



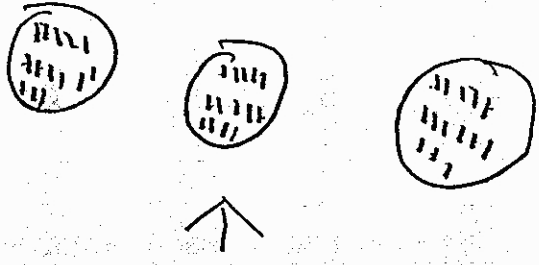
### 3. Comparing Reading Books Task

Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?

<p><b>Stuart</b></p>  $\begin{array}{r} 14 \\ 3 \overline{)42} \\ \underline{-3} \phantom{0} \\ 12 \\ \underline{-12} \\ 0 \end{array}$ <p>Total 42</p> $42 \div 3 = 14$	<p>① <math>\div</math> 42 by 3 <math>\Rightarrow</math> 14</p> <p>② C has 14 books read</p> <p>③ to check your answer do <math>14 \times 3 = 42</math>.</p>	<p><b>Catherine</b> read 14</p>
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- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.

<p> <math>S = 42</math></p> <p><math>\times 3</math></p> <p>C = ? (14)</p> <p>C = 14</p>	 <p>42</p>	<p>In each circle there is 14</p>
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- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.

① Stuart has  $\times 3$  as C so  
 since S has 42.  $42 \div 3 = 14$ .


② - That is how you know how many  
 C has. To check with  $\times$  to  $14 \times$   
 $3 = 42$ .

Key  
 S = Stuart  
 C = Catherine

3. Comparing Reading Books Task

Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.


- a. If Stuart read 42 books, how many books did Catherine read?

  $42 \div 3 = 14$   
 Catherine read 14 books in all.  
 But Stuart read 28 books more.

$42 - 14 = 28$  books more

$$\begin{array}{r} 42 \\ -14 \\ \hline 28 \end{array}$$


- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.

  $= 14$   $= 14 +$   $= 14$

$$\begin{array}{r} 14 \\ + 14 \\ + 14 \\ \hline 42 \end{array}$$

$14 + 14 + 14 = 42$

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



$7 \times 6 = 42$   
 $6 \times 7 = 42$   
 $42 \div 6 = 7$   
 $42 \div 7 = 6$

Since in the (part b) I drew 42 circles then they were divided into 3 equal groups. So I counted & 14 were in each group.


$  \begin{array}{r}  10000000 \\  20000000 \\  \hline  30000000 \\  40000000 \\  \hline  50000000 \\  60000000 \\  \hline  6 \times 7 = 42  \end{array}  $	$  \begin{array}{l}  1, 2 \text{ paired} \\  3, 4 \text{ paired} \\  5, 6 \text{ paired} \\  \hline  \leftarrow \text{now each group} \\  \text{is } 2 \times 7 \\  \neq 7 = 14 \\  \begin{array}{r}  20000000 \\  20000000  \end{array}  \end{array}  $
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$3 \times 14 = 42$

### 3. Comparing Reading Books Task

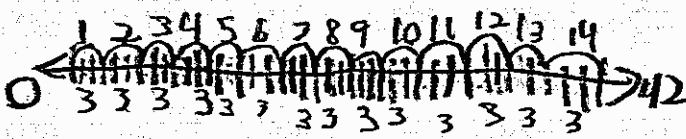

Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?



