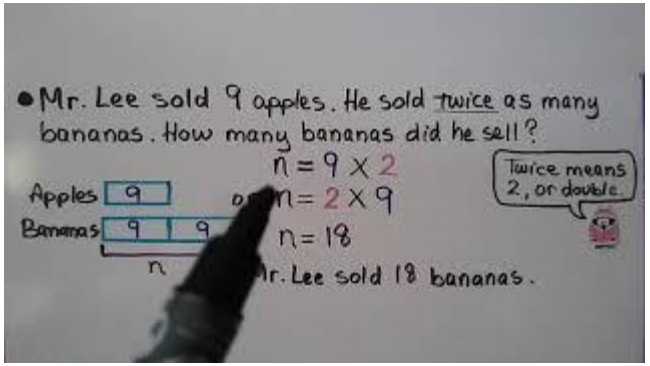
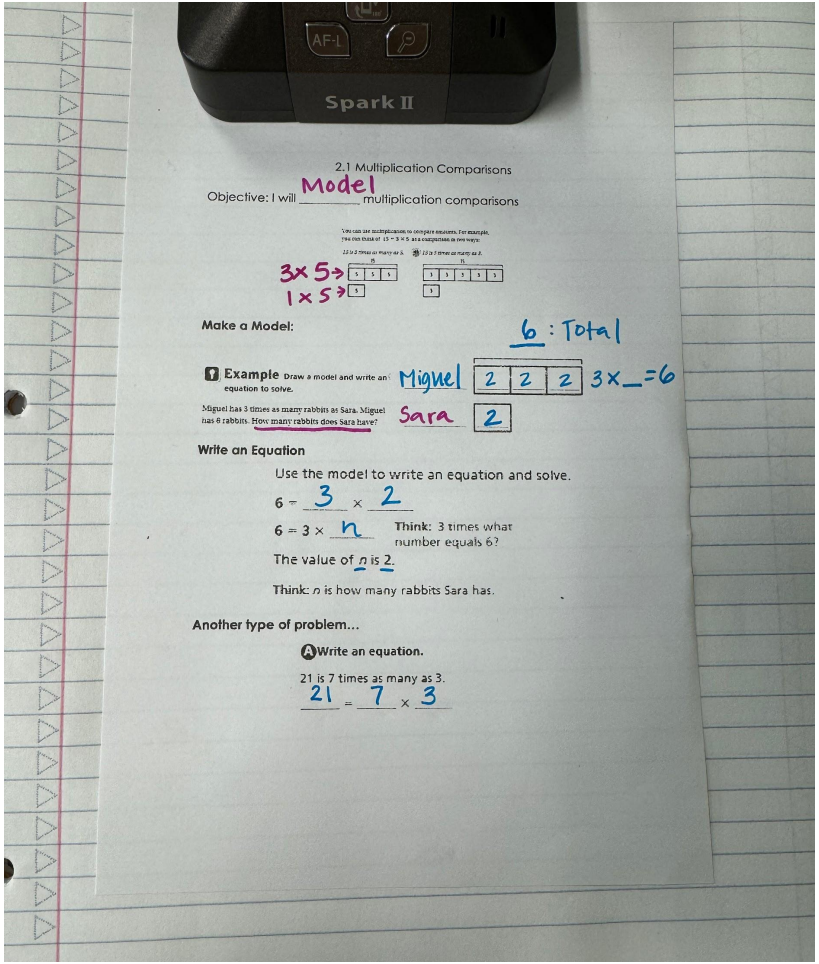
Ch 2 Hw HELP

Ms.Cook

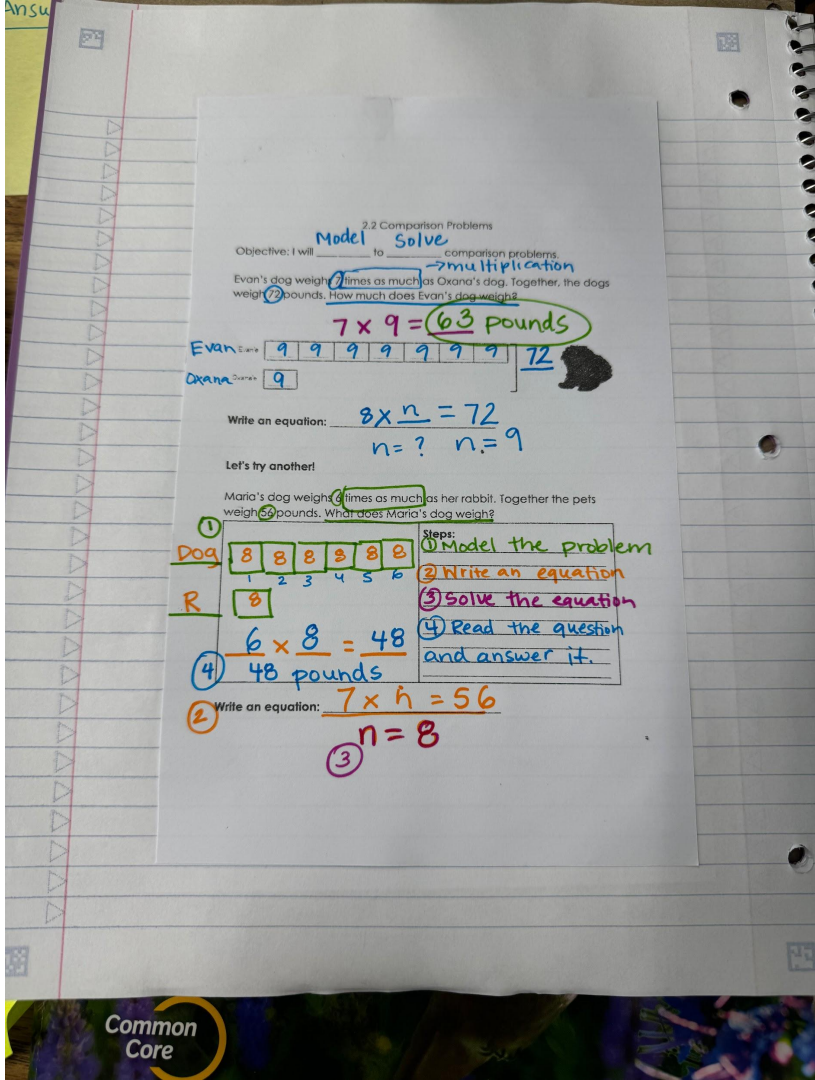
2.1

Reteach video:





