Lesson 19:

Solve multi-step word problems involving multiplication and division.

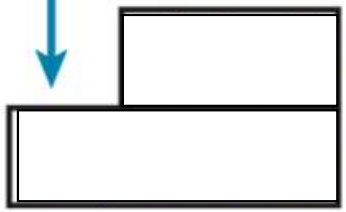
CCSS Standard – 5.OA.A.1 / 5.OA.A.2 / 5.NBT

FLUENCY (10-min) **Whiteboard Exchange: Place Value Relationships**

Say the VALUE of two identical adjacent digits in a six-or seven-digit number.

Then write a multiplication and division equation to build fluency.

156,629

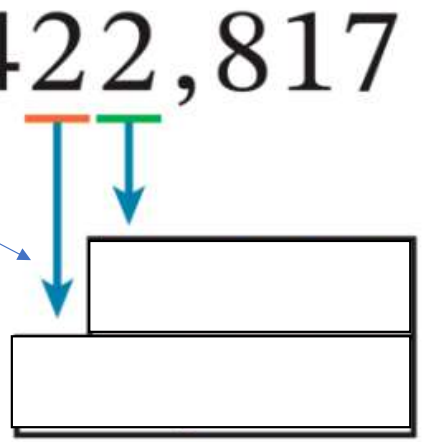


Raise your hand when you know the answer to each question. Wait for my signal.

FLUENCY (10-min) **Whiteboard Exchange: Place Value Relationships**

Say the VALUE of two identical adjacent digits in a six-or seven-digit number.

Then write a multiplication and division equation to build fluency.



Raise your hand when you know the answer to each question. Wait for my signal.

FLUENCY (10-min) **Whiteboard Exchange: Place Value Relationships**

Say the VALUE of two identical adjacent digits in a six-or seven-digit number.

Then write a multiplication and division equation to build fluency.

1,994,305

Raise your hand when you know the answer to each question. Wait for my signal.

FLUENCY (10-min) **Whiteboard Exchange: Place Value Relationships**

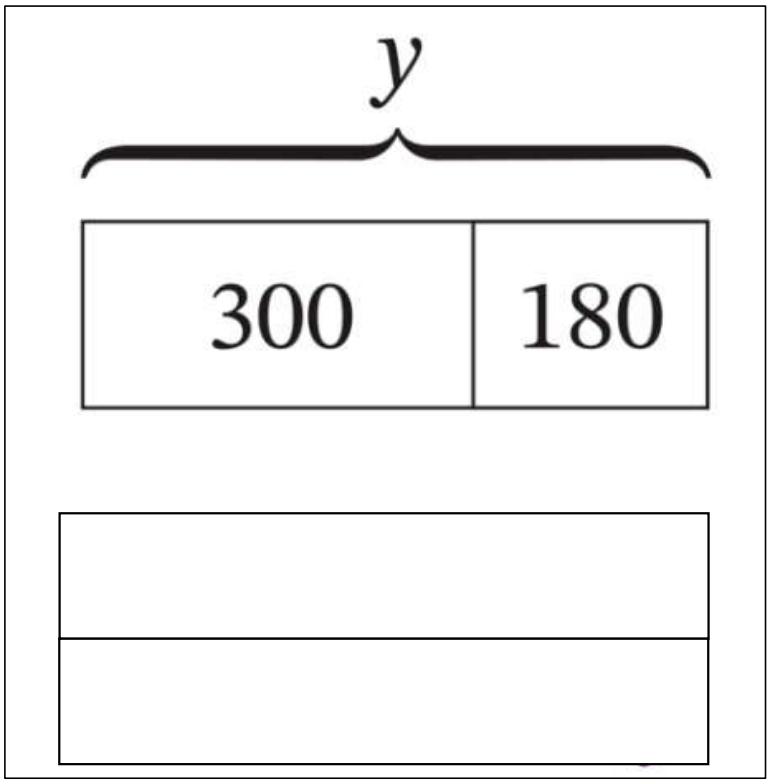
Say the VALUE of two identical adjacent digits in a six-or seven-digit number.

Then write a multiplication and division equation to build fluency.

3,326,804

Raise your hand when you know the answer to each question. Wait for my signal.

FLUENCY (10-min) **Whiteboard Exchange: Interpret Tape Diagrams**



What does this tape diagram show?