$42 \div 3 = 14$

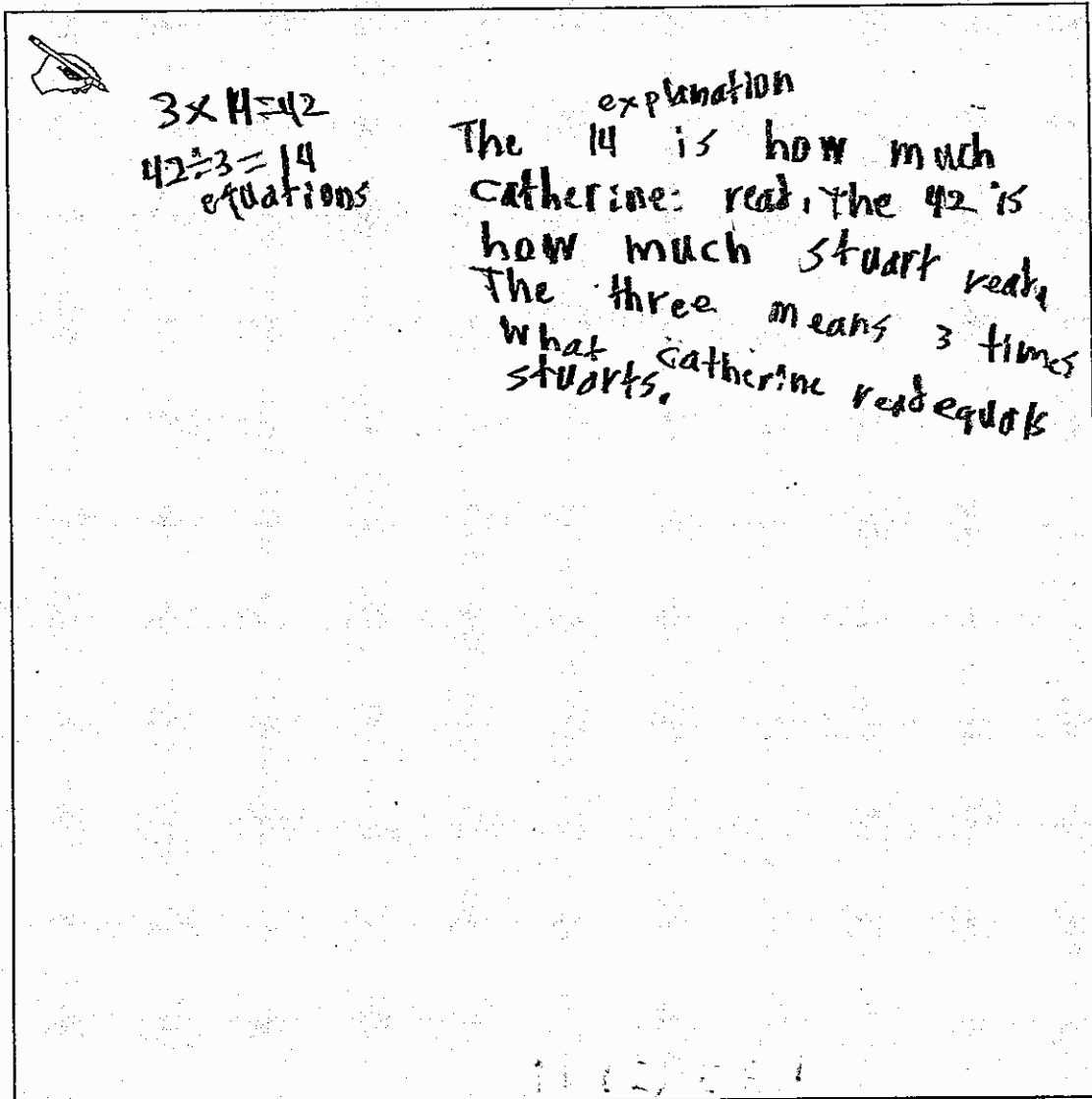
- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.




0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 42

3 3 3 3 3 3 3 3 3 3 3 3 3 3

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



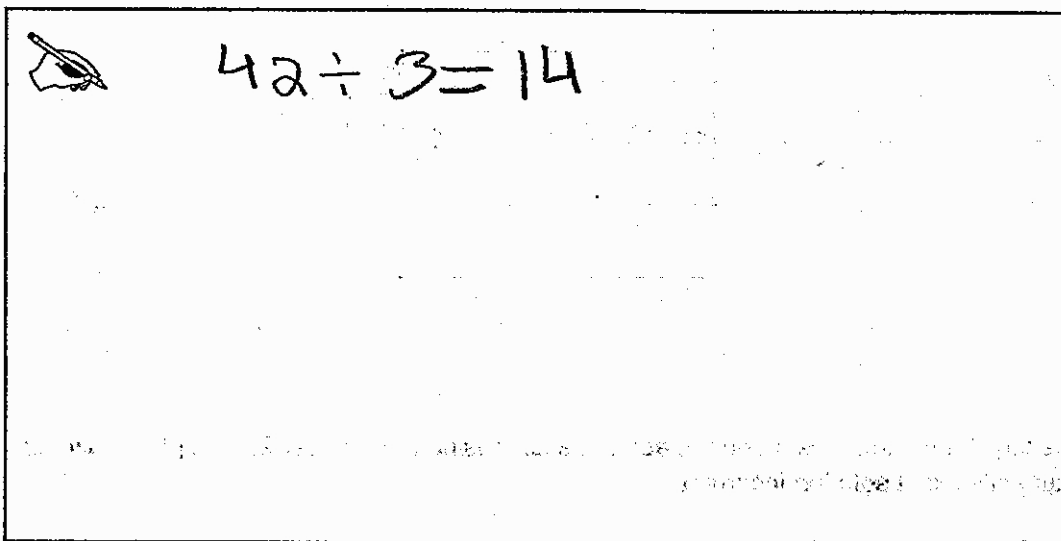
  $3 \times 14 = 42$   
 $42 \div 3 = 14$   
equations

<sup>explanation</sup>  
The 14 is how much Catherine read, the 42 is how much Stuart read. The three means 3 times what Catherine read equals Stuart's.