2.2


2.2 Comparison Problems
Objective: I will Model to Solve comparison problems.
→multiplication
Evan's dog weighs 7 times as much as Oxana's dog. Together, the dogs weigh 72 pounds. How much does Evan's dog weigh?
7 x 9 = 63 pounds
Evan
Oxana
72
Write an equation: 8 x n = 72
n = ? n = 9
Let's try another!
Maria's dog weighs 6 times as much as her rabbit. Together the pets weigh 56 pounds. What does Maria's dog weigh?
Dog
R
6 x 8 = 48
48 pounds
Steps:
1 Model the problem
2 Write an equation
3 Solve the equation
4 Read the question and answer it.
Write an equation: 7 x h = 56
n = 8
Common Core

2.3

Multiply Tens, Hundreds & Thousands

Find the product.

1. $4 \times 7{,}000 =$ 28,000
   Think: $4 \times 7 = 28$
   So, $4 \times 7{,}000 = 28{,}000$

2. $9 \times 60 =$ 540

3. $8 \times 200=$ 1600

4. $5 \times 6{,}000 =$ 30,000

P927

2.3 Multiply Tens, Hundreds, and Thousands

Objective: By understanding place value, I will multiply tens, hundreds, and thousands.

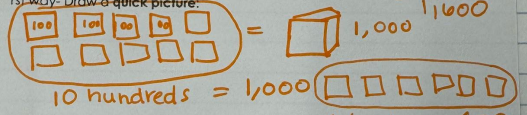
Multiply

Each car on a train has 200 seats. How many seats are on a train with 8 cars?

Find 8×200. = 1,600

1,000
+ 600
1,600

1st way- Draw a quick picture:



2nd way- Use **Place Value** (rename numbers)

$8 \times 200 = 8 \times 2$ hundreds
$= 16$ hundreds
$= 1{,}600$

Other ways- use a **Basic Facts**

Use patterns. $3 \times 7{,}000$

Basic fact:

$3 \times 7 = 21$ — basic fact
$3 \times 70 = 210$
$3 \times 700 = 2100$
$3 \times 7{,}000 = 21000$

Basic fact with a zero:

$8 \times 5 = 40$ — basic fact
$8 \times 50 = 400$
$8 \times 500 = 4000$
$8 \times 5{,}000 = 49000$

2.4

2.4 Estimate Products

Objective: I will estimate products by rounding and determine if exact estimates are reasonable.

CUBES

estimate or round → multiplication

An elephant can reach as high as 23 feet with its trunk. It uses its trunk to pick up objects that weigh up to 3 times as much as a 165-pound person! About how much weight can an African elephant pick up with its trunk?

One way- Estimate by **rounding**

STEP 1 Round the greater factor to the nearest hundred.

3 × 165

3 × 200

3 × 200 = 600

STEP 2 Use mental math.

Think: 3 × 200 = 3 × 2 hundreds

= 6 hundreds

= 600

You can also estimate by finding two numbers the exact answer is between

3 × 165

3 × 100 = 300

3 × 165 (Think: 165 is between 100 and 200. Use those numbers to estimate.)

3 × 200 = 600

So, the African elephant can pick up between 300 and 600 pounds.

Check for **reasonableness**- Estimates help you check to see that your answer makes sense.

4 × 80 = 320

4 × 86 = 384

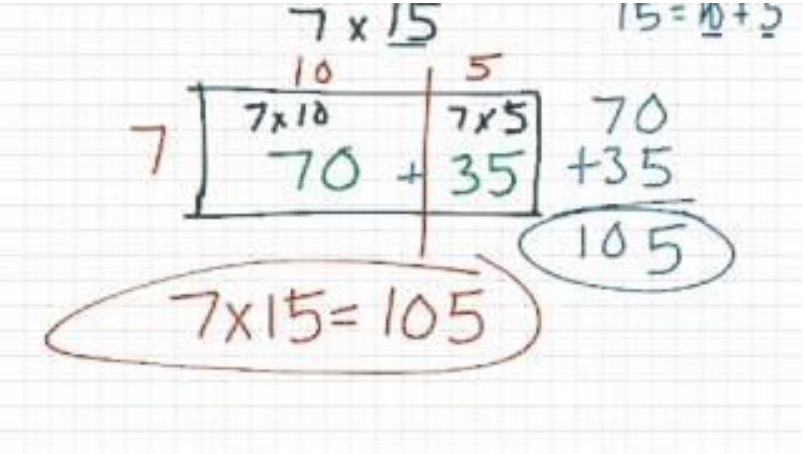
4 × 90 = 360

10 20 30 40 50

Is this answer correct? How do you know?

The answer is not reasonable, 344 is the correct answer. 384 was not between our estimates

2.5



2.5 Multiply Using the Distributive Property

Objective: I will use the Distributive Property to multiply a 2-digit number by a 1-digit number.

The **Distributive Property** states Multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products together.

This means you can break apart numbers to make them easier to multiply!

$6 \times 13 = 78$

10 3

$6 \times 10 = 60$

$6 \times 3 = 18$

$60 + 18 = 78$

products

Let's do another!

