

Math
Released Item 2019

Grade 3

Teacher Has Two Sheets of Stickers
M05158

Anchor Set A1 – A8

With Annotations

Prompt

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.



▼ Math symbols

+	-	×	÷
$\frac{\square}{\square}$	$\square \frac{\square}{\square}$	(·)	[·]
=	<	>	≠
\$	°	?	

M05158 Rubric

Score	Description
3	<p>Student response includes the following 3 elements.</p> <ul style="list-style-type: none"> • Computation component = 1 point <ul style="list-style-type: none"> ○ Correct number of stickers, 111 • Modeling component = 1 point <ul style="list-style-type: none"> ○ Valid explanation on how rows and columns can be used to model the total number of stickers on the two sheets • Modeling component = 1 point <ul style="list-style-type: none"> ○ Valid equation that models the total number of stickers on the two sheets <p>Sample Student Response:</p> <p>The teacher has a total of 111 stickers.</p> <p>An array of 8 rows and 6 columns and an array of 9 rows and 7 columns could be drawn to model the total number of stickers the teacher has.</p> <p>The equation $(8 \times 6) + (9 \times 7) = 111$ shows the number of stickers on the first sheet, (8×6), plus the number of stickers on the second sheet, (9×7), is equal to the total number of 111 stickers.</p> <p>Or other valid response.</p>
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

1. You can use an array to model the rows and columns on each sheet.

$$\begin{array}{l} 2. \\ (8 \times 6) + (9 \times 7) \\ 48 + 63 = 111. \end{array}$$

Annotation

Anchor Paper 1 Score Point 3

This response receives full credit. It includes each of the three required elements.

- A valid explanation on how the rows and columns can be used to model the total number of stickers on the two sheets is given (You can use an array; $[8 \times 6] + [9 \times 7]$). The student has correctly used the number of rows and the number of stickers in each row on both sheets of stickers to calculate the total number of stickers on each sheet of stickers. The explanation is not required to be in the form of an equation.
- A valid equation that models the total number of stickers on the two sheets is given ($48 + 63 = 111$). The student has correctly used an equation to show how to find the total by adding the total number of stickers on each sheet to find the total of 2 sheets.
- The correct number of stickers is provided (111).

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

$$(8 \times 6) + (9 \times 7) = 111$$
$$48 + \square 63 = 111$$

Annotation

Anchor Paper 2 Score Point 3

This response receives full credit. It includes each of the three required elements.

- A valid explanation on how the rows and columns can be used to model the total number of stickers on the two sheets is given ($[8 \times 6] + [9 \times 7]$).
- A valid equation that models the total number of stickers on the two sheets is given ($48 + 63 = 111$).
- The correct number of stickers is provided (111).

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

9 rows of 7 will be 9×7 and 8 rows of 6 will be 8×6 you could do $(8 \times 6) + (9 \times 7)$ to model the total stickers
 $(8 \times 6) + (9 \times 7) = 110$

Annotation

Anchor Paper 3 Score Point 2

This response receives partial credit. It includes two of the three required elements.

- A valid explanation on how the rows and columns can be used to model the total number of stickers on the two sheets is given ($[8 \times 6] + [9 \times 7]$). The student is not required to provide the number of stickers on each sheet of stickers within the explanation.
- A valid equation that models the total number of stickers on the two sheets is given ($[8 \times 6] + [9 \times 7] = 110$). Even though the equation contains a calculation error, the student has provided a correct equation that models how to calculate the total number of stickers on the two sheets.

The response provides an incorrect calculation of the number of stickers on the two sheets (110).

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

You can draw an array with 9 rows down and 7 stickers across or 8 rows down and 6 stickers across. Then you could multiply 9×7 or 8×6 . The total number of stickers on the two sheets is 111.

Annotation

Anchor Paper 4 Score Point 2

This response receives partial credit. It includes two of the three required elements.

- Two valid explanations on how the rows and columns can be used to model the total number of stickers on the two sheets are given (You can draw an array with 9 rows down and 7 stickers across or 8 rows down and 6 stickers across) and (you could multiply 9×7 or 8×6). The student is not required to provide the number of stickers on each sheet of stickers.
- The correct number of stickers is provided (111).

