Lesson 18:

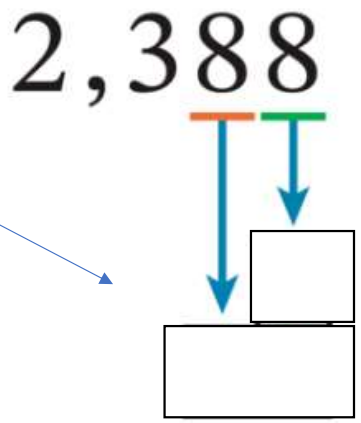
Create and solve real-world problems for given numerical expressions.

CCSS Standard – 5.OA.A.1 / 5.OA.A.2

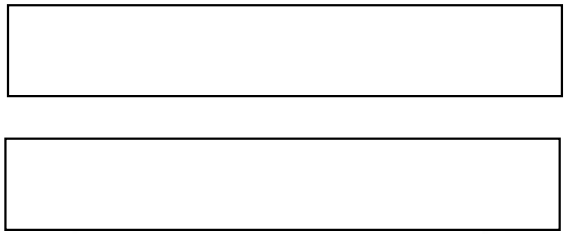
FLUENCY (15-min) **Whiteboard Exchange: Place Value Relationships**

Say the VALUE of two identical adjacent digits in a four-or five-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.



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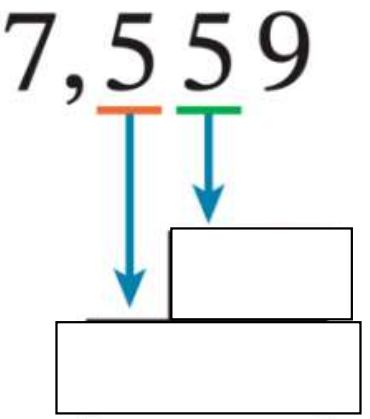

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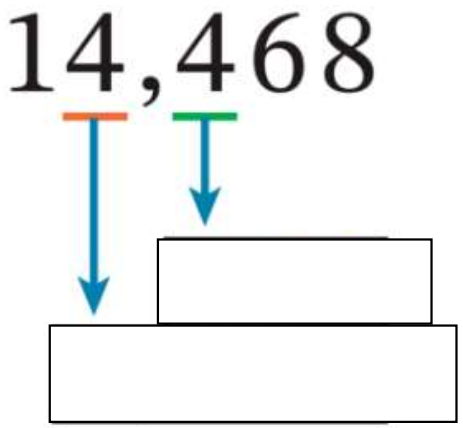

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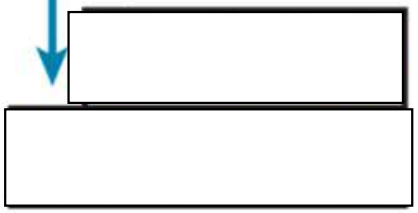
77,203



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FLUENCY (15-min) **Counting by Multiples of 6 and 60**

When I give the signal, say the first ten multiples of 6 and 60.
This will help us prepare to estimate for quotients. Ready?

Multiples of 6: ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐

Multiples of 60: ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐

FLUENCY (15-min) **Counting by Multiples of 7 and 70**

When I give the signal, say the first ten multiples of 7 and 70.
This will help us prepare to estimate for quotients. Ready?

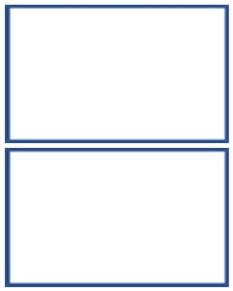
Multiples of 7: ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐

Multiples of 70: ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐, ☐

FLUENCY (15-min) **Whiteboard Exchange: Write and Evaluate Expressions**

Write an expression to represent the statement.
Write the value of the expression.

The sum of 1 seventh and 2 sevenths



FLUENCY (15-min) **Whiteboard Exchange: Write and Evaluate Expressions**

Write an expression to represent the statement.
Write the value of the expression.

1 fifth more than 2 fifths

The difference of 63 hundredths and 22 hundredths

FLUENCY (15-min) **Whiteboard Exchange: Write and Evaluate Expressions**

Write an expression to represent the statement.
Write the value of the expression.

4 tenths less than 7 tenths

4 times as much as 2 ninths

9 times as much as 3 hundredths

FLUENCY (15-min) **Whiteboard Exchange: Write and Evaluate Expressions**

Write an expression to represent the statement.
Write the value of the expression.

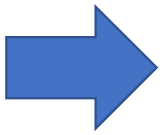
The quotient of 56 divided by 7

The quotient of 54 divided by 6

LAUNCH (5-min)

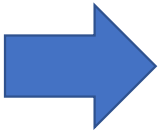
Students use parentheses as they write expressions to match a word problem context.

Create a real-world situation that could apply to these expressions.

$5+2$ 

There are five goldfish and two clown fish in my tank. How many fish are in my tank?

Using the same real-world situation above, can you adjust the situation to match this expression?

$3\times(5+2)$ 

5 goldfish and 2 clown fish are in a small tank. There are 3 times as many fish in the large tank. How many fish are in the large tank?

Today, we will write and solve real-world problems that match expression.

LEARN (30-min) **Develop Multi-Part Word Problem Situations**

Think of one real-world situation in your life where math is needed.