① $3 \times 13 = 39$

8 5

② $3 \times 8 = 24$

$3 \times 5 = 15$

③ $24 + 15 = 39$

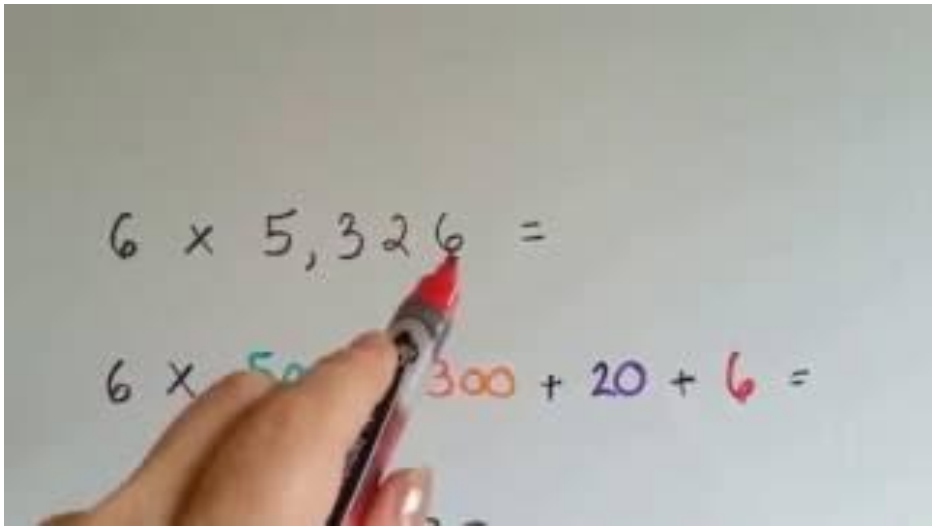
Steps:

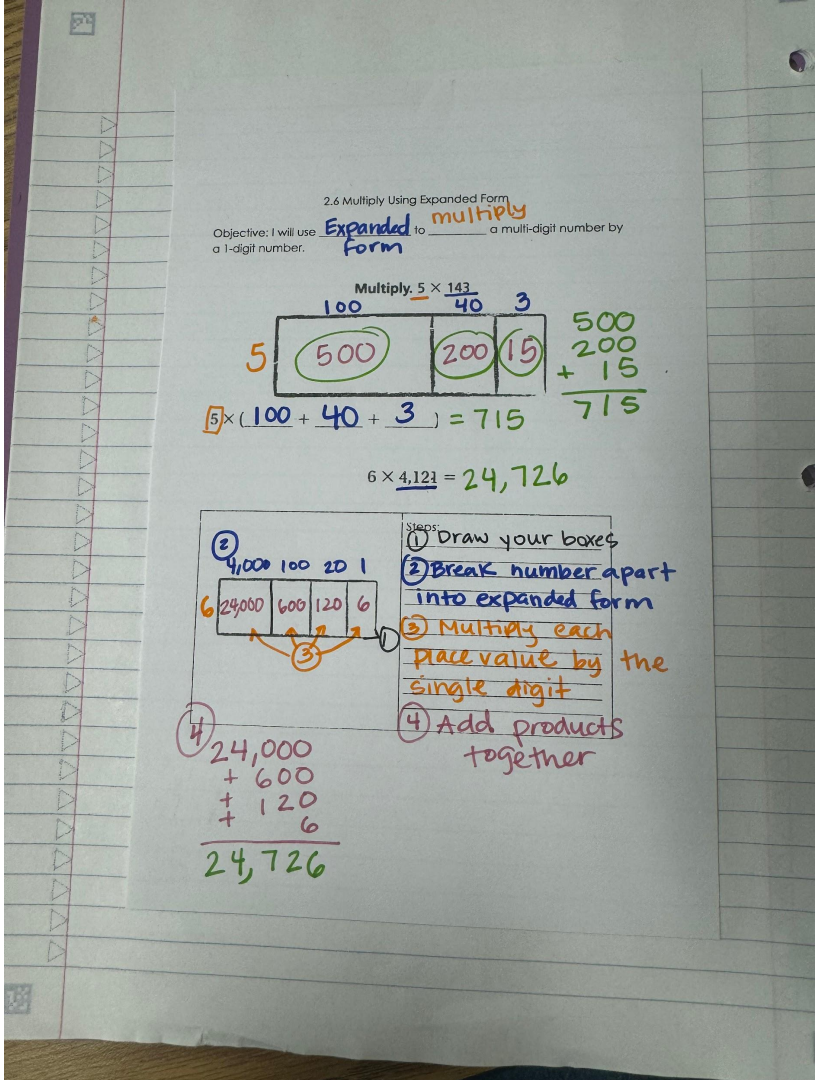
① Break apart the 2-digit number by place value or basic facts

