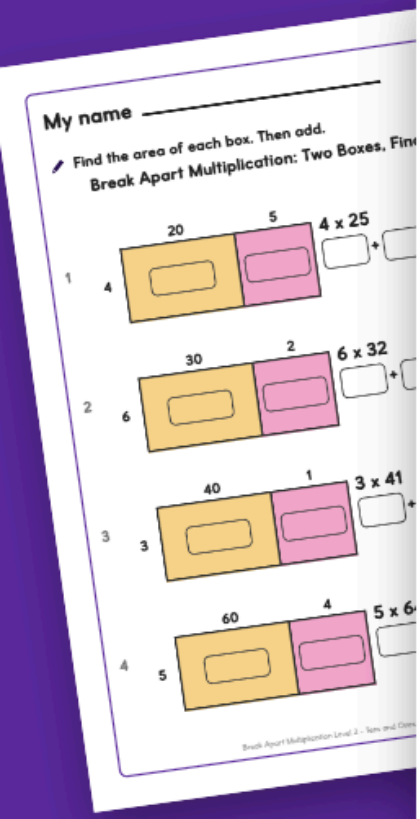
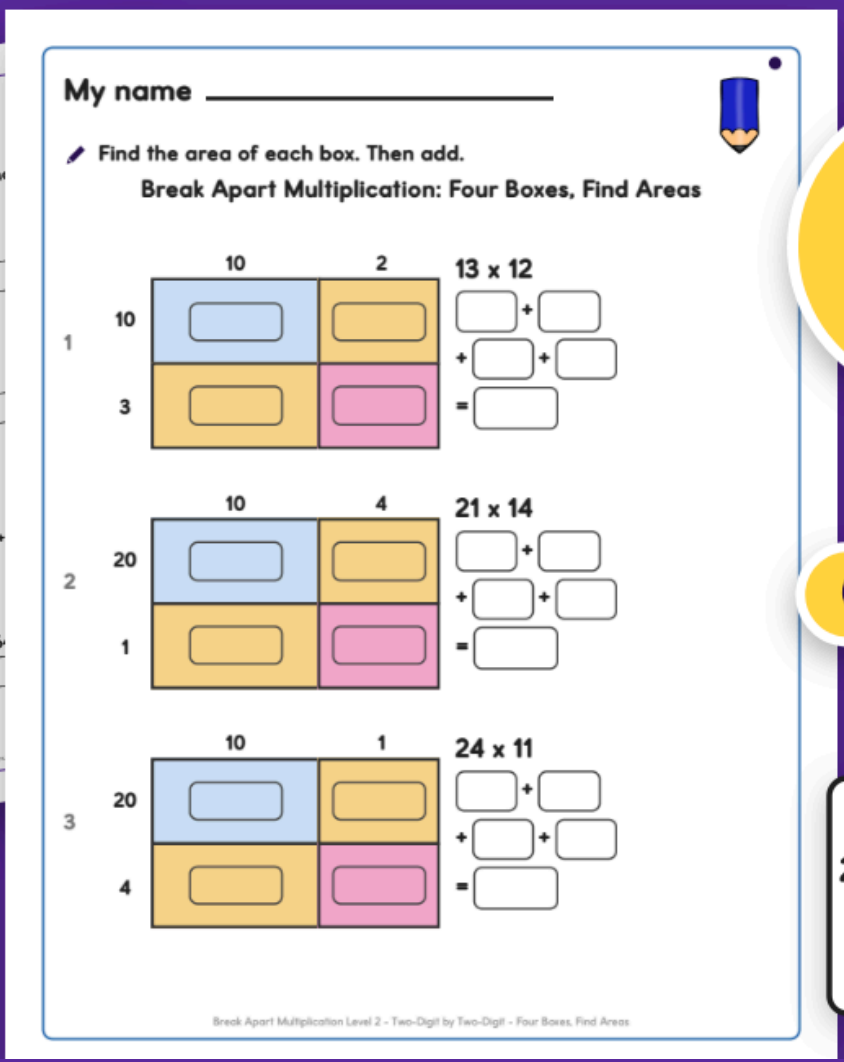
BREAK APART MULTIPLICATION LEVEL 2

Equations and Area Models





37 SHEETS

GRADE 4

	10	4
20	200	80
3	30	12

Bright Path Sped

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This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a box, type, and Save As.
- The name line and every number box are type-in fields. The area models and the base-ten pictures are printed: print the page and let students write, draw and color with a pencil or crayon.
- It works offline once downloaded.