3. Comparing Reading Books Task

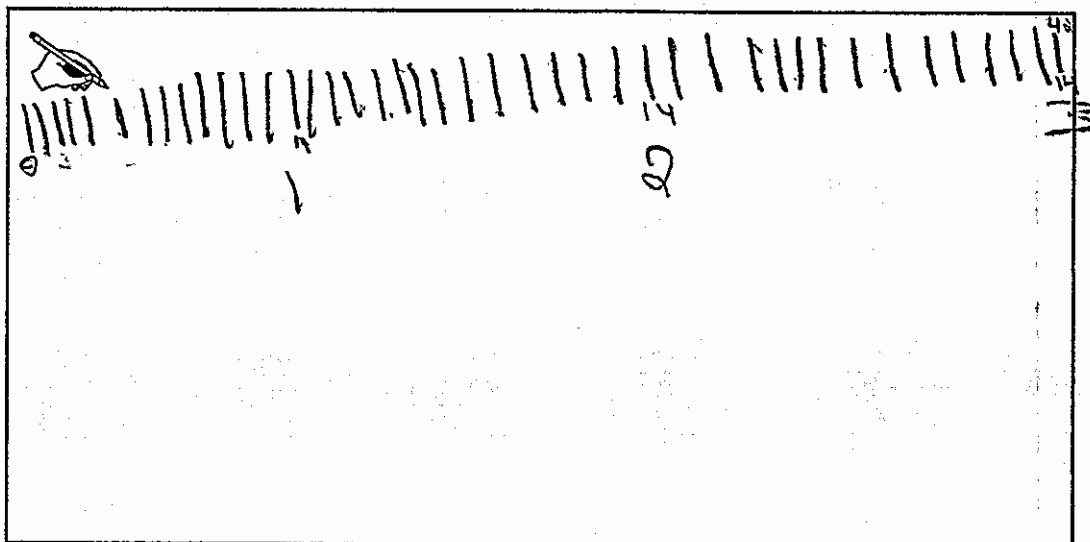
Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?



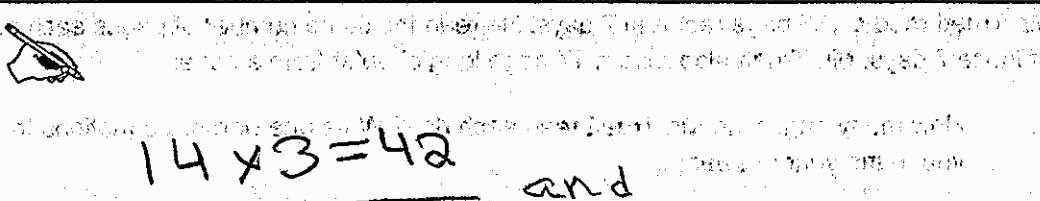
A rectangular box containing a drawing of a hand holding a pencil on the left. To the right of the drawing, the equation  $42 \div 3 = 14$  is handwritten in black ink.

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.



A rectangular box containing a drawing of a hand holding a pencil on the left. To the right, a number line is drawn from 0 to 42. The number line has tick marks every 1 unit. The numbers 0, 1, 2, 3, 14, and 42 are labeled. Vertical lines are drawn from the number line to the top of the box, creating groups of 3 units each. There are 14 such groups. The number 14 is written below the number line, and the number 42 is written at the far right end of the number line.

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



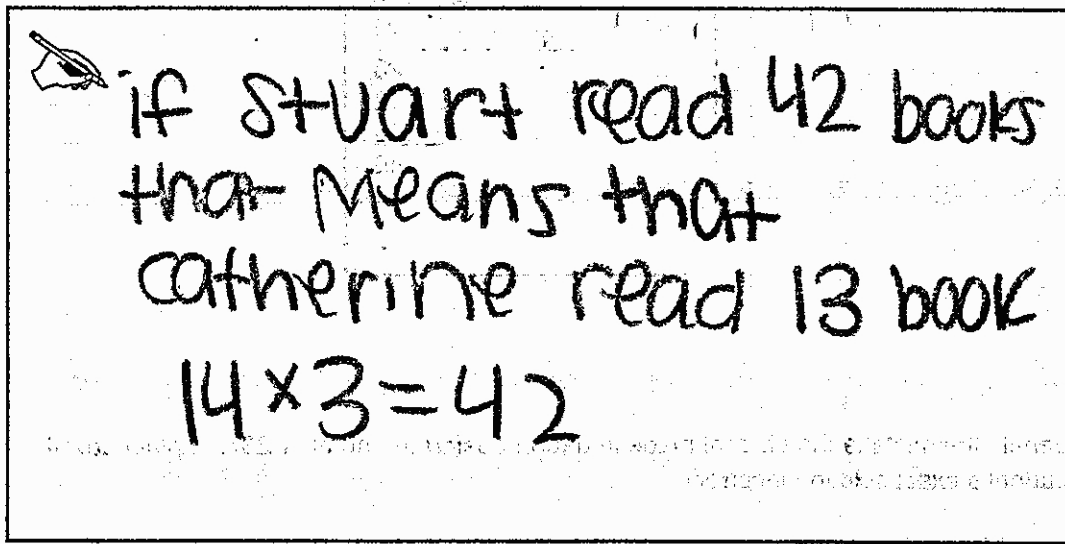
A hand-drawn diagram of a number line is shown within a rectangular box. The number line is a horizontal line with arrows at both ends. There are several tick marks along the line, but no numerical labels are present. A small drawing of a hand holding a pencil is located in the upper left corner of the box. The word "and" is written in the middle of the box, between the two equations.