② Multiply

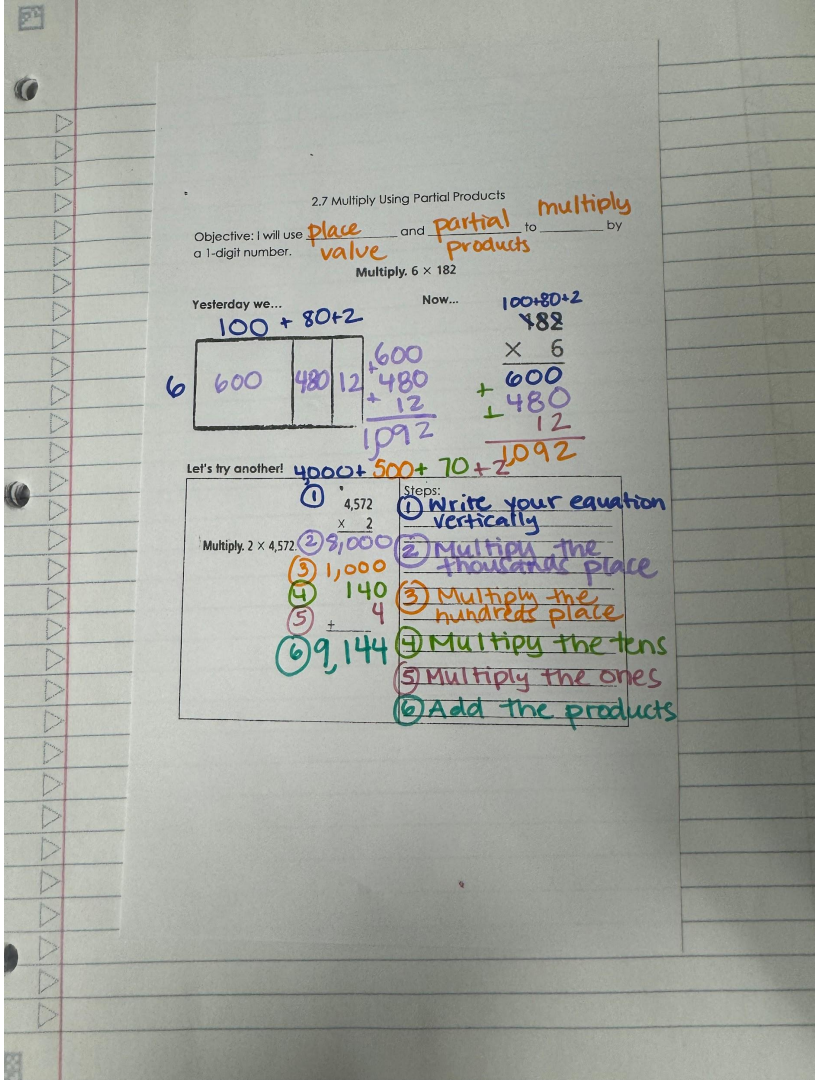
③ Add the two products together

2.6


6 x 5,326 =
6 x
300 + 20 + 6 =

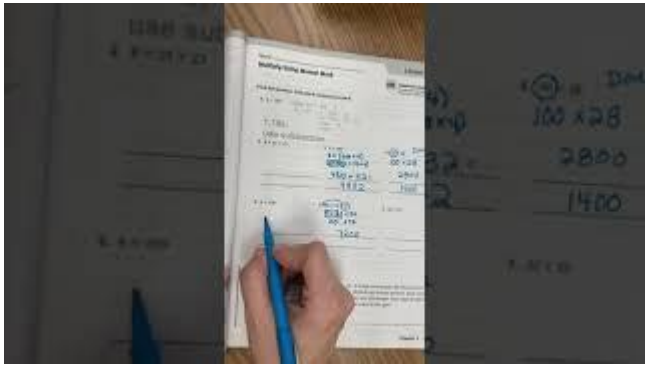

2.6 Multiply Using Expanded Form
Objective: I will use Expanded Form to multiply a multi-digit number by a 1-digit number.
Multiply. 5 × 143
100 40 3
5 500 200 15
500 + 200 + 15 = 715
5 × (100 + 40 + 3) = 715
6 × 4,121 = 24,726
4,000 100 20 1
6 24,000 600 120 6
Steps:
1 Draw your boxes
2 Break number apart into expanded form
3 Multiply each place value by the single digit
4 Add products together
24,000 + 600 + 120 + 6 = 24,726

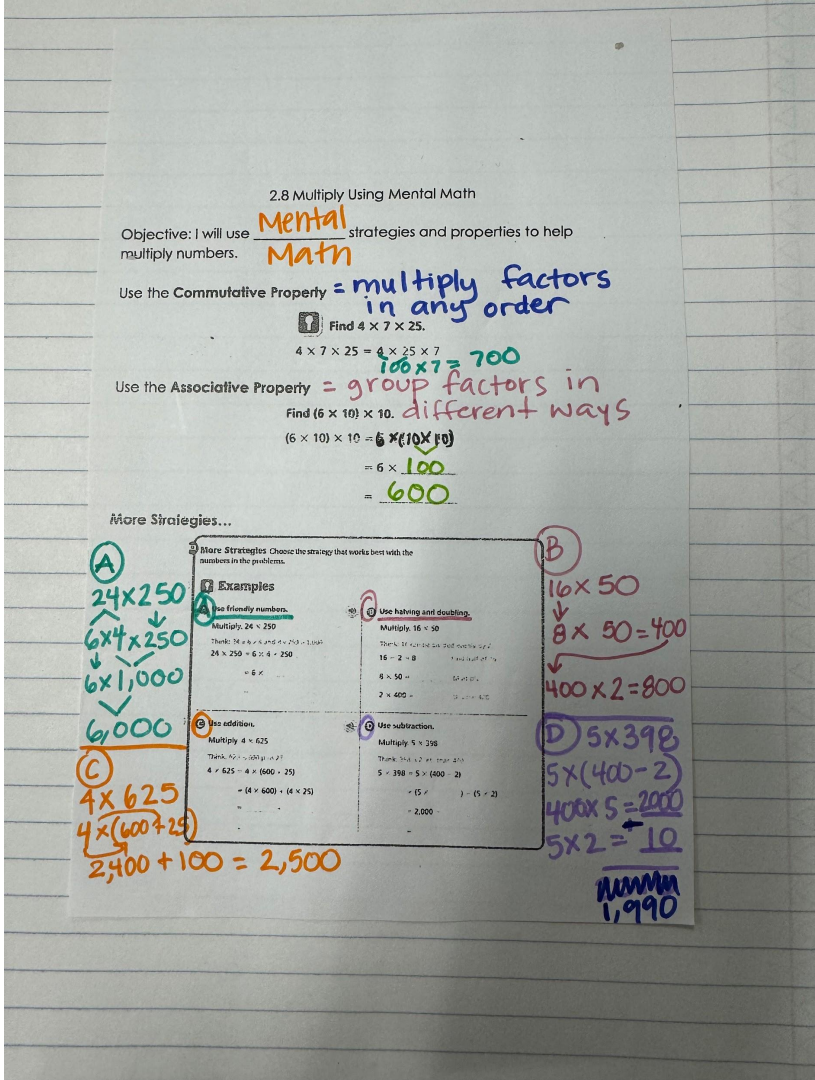
2.7


2.7 Multiply Using Partial Products
Objective: I will use place value and partial products to multiply by a 1-digit number.
Multiply. 6 × 182
Yesterday we...
100 + 80 + 2
6
600
480
12
600
+ 480
+ 12
1092
Now...
100+80+2
182
× 6
600
+ 480
12
1092
Let's try another! 4000 + 500 + 70 + 2
Multiply. 2 × 4,572
1 4,572 × 2
2 8,000
3 1,000
4 140
5 4
6 9,144
Steps:
1 Write your equation vertically
2 Multiply the thousands place
3 Multiply the hundreds place
4 Multiply the tens
5 Multiply the ones
6 Add the products