Situation	Add	Subtract	Multiply	Divide
Baking cookies	Find the total number of cookies.	How many cookies are left after you eat some?	There are _____ times as many chocolate chip cookies as sugar cookies.	How many cookies can each person have?
Organizing pencils	Find the total number of pencils.	How many pencils are left after another class borrows some?	There are _____ times as many purple pencils as blue pencils.	How many pencils can go in each bin?
Counting money	How much money do you have in all?	If you spend some money, how much money is left?	Find the amount of money it costs to buy _____ sandwiches.	Find the amount of money each person gets if it is divided equally.

Sometimes word problems have more than one step and each step might involve a different operation.

LEARN (30-min) **Develop Multi-Part Word Problem Situations**

LEARN BOOK – PAGE 153

2 x (15 + 20)

What situation or context can apply to this expression?

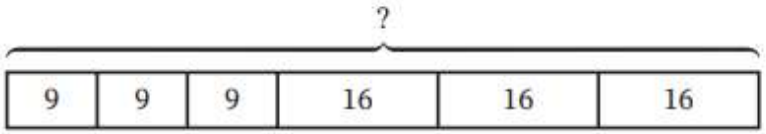
Nick bakes 15 peanut butter cookies and 20 chocolate chip cookies, Maddy bakes **twice as many as** Nick. How many cookies does Maddy bake?

Lilly spends 15 minutes on her math homework and 20 minutes on her reading homework. Amir spend twice as much time as Lilly on his homework. How many minutes does Amir spend on his homework?

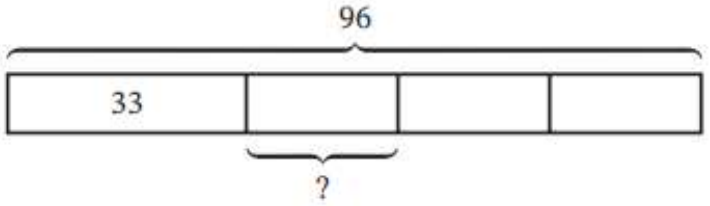
LEARN (30-min) **Write Word Problems to Match Expressions and Tape Diagrams**

LEARN BOOK – PAGE 153 & 154

What situation or context can apply to these expressions?



An action figure costs $9 and a puzzle costs $16. A parent purchases 3 action figures and 3 puzzles. How much money does the parent spend in all?



Maggie makes 96 muffins for a bake sale. She sells 33 of them and puts the remaining muffins in 3 containers. If the same amount is placed into each container, how many muffins are in each?

(24 – 6) ÷ 3

Janice baked cookies. She makes 24 cookies but 6 burn. She gives the rest of the cookies to her 3 friends. If each friend gets the same number of cookies, how many cookies does each friend get?

(9 + 4) x 3 - 6

On Monday a teacher bought 3 boxes of whiteboard markers. Each box had 9 black markers and 4 blue markers. By Friday, 6 of the markers had dried up. How many markers are left?

LEARN (30-min) **Connect the expression to the word problem**

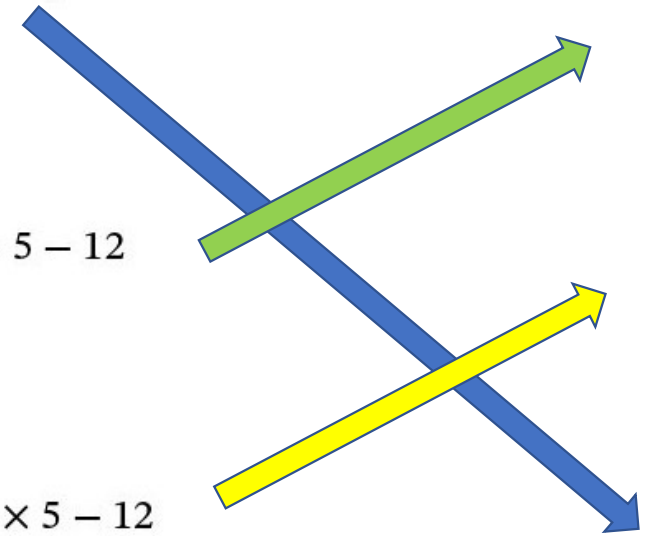
LEARN BOOK – PAGE 155

Draw lines to match the expressions to the word problems.

a. $(3 + 9 - 5) \times 12$

b. $3 \times 9 - 5 - 12$

c. $(3 + 9) \times 5 - 12$



Yuna buys 3 bags of oranges. There are 9 oranges in each bag. She eats 5 oranges. Then she gives 12 oranges to her friends. How many oranges does Yuna have now?

Tyler has 3 pencils. He finds 9 more pencils. Sasha has 5 times as many pencils as Tyler. Eddie has 12 fewer pencils than Sasha. How many pencils does Eddie have?

Riley gets 3 books from the library on Monday and 9 more books on Tuesday. She reads and returns 5 books on Wednesday. Riley has 12 times as many books on her bookshelf as she still has from the library. How many books are on Riley's bookshelf?

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

Name _____ Date _____

18

Write a word problem that can be solved by using the expression shown.

$$(6 + 7) \times 11 - 34$$

Exit Ticket – PAGE 157

Small Group Time:
Problem Set Page 155

Homework:
Page 113 APPLY BOOK