The response does not provide an equation that models the total number of stickers on the two sheets. Two expressions are given (9×7 or 8×6); but expressions are not the same as an equation. An equation has values on both sides of an 'equal' sign that are equivalent. The student does not use an equation to show how to calculate the total number of stickers.

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

$6 \times 8 = 48$ that was the 1.

$9 \times 7 = 63$ that was the 2.

Annotation

Anchor Paper 5 Score Point 1

This response receives partial credit. It includes one of the three required elements.

- A valid explanation on how the rows and columns can be used to model the total number of stickers on the two sheets is given ($6 \times 8 = 48$, $9 \times 7 = 63$).

The response does not provide an equation that models the total number of stickers on the two sheets. These equations are not sufficient; a valid equation that models the total number of stickers on the two sheets must be provided to receive credit for this element.

The response does not provide the total number of stickers.

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

The teacher is saying that 8×6 is the same as 8 rows and 6 stickers in each row. And the other sheet has 9 rows with 7 stickers. So on both sheets the teacher will have 111 stickers.

Annotation

Anchor Paper 6 Score Point 1

This response receives partial credit. It includes one of the three required elements.

- The correct number of stickers is provided (111 stickers).

The response provides an incomplete and insufficient explanation on how the rows and columns can be used to model the total number of stickers on the two sheets. Although the model for one sheet of stickers is provided (8 X 6), the model for the other sheet is vague and only repeats the prompt with no explanation provided (the other sheet has 9 rows with 7 stickers).

The response does not provide an equation that models the total number of stickers on the two sheets.

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

9 groups of 7 = 63

Annotation

Anchor Paper 7 Score Point 0

This response receives no credit. It includes none of the three required elements.

An incomplete explanation on how the rows and columns can be used to model the total number of stickers on the two sheets is given (9 groups of 7 = 63). The student correctly describes an array for one sheet of stickers, but the explanation of the modeling is insufficient because it is missing the other sheet of stickers.

The response does not provide an equation that models the total number of stickers on the two sheets.

The response provides an incorrect total number of stickers (63).

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

$$9 \times 8 = 72$$

Annotation

Anchor Paper 8 Score Point 0

This response receives no credit. It includes none of the three required elements.

The response provides an incorrect explanation on how the rows and columns can be used to model the total number of stickers on the two sheets ($9 \times 8 = 72$). Multiplying the number of rows of each set of stickers is an incorrect strategy.

The response provides an incorrect equation to model the total number of stickers on the two sheets ($9 \times 8 = 72$).

The response provides an incorrect total number of stickers (72).

Practice Set

P1 - P5

No Annotations Included

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

$8 \times 6 = 36$ so the first time it was
a mulplication problem know we
using $9 \times 7 = 62$ AGGAIN
MULTUPLYCAITON SO addion
 $36 + 62 = 98$

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

if you times 8×6 you can get 48. and if times 9×7 you can get 63. because if you put the 9 rows of stickers down and count them you get the number and do the exact same with the 8 rows too.

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

$$8 \times 6 \times \square = 48$$

$$9 \times 7 = 63$$

$$63 + 48 = 111$$

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

1, \$\$\$\$\$\$
 \$\$\$\$\$\$
 \$\$\$\$\$\$
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 \$\$\$\$\$\$
 \$\$\$\$\$\$
 \$\$\$\$\$\$
 \$\$\$\$\$\$ 8 rows 6 in each

2, #####
 #####
 #####
 #####
 #####
 #####
 #####
 #####
 ##### 9 rows 7 in each

A teacher has two sheets of stickers. One sheet has 8 rows with 6 stickers in each row. The other sheet has 9 rows with 7 stickers in each row.

- Explain how the rows and columns can be used to model the total number of stickers on the two sheets.
- Write an equation that can be used to model the total number of stickers on the two sheets.
- What is the total number of stickers on the two sheets?

Enter your explanation, your equation, and your answer in the space provided.

It can be used because you can count the top row and the side row and then you multiply the two numbers and you can do the same with the other numbers.

$$8 \times 6 = 48$$

$$9 \times 7 = 63$$

There are 111 stickers

Practice Set

Paper	Score
P1	2
P2	1
P3	3
P4	1
P5	2