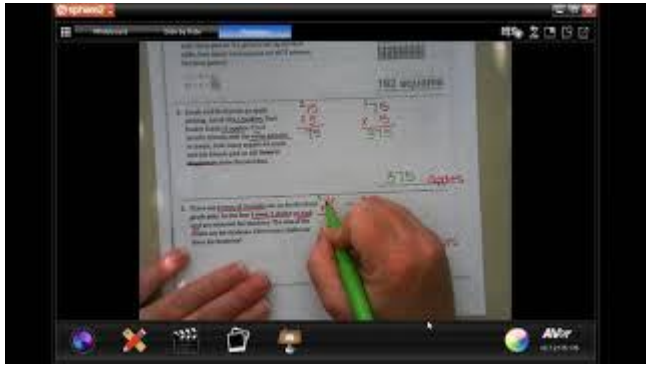
2.8

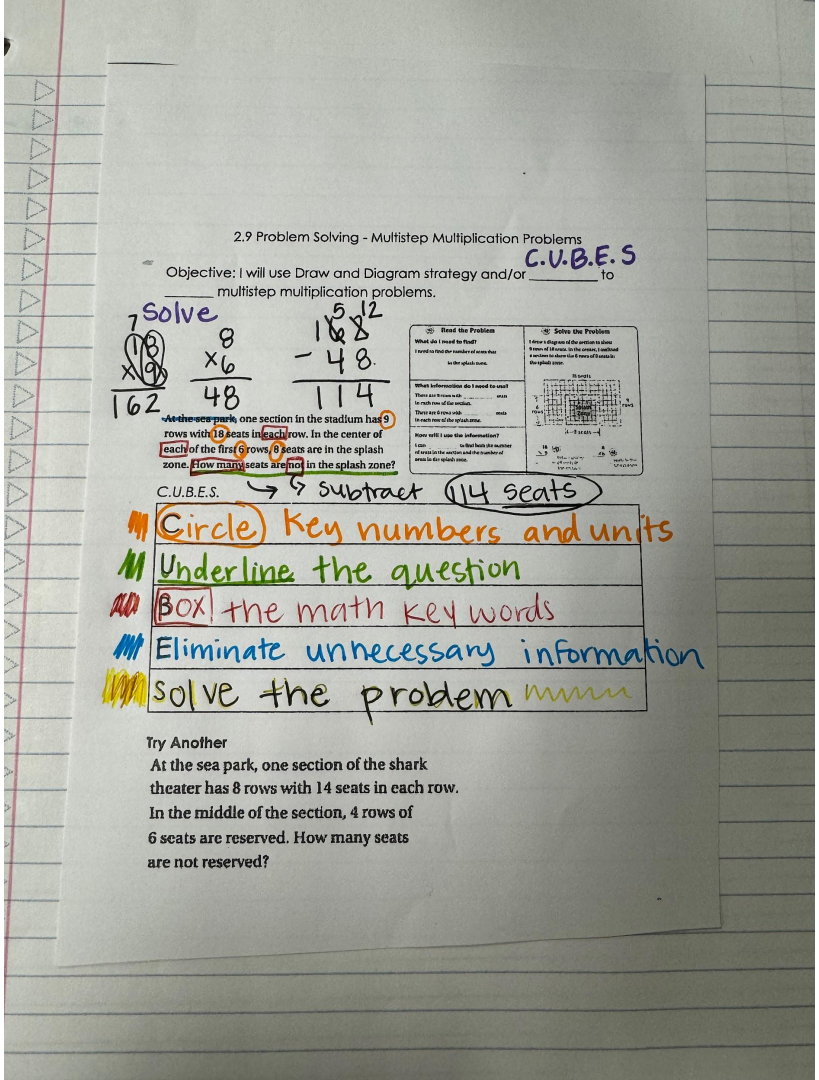
I suggest students watch her complete one problem, then try the next on their own.