Print at 100 percent

Turn off fit to page and shrink to fit so the boxes stay big enough to write in. Pages print in color or in black and white. The flats, rods and ones are light tints and print as shades of gray with a dark outline. The cutting pages need scissors and a glue stick.

Student work

A filled-in tracker carries a student's name. Keep it in the data folder, and use a first name only on any page that leaves your hands.

Need help?

If a box will not behave or a page will not print the way you expect, use Ask a Question on the product page before leaving a review. Every question is read, and a fix to the file ships as a free update: re-download it any time from My Purchases.

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PREVIEW

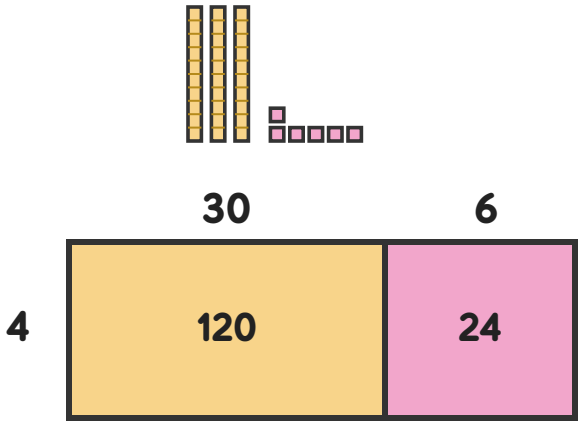
My name _____



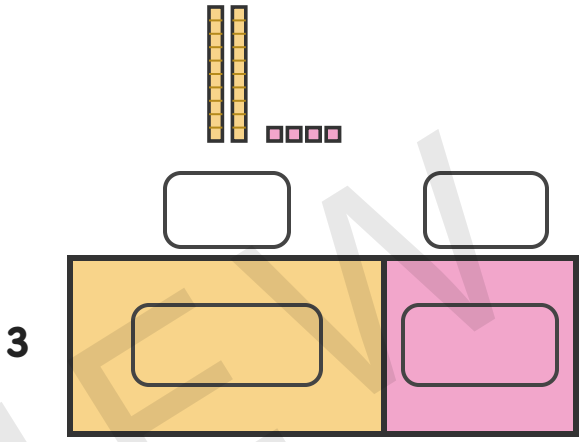
Read the example. Then try one.

Break Apart Multiplication: How to Break Apart

4 x 36: break the 36.



Your turn: 3 x 24.



The equation

4 x 36 = (4 x 30) + (4 x 6)

= 120 + 24 = 144

Now write yours: 3 x 24

3 x 24 = (3 x ☐) + (3 x ☐)

= ☐ + ☐ = ☐

Three steps

1. Break the big number into tens and ones.

2. Multiply each part.

3. Add the two answers. Same answer as the whole!

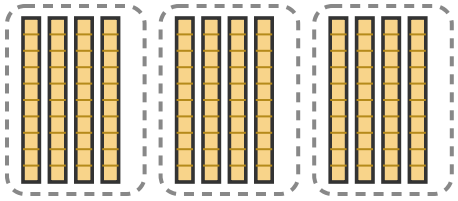
PREVIEW

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My name _____

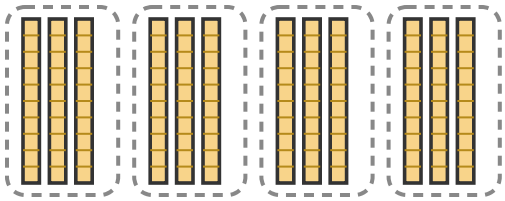
Count the tens. Write the answers.