$14 \times 3 = 42$  and  $42 \div 3 = 14$

## 3. Comparing Reading Books Task

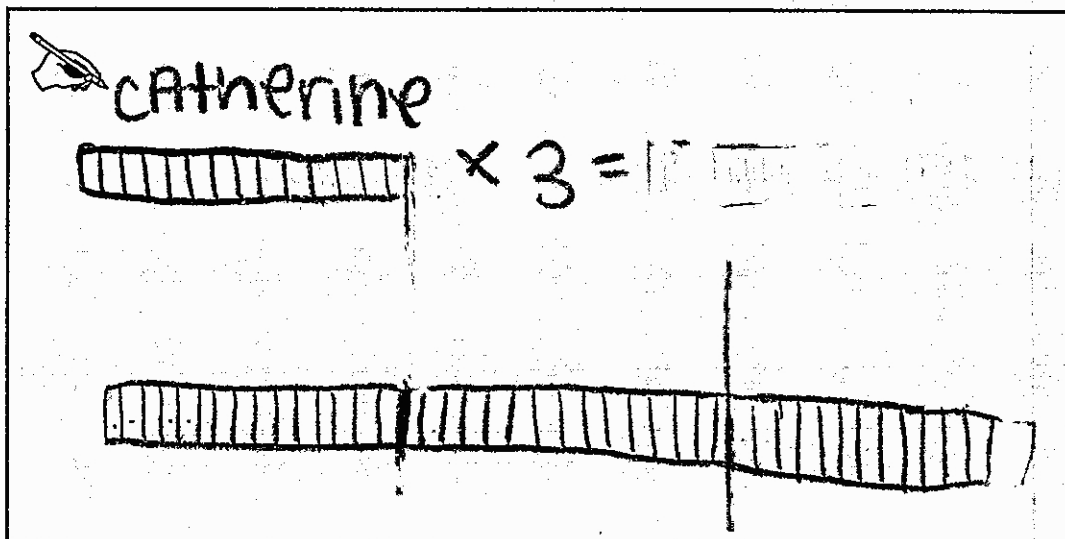
Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?



if Stuart read 42 books  
that means that  
Catherine read 13 book  
 $14 \times 3 = 42$

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.



Catherine

$\times 3 = 42$


- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.

The image shows a large rectangular box with a black border. Inside the box, at the top left, there is a small drawing of a hand holding a pencil, pointing towards the equation  $14 \times 3 = 42$ . The equation is written in a large, handwritten style. Below the equation, the box is mostly empty, with some faint, illegible markings and a small, faint drawing of a hand holding a pencil in the bottom right corner.


3. Comparing Reading Books Task

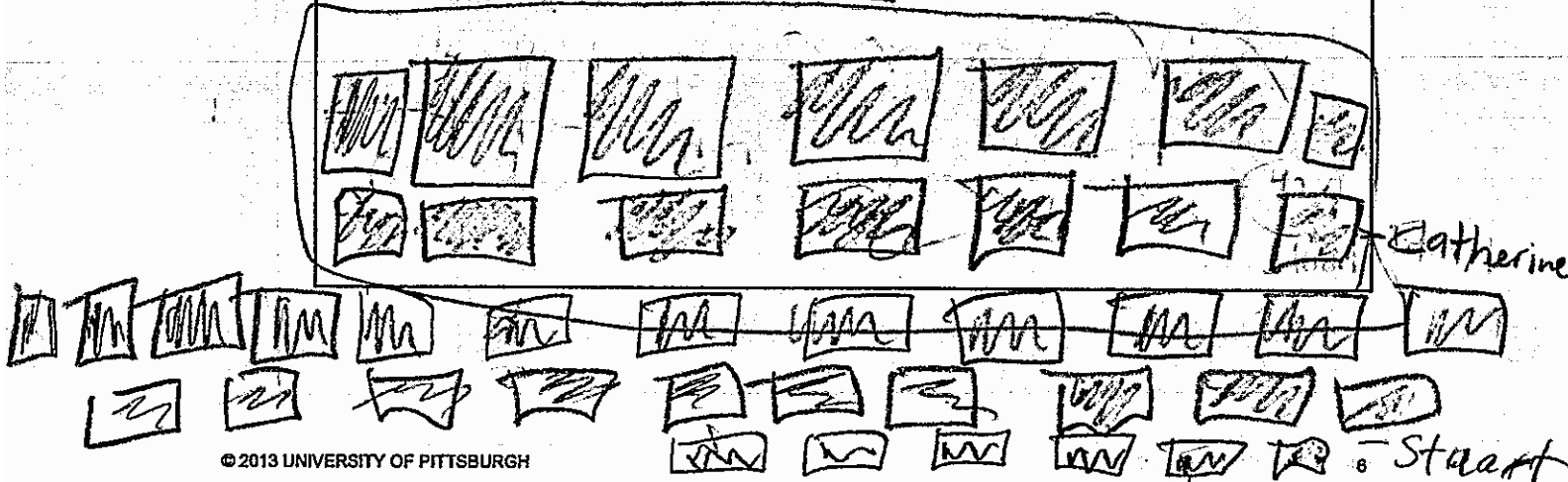
Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?

 If Stuart read 42 books and it says that he ate 3 times as many books as Catherine, then we have to divide.

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.