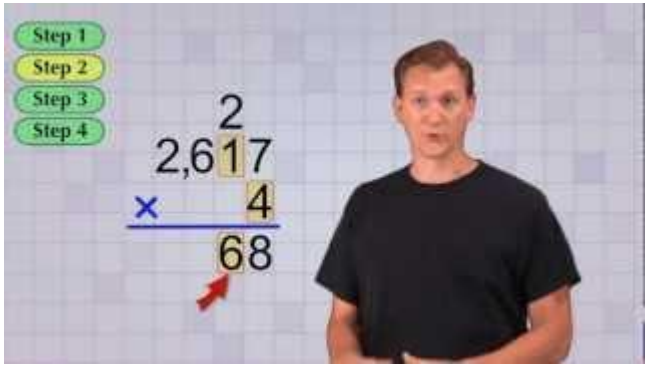
2.9-

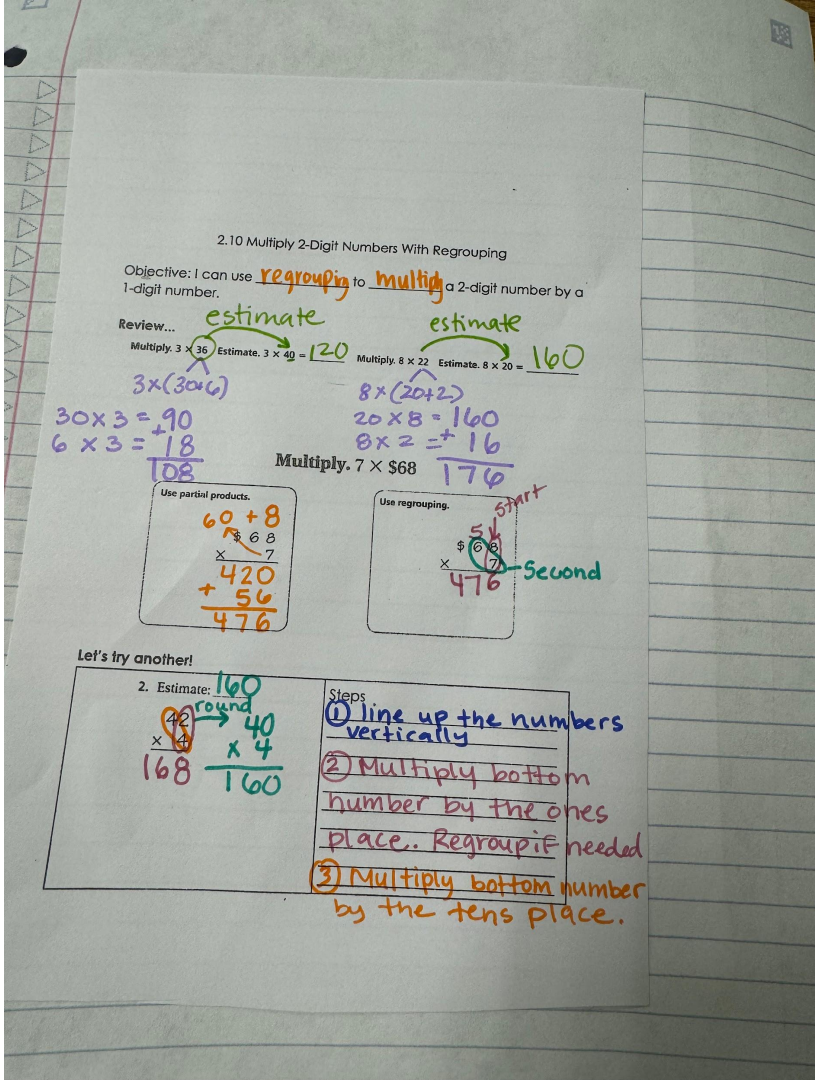



2.9 Problem Solving - Multistep Multiplication Problems
Objective: I will use Draw and Diagram strategy and/or C.U.B.E.S to _____ multistep multiplication problems.
Solve
162
48
114
At the sea park, one section in the stadium has 9 rows with 18 seats in each row. In the center of each of the first 6 rows, 8 seats are in the splash zone. How many seats are not in the splash zone?
C.U.B.E.S.
subtract
114 seats
Circle Key numbers and units
Underline the question
Box the math key words
Eliminate unnecessary information
solve the problem
Try Another
At the sea park, one section of the shark theater has 8 rows with 14 seats in each row. In the middle of the section, 4 rows of 6 seats are reserved. How many seats are not reserved?

2.10

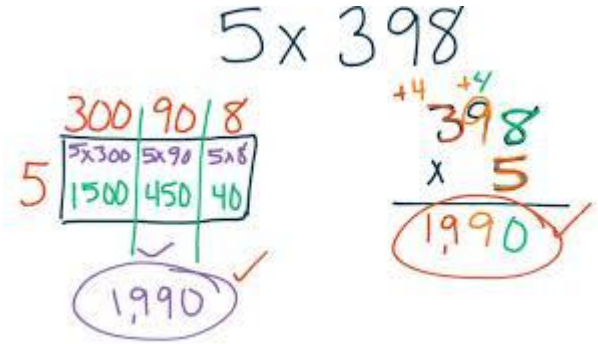
Reteach video:

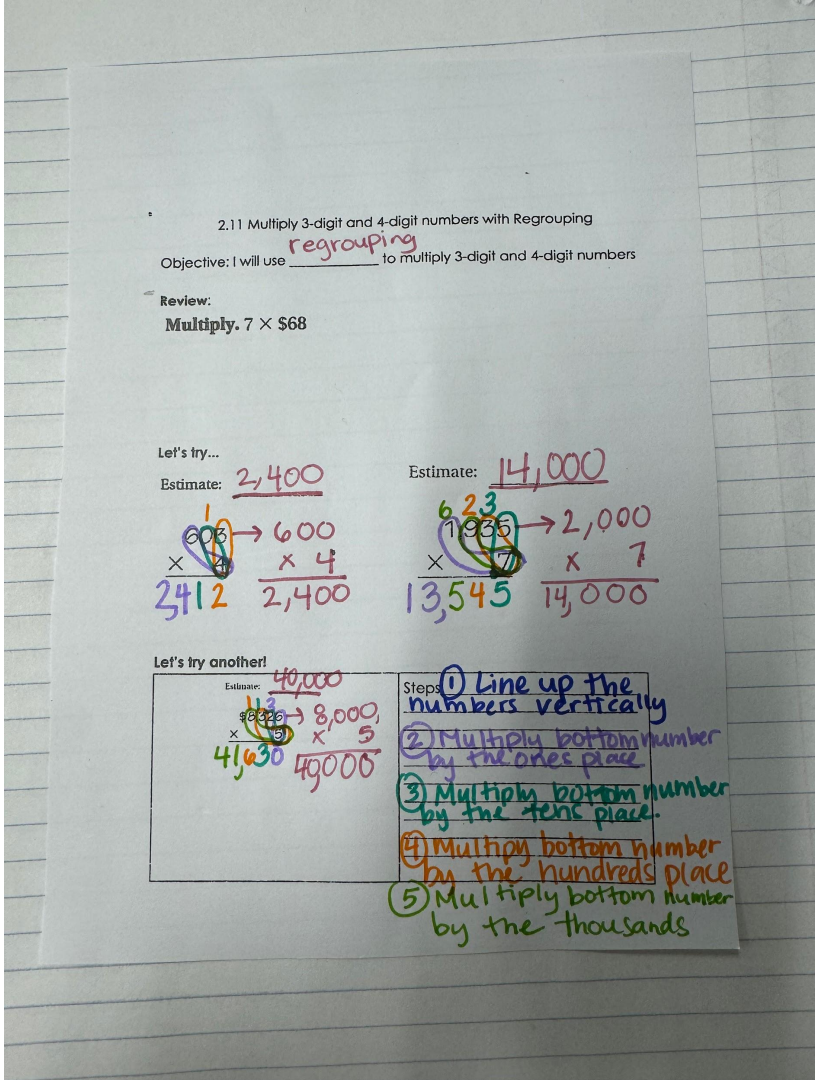




2.11

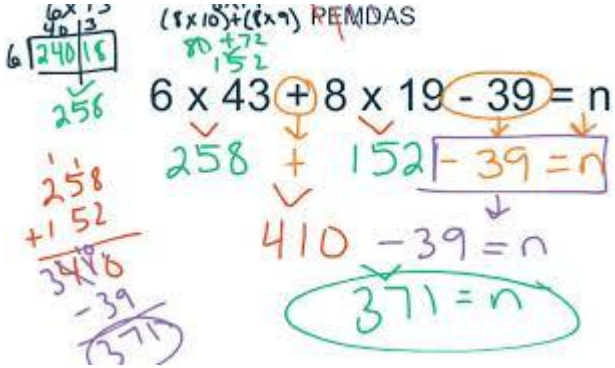
Reteach video:

