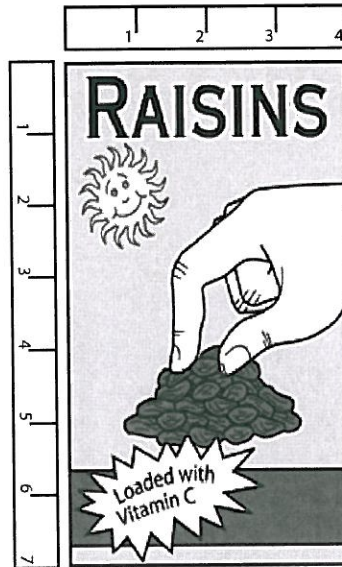


What is the perimeter of the piece of fabric in inches?

			.
0	0	0	
1	1	1	
2	2	2	
3	3	3	
4	4	4	
5	5	5	
6	6	6	
7	7	7	
8	8	8	
9	9	9	

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

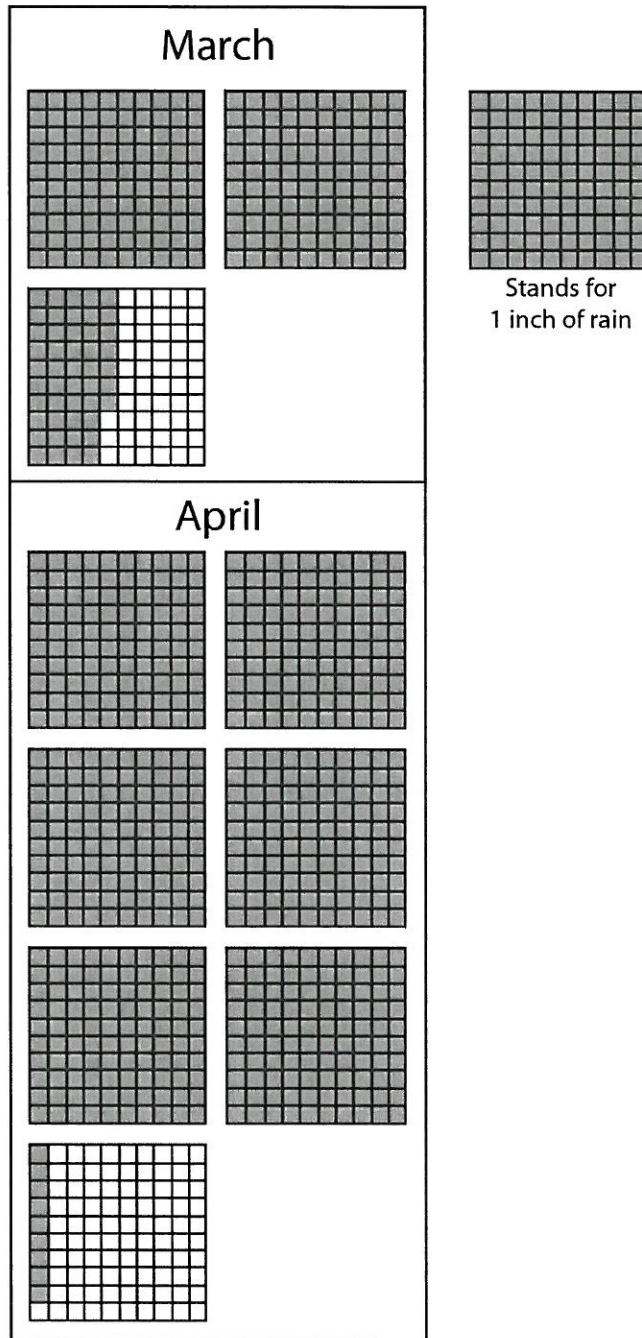
- 14 The picture shows Larry's after school snack package.



If the height of the box is 7 cm and the length is 4 cm, what is the perimeter of the front of the box?

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- 17** The shaded part of the models below show how much rain a city got in two different months. How much rain did the city get in March and April, all together?



Answer \_\_\_\_\_