 Stuart = 42 (3 times as many books as)  
Catherine = ? books



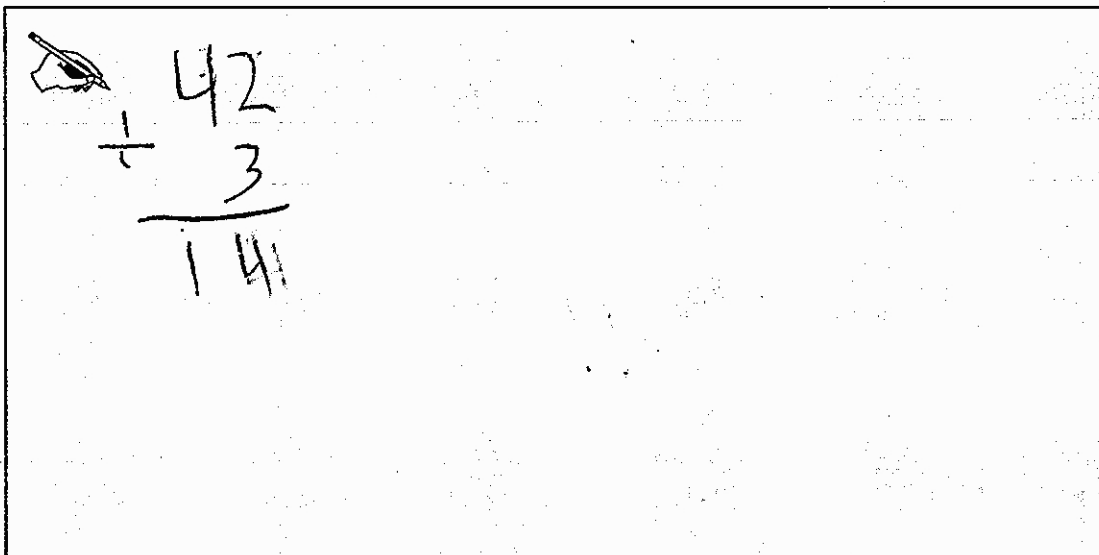
- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.

The student's work is contained within a rectangular box. At the top left, there is a drawing of an eye with a pencil tip pointing towards it. To the right of the eye, the number line  $4 \div 2 = 3 = 14$  is written. A curved line is drawn below this equation. Below the equation, there is a large, faint drawing of a number line with several tick marks and some illegible handwritten labels. At the bottom of the box, there are some faint, illegible handwritten notes.

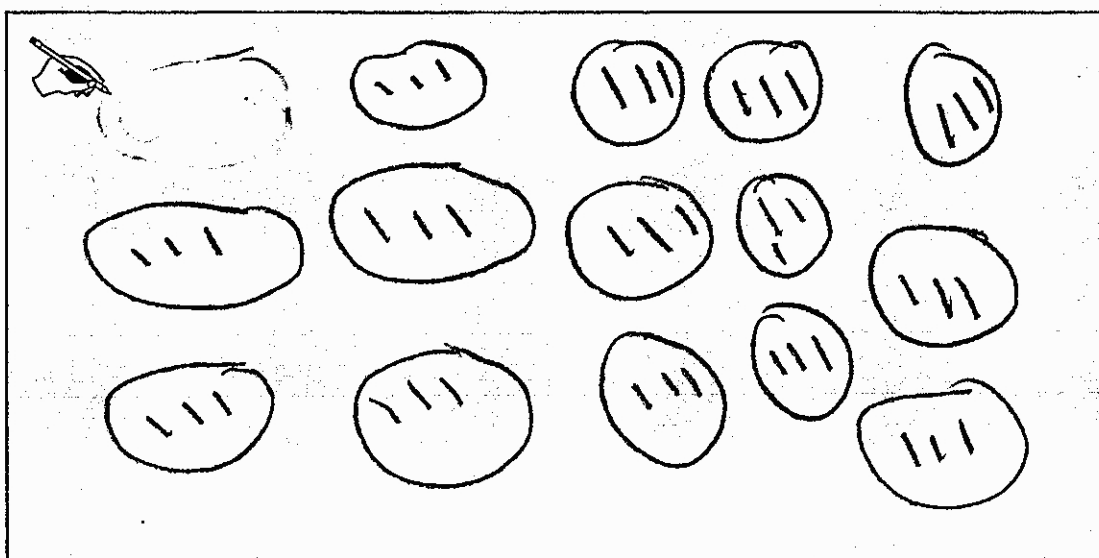
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Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