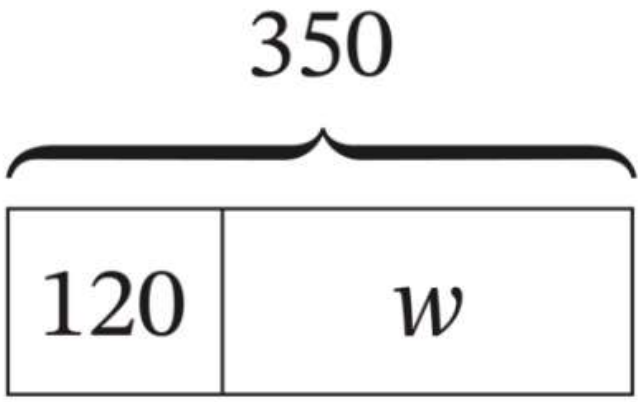
Is the total known or unknown?

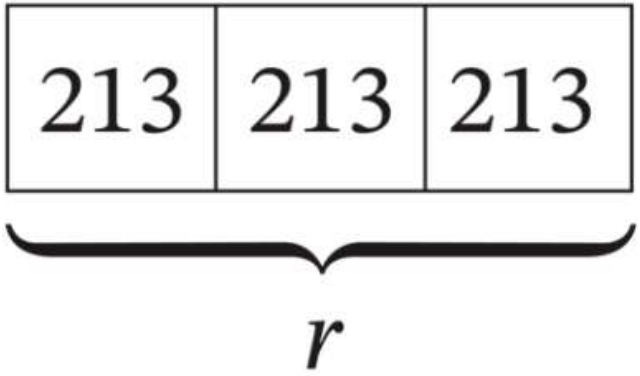
What equation can we write to solve for a?

Write the value of the expression.

FLUENCY (10-min) **Whiteboard Exchange: Interpret Tape Diagrams**

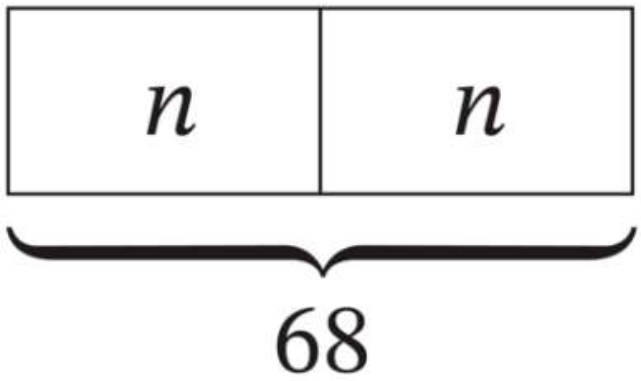
What equation can we write to solve for the letter?
Write the value of the expression.

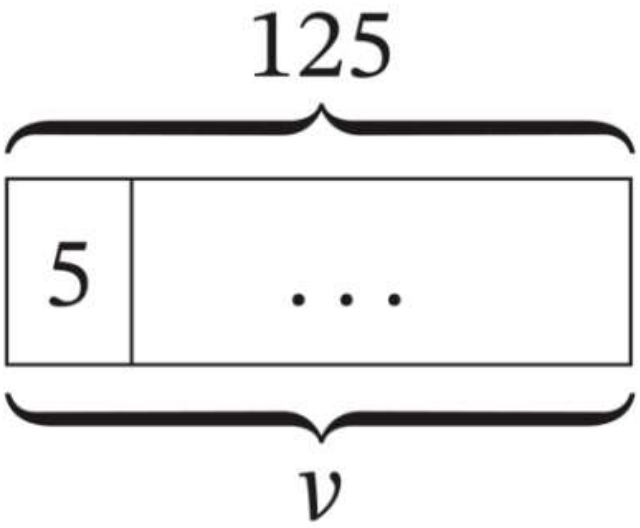




FLUENCY (10-min) **Whiteboard Exchange: Interpret Tape Diagrams**

What equation can we write to solve for the letter?
Write the value of the expression.