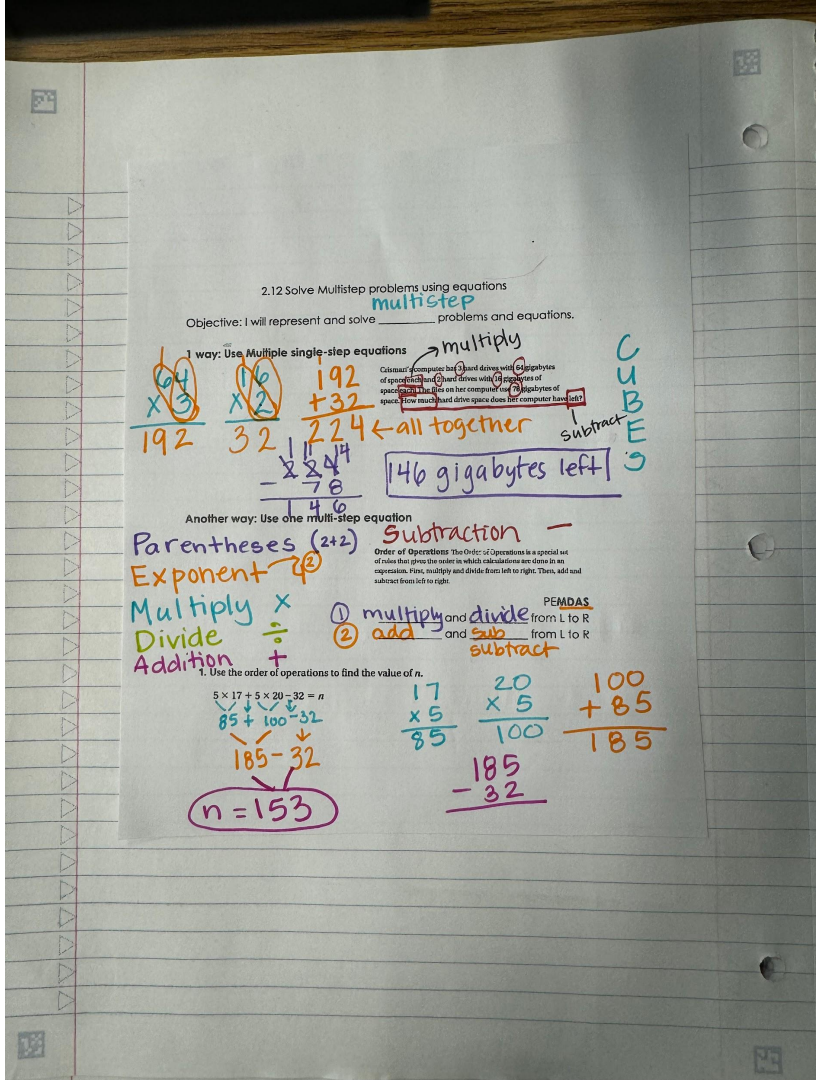




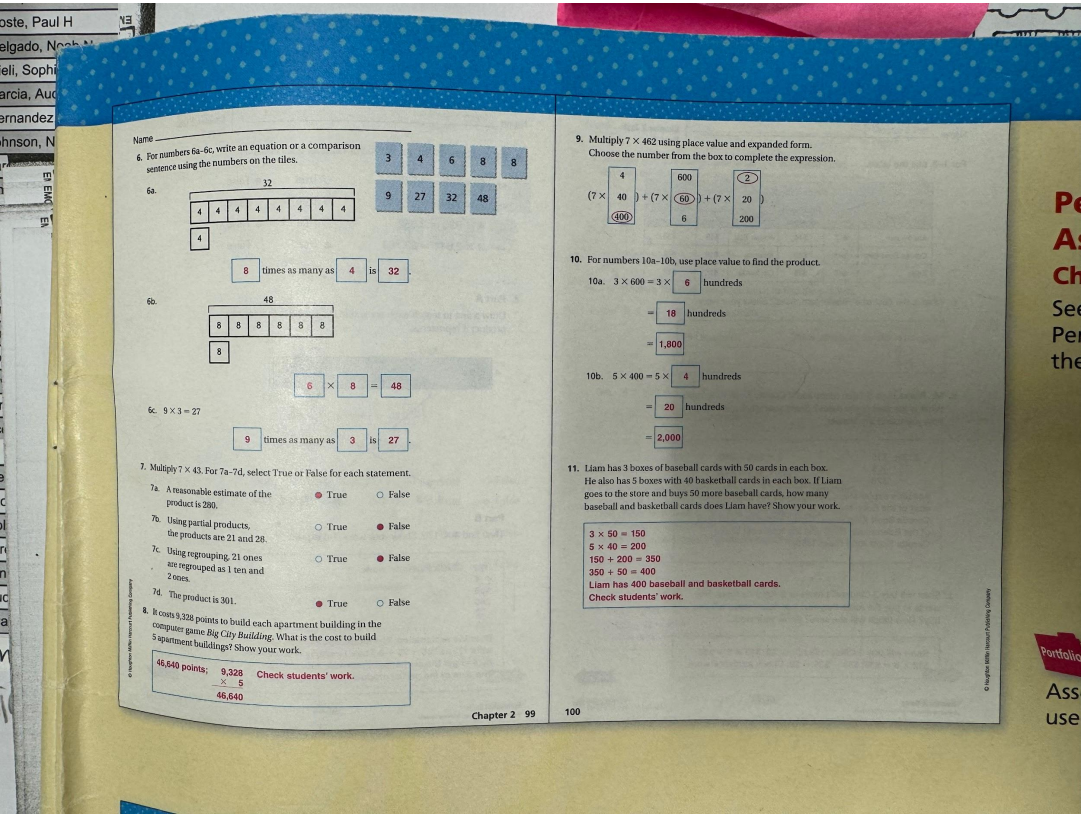
2.12-

Reteach practice video





Study guide answer key



Name _____

6. For numbers 6a–6c, write an equation or a comparison sentence using the numbers on the tiles.

3 4 6 8 8 9 27 32 48

6a. 32

4 4 4 4 4 4 4 4

4

8 times as many as 4 is 32.

6b. 48

8 8 8 8 8 8 8 8

6 × 8 = 48

6c. 9 × 3 = 27

9 times as many as 3 is 27.