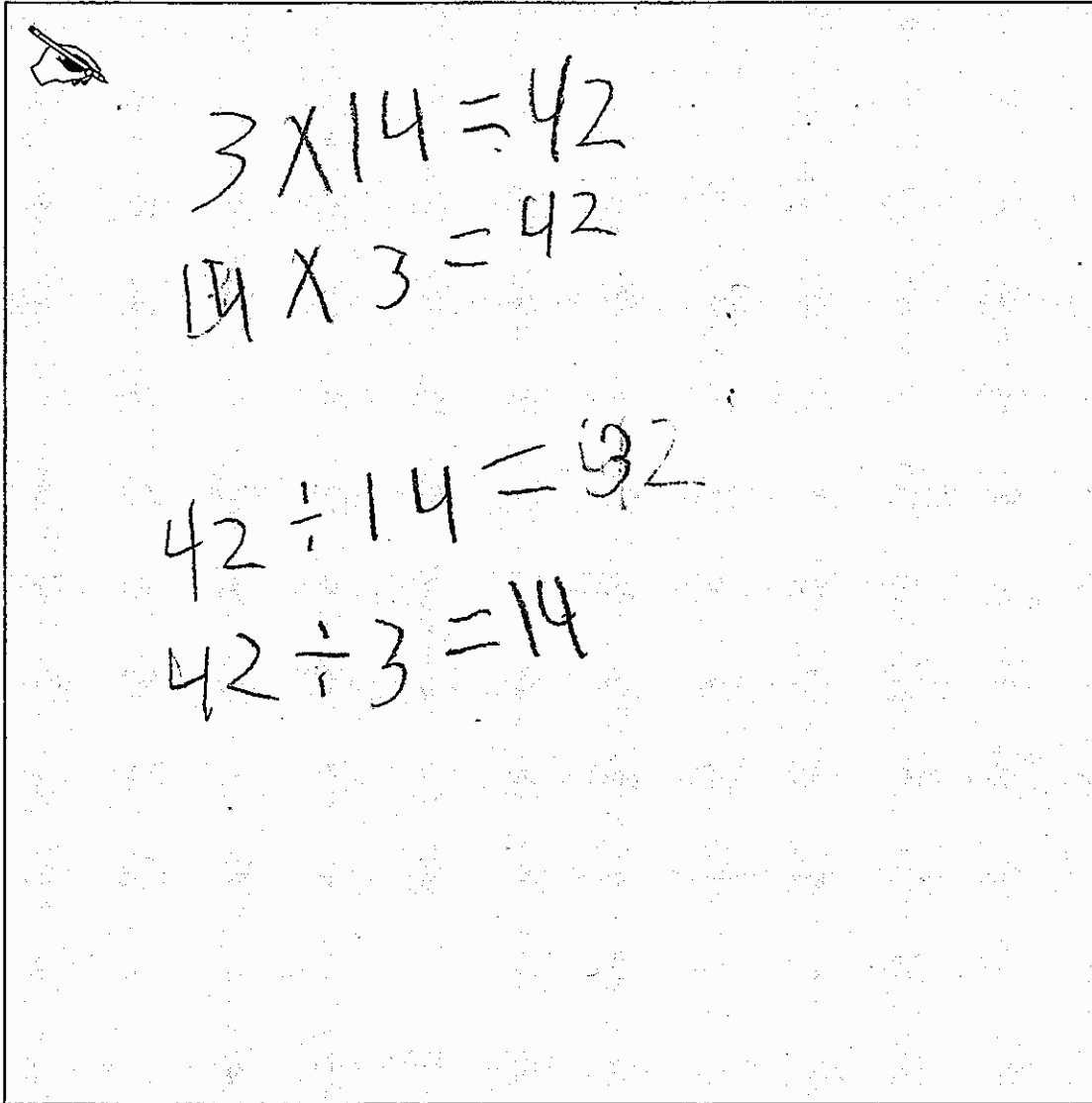
- a. If Stuart read 42 books, how many books did Catherine read?



- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.



- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



A hand-drawn box containing four equations on a grid background. In the top-left corner of the box is a small drawing of an eye with a pencil tip pointing towards it. The equations are:

$$3 \times 14 = 42$$
$$14 \times 3 = 42$$
$$42 \div 14 = 3$$
$$42 \div 3 = 14$$

### 3. Comparing Reading Books Task

Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?


$126 \div 42 = 3$   
 $42 \times 3 = 126$   
 Catherine read 126 books.

$A = B$   
 $B = 21$

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.

$A = 1$   
 $B = 21$

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



$126 = 42 \times 3$   
 $3 \times 42 = 126$

42 represents the # of how many books Stuart read.

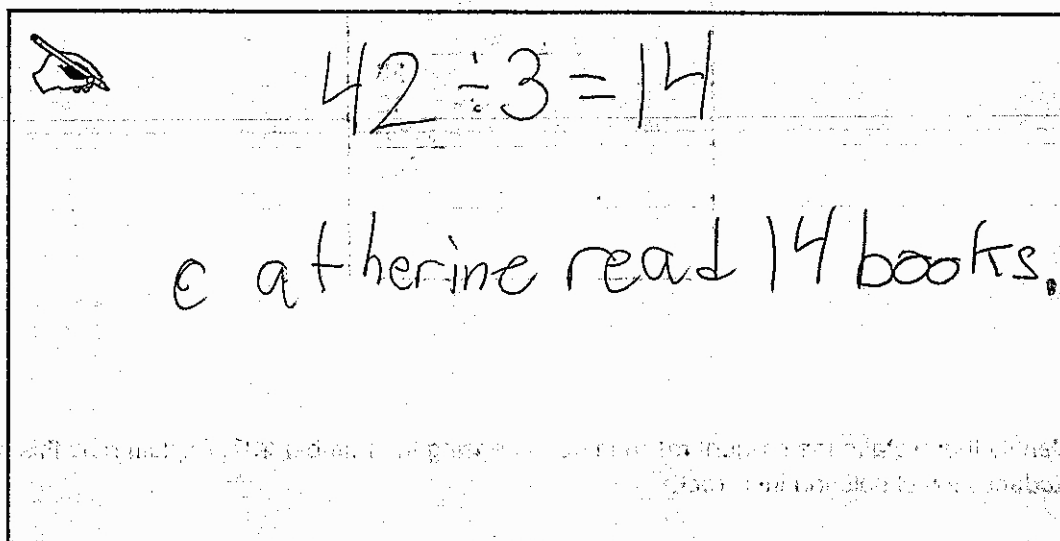
3 represents how many more times Catherine read.