LAUNCH (5-min) **Students sort tape diagrams in 3 groups.**

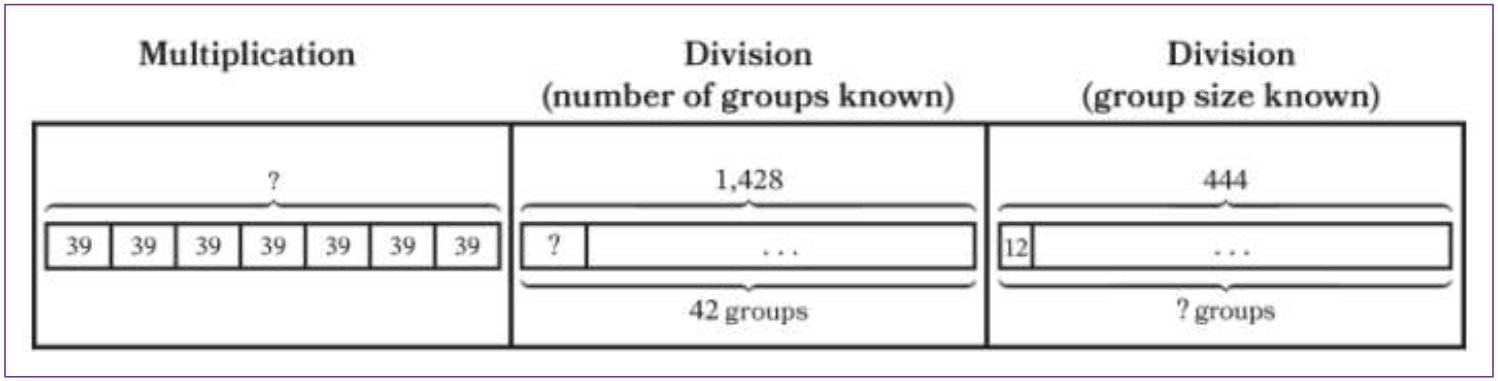
You are going to be placed into a group of three.

Each group will receive a set of Multiplication and Division Tape Diagram Sort Cards.

TASK: Sort your cards into each groups:

1. Multiplication
2. Division (number of groups known)
3. Division (number of group unknown)

You will have 2 minutes to complete the task.
Here is an example of correctly sorted cards:

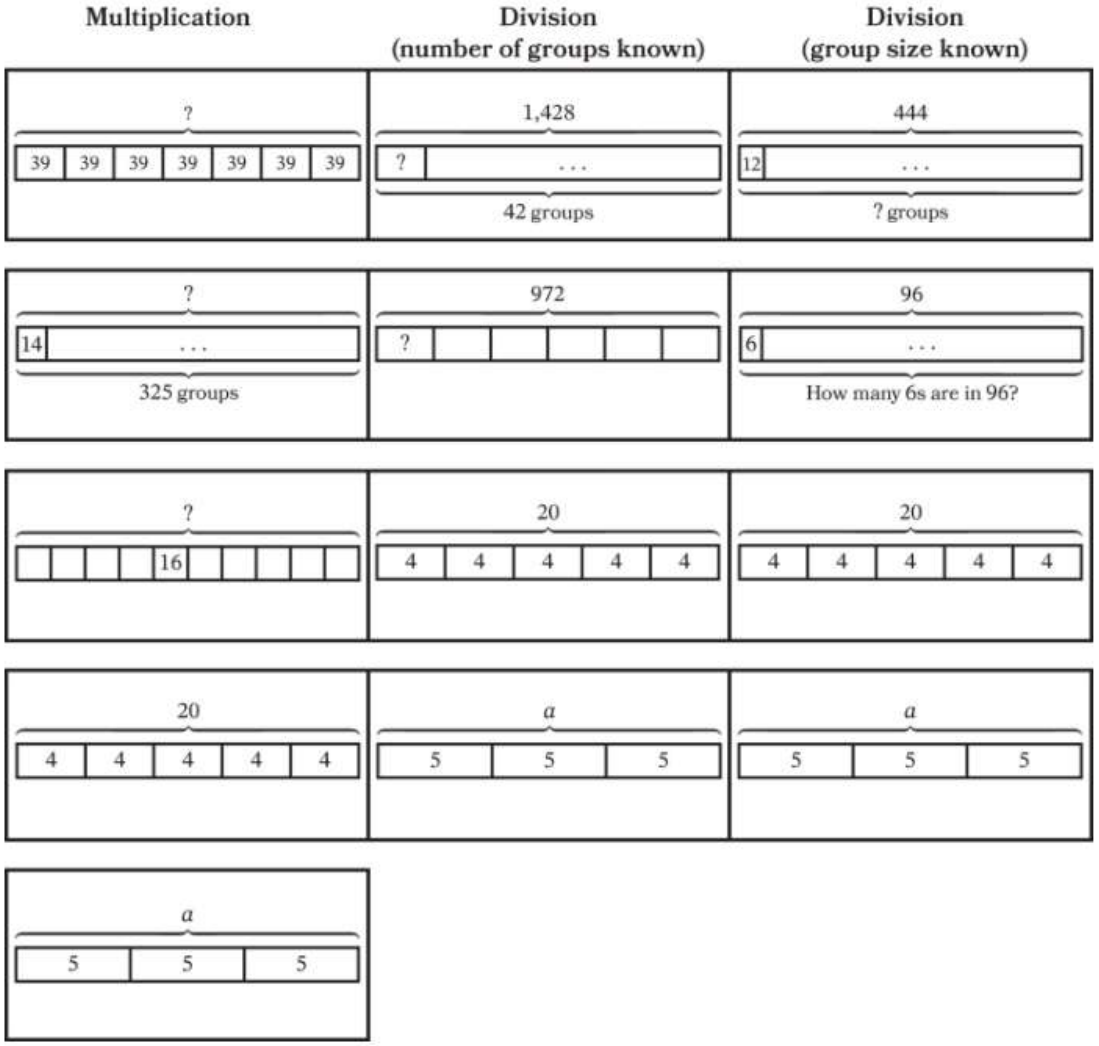


LAUNCH (5-min)

Check your group's work:

- **How did you know a tape diagram represented multiplication?**
- **How did you know a tape diagram represented division with the number of groups known? With group size known?**
- **Were there any tape diagrams you were not sure where to place? Why?**
- **What would have helped you decide in which category those tape diagrams belonged?**

Students sort tape diagrams in 3 groups.



LEARN (35-min) **Represent Word Problems with Models and Expressions**

LEARN Book – PAGE 161

A florist uses 2,448 flowers to make bouquets. They put 24 flowers in each bouquet and sell the bouquets for $25 each. If the florist sells all the bouquets of flowers, how much money do they earn?

(2,448 ÷ 24) x $25 =

Estimate

2,500 ÷ 25 = 100
2,000 ÷ 20 = 100

Tape Diagram

Divide

$$24\overline{)2{,}448}$$

LEARN (35-min) **Represent Word Problems with Models and Expressions**

LEARN Book – PAGE 161

A florist uses 2,448 flowers to make bouquets. They put 24 flowers in each bouquet and sell the bouquets for $25 each. If the florist sells all the bouquets of flowers, how much money do they earn?

$$
\begin{array}{r}
2 \\
100 \\
\hline
24\overline{)\,2,448} \\
-2,400 \\
\hline
48 \\
-48 \\
\hline
0
\end{array}
$$

$$
\begin{array}{r}
\times\ 102 \\
\hline
24\overline{)\,2,448} \\
-24\downarrow \\
\hline
04\ \downarrow \\
-\ 0\ \downarrow \\
\hline
48 \\
-48 \\
\hline
0
\end{array}
$$

STEP 1: How many bouquets were made?

LEARN (35-min) **Represent Word Problems with Models and Expressions**

LEARN Book – PAGE 161

A florist uses 2,448 flowers to make bouquets. They put 24 flowers in each bouquet and sell the bouquets for $25 each. If the florist sells all the bouquets of flowers, how much money do they earn?

102 x $25

Estimate

100 x $25 = $2,500

```
    1
  102
x  25
 ----
  510
+2040
 ----
$2,550
```

STEP 2: How much money was earned?

LEARN (35-min) **Represent Word Problems with Models and Expressions**

LEARN Book – PAGE 163

Miss Baker orders 13 cases of soup for her grocery store. Each case has 48 cans of soup. She puts all the cans on the shelves so that each shelf has an equal number. If there are 16 shelves, how many cans of soup are on each shelf?

(13 x 48) ÷ 16 =

STEP 1: How many cans does she have in all?

$$\begin{array}{r} {\scriptstyle 1\ 2} \\ 13 \\ \times\ 48 \\ \hline 104 \\ +\ 520 \\ \hline 624 \end{array}$$

624 ÷ 16 =

Estimate

600 ÷ 20 = 30

$$16\overline{)624}$$

STEP 2: How many cans will fit on each shelf?

LAND (10-min) **Exit Ticket**

19

Use the Read–Draw–Write process to solve the problem.

Blake buys 6 cases of water for a picnic. Each case has 32 water bottles. Blake plans to give everyone the same number of water bottles. If there are 48 people at the picnic, how many water bottles does each person get?

Exit Ticket – PAGE 167

Small Group Time:
Problem Set Page 163

Homework:
Page 119 APPLY BOOK