7. Multiply 7 × 43. For 7a–7d, select True or False for each statement.

7a. A reasonable estimate of the product is 280. ● True ○ False

7b. Using partial products, the products are 21 and 28. ○ True ● False

7c. Using regrouping, 21 ones are regrouped as 1 ten and 2 ones. ○ True ● False

7d. The product is 301. ● True ○ False

8. It costs 9,328 points to build each apartment building in the computer game *Big City Building*. What is the cost to build 5 apartment buildings? Show your work.

46,640 points; 9,328 × 5 = 46,640 Check students' work.

Chapter 2 99

9. Multiply 7 × 462 using place value and expanded form. Choose the number from the box to complete the expression.

4 40 400 | 600 60 6 | 2 20 200

(7 × 400) + (7 × 60) + (7 × 2)

10. For numbers 10a–10b, use place value to find the product.

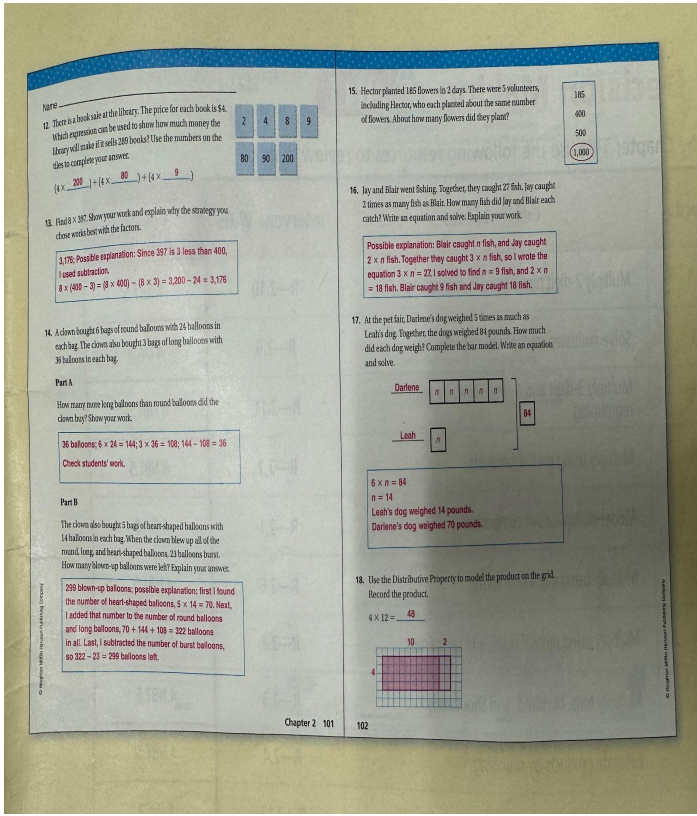
10a. 3 × 600 = 3 × 6 hundreds
= 18 hundreds
= 1,800

10b. 5 × 400 = 5 × 4 hundreds
= 20 hundreds
= 2,000

11. Liam has 3 boxes of baseball cards with 50 cards in each box. He also has 5 boxes with 40 basketball cards in each box. If Liam goes to the store and buys 50 more baseball cards, how many baseball and basketball cards does Liam have? Show your work.

3 × 50 = 150
5 × 40 = 200
150 + 200 = 350
350 + 50 = 400
Liam has 400 baseball and basketball cards.
Check students' work.

100



Name _____

12. There is a book sale at the library. The price for each book is $4. Which expression can be used to show how much money the library will make if it sells 289 books? Use the numbers on the tiles to complete your answer.

2 4 8 9 80 90 200

(4 × 200) + (4 × 80) + (4 × 9)

13. Find 8 × 387. Show your work and explain why the strategy you chose works best with the factors.

3,176; Possible explanation: Since 387 is 3 less than 400, I used subtraction.
8 × (400 − 3) = (8 × 400) − (8 × 3) = 3,200 − 24 = 3,176

14. A clown bought 6 bags of round balloons with 24 balloons in each bag. The clown also bought 3 bags of long balloons with 36 balloons in each bag.

Part A

How many more long balloons than round balloons did the clown buy? Show your work.

36 balloons; 6 × 24 = 144; 3 × 36 = 108; 144 − 108 = 36
Check students' work.

Part B

The clown also bought 5 bags of heart-shaped balloons with 14 balloons in each bag. When the clown blew up all of the round, long, and heart-shaped balloons, 23 balloons burst. How many blown-up balloons were left? Explain your answer.

299 blown-up balloons; possible explanation: first I found the number of heart-shaped balloons, 5 × 14 = 70. Next, I added that number to the number of round balloons and long balloons, 70 + 144 + 108 = 322 balloons in all. Last, I subtracted the number of burst balloons, so 322 − 23 = 299 balloons left.

Chapter 2 101

15. Hector planted 185 flowers in 2 days. There were 5 volunteers, including Hector, who each planted about the same number of flowers. About how many flowers did they plant?

185 400 500 1,000

16. Jay and Blair went fishing. Together, they caught 27 fish. Jay caught 2 times as many fish as Blair. How many fish did Jay and Blair each catch? Write an equation and solve. Explain your work.

Possible explanation: Blair caught n fish, and Jay caught 2 × n fish. Together they caught 3 × n fish, so I wrote the equation 3 × n = 27. I solved to find n = 9 fish, and 2 × n = 18 fish. Blair caught 9 fish and Jay caught 18 fish.

17. At the pet fair, Darlene's dog weighed 5 times as much as Leah's dog. Together, the dogs weighed 84 pounds. How much did each dog weigh? Complete the bar model. Write an equation and solve.

Darlene: n n n n n
Leah: n
84

6 × n = 84
n = 14
Leah's dog weighed 14 pounds.
Darlene's dog weighed 70 pounds.

18. Use the Distributive Property to model the product on the grid. Record the product.

4 × 12 = 48

10 2
4

102

Extra practice

Please complete the multiplication/division sheet I sent home with student daily if they are struggling with their multiplication or division facts.

I provided a sheet protector so it can be reused with a dry erase marker.

If you need one let me know and I can send the students home with one :)

PEMDAS Practice song

Please -parenthesis

Excuse-Exponent

My -Multiply

Dear -Divide

Aunt -Add

Sally -Subtract

Order of Operations

4th grade is required to know m-S