126 represents how many books Catherine read.

3. Comparing Reading Books Task

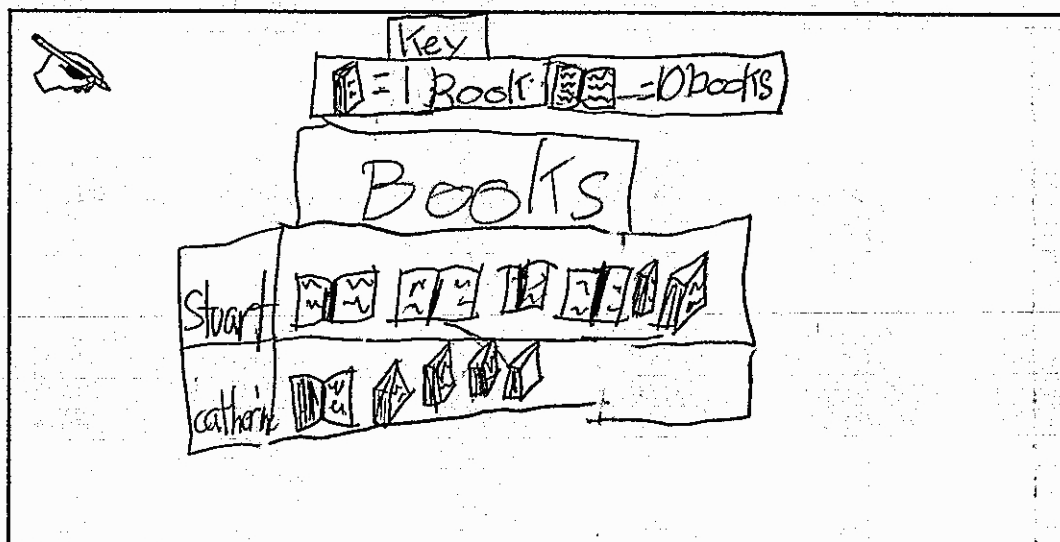
Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?




A handwritten solution for part a. It features a pencil icon in the top left corner. The equation  $42 \div 3 = 14$  is written in the center. Below the equation, the text "Catherine read 14 books." is written.

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.



A handwritten drawing for part b. It includes a pencil icon in the top left corner. At the top, a box labeled "Key" contains two symbols: a single book icon followed by "= 1 Book" and a group of three book icons followed by "= 3 Books". Below the key is a large box labeled "Books". Underneath, there are two rows of book icons. The top row is labeled "Stuart" and contains 14 book icons. The bottom row is labeled "Catherine" and contains 4 book icons, representing one-third of Stuart's total.

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.

  $142 \div 3 = 14$  Cathrine's books


Stuart's books

I said 3 times as many

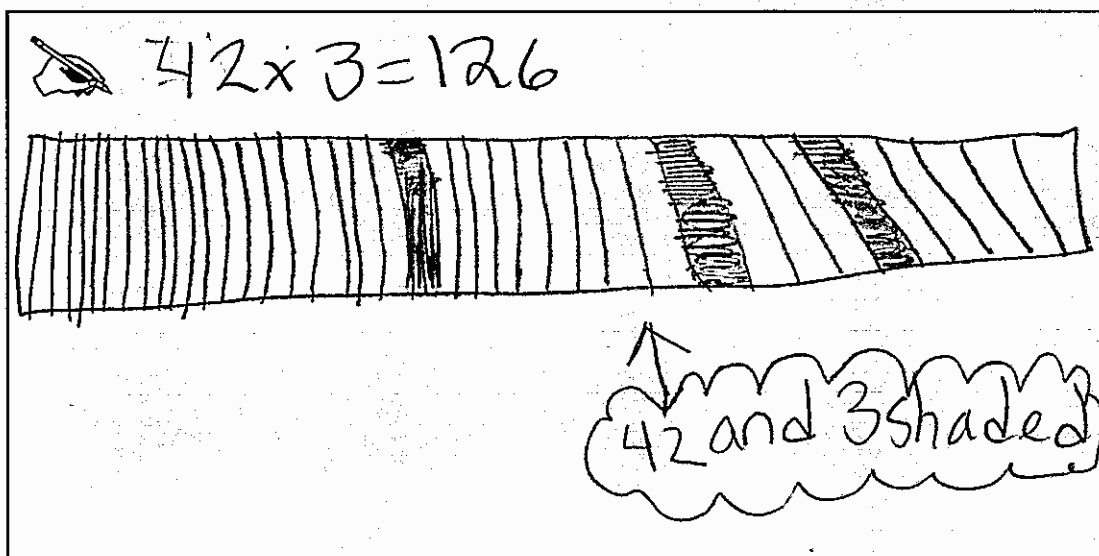
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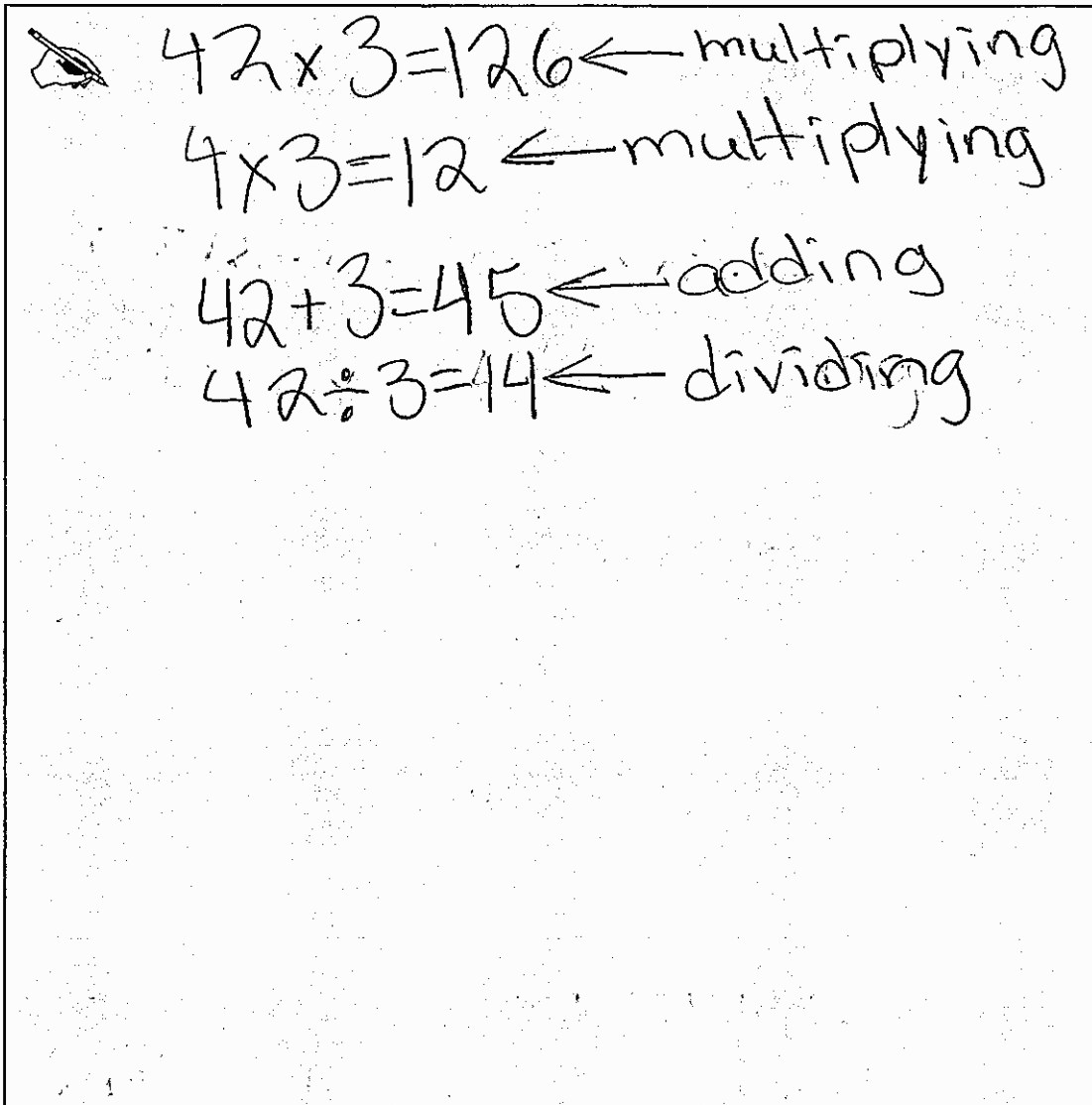
- a. If Stuart read 42 books, how many books did Catherine read?

 Stuart read 42 books and Catherine read 12 books. It seems that my calculator says that  $42 \times 3 = 126$  and it says that Stuart read 42 books but that is not true. What if equal's 12 is  $4 \times 3 = 12$

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.



- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.



A rectangular box containing four handwritten mathematical equations. Each equation is followed by an arrow pointing to the right and a descriptive word. The equations are:  $42 \times 3 = 126$  ← multiplying,  $4 \times 3 = 12$  ← multiplying,  $42 + 3 = 45$  ← adding, and  $42 \div 3 = 14$  ← dividing. A small drawing of a pencil is to the left of the first equation.

$42 \times 3 = 126$  ← multiplying

$4 \times 3 = 12$  ← multiplying

$42 + 3 = 45$  ← adding

$42 \div 3 = 14$  ← dividing

### 3. Comparing Reading Books Task

Stuart and Catherine are comparing how many books they have read. Stuart read three times the number of books that Catherine read.

- a. If Stuart read 42 books, how many books did Catherine read?

$3 \times 3 = 9$  Catherine

$3 \times 3 = 9$

42 Stuart

- b. Use a drawing or a number line to show how you calculated the number of books Catherine read.

catherine read 9 books because it said 3x the number of books that Catherine read.

Catherine 9

and

Stuart 42

# A-11b

- c. Write a multiplication equation *and* a division equation that match your drawing or number line. Explain what each number in each equation represents.

The student has written the equation  $3 \times 3 = 9$  with a drawing of a quill pen to the left. Below this, they have drawn a multiplication equation using arrays: a 3x3 array of squares followed by  $\times$ , another 3x3 array of squares, an equals sign, and a single row of 9 small squares followed by the number 9.