Break Apart Multiplication: Tens Facts Warm-Up

1 

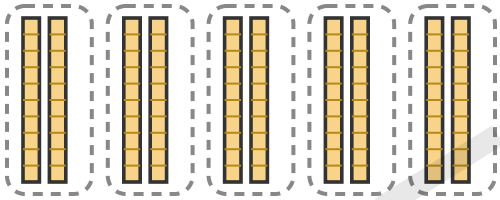
3 x 4 = ☐ tens

3 x 40 = ☐

2 

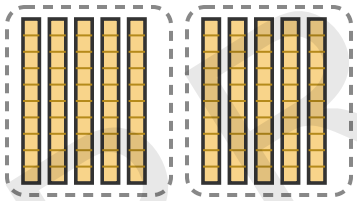
4 x 3 = ☐ tens

4 x 30 = ☐

3 

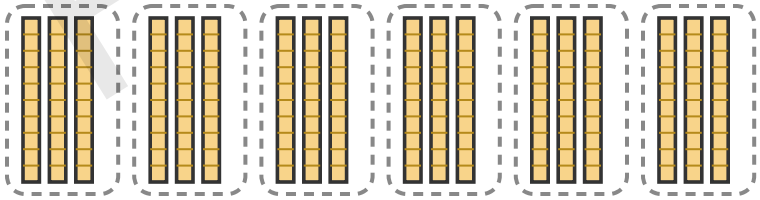
5 x 2 = ☐ tens

5 x 20 = ☐

4 

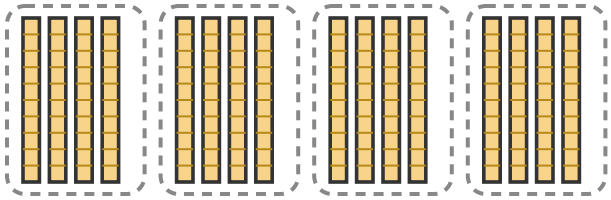
2 x 5 = ☐ tens

2 x 50 = ☐

5 

6 x 3 = ☐ tens

6 x 30 = ☐

6 

4 x 4 = ☐ tens

4 x 40 = ☐

PREVIEW

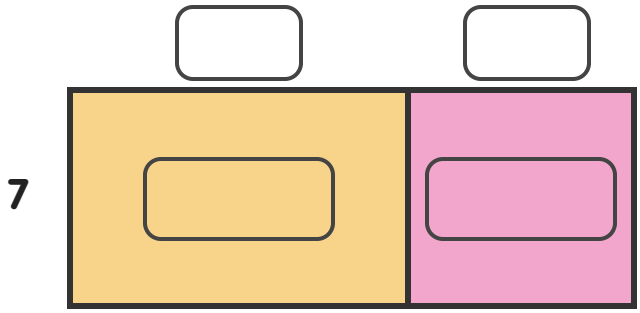
My name _____



Write the parts. Fill the boxes.

Break Apart Multiplication: Write the Parts

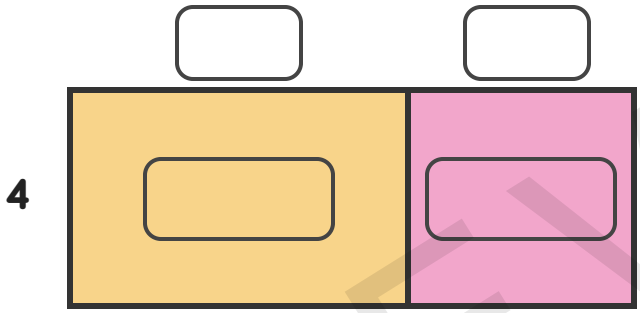
1



7 x 23

Total ☐

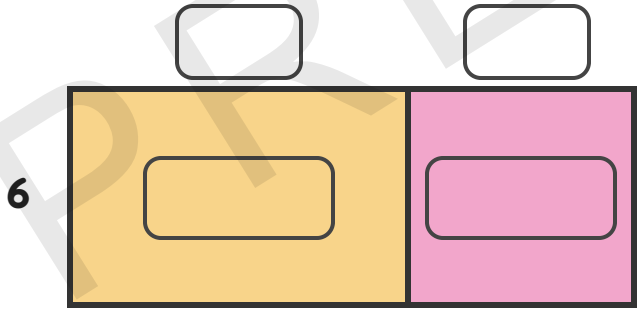
2



4 x 38

Total ☐

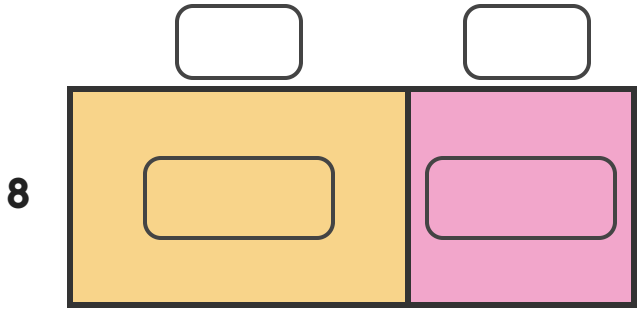
3



6 x 45

Total ☐

4



8 x 52

Total ☐

PREVIEW

My name _____



Find the missing numbers.

Break Apart Multiplication: Find the Missing Part

Some numbers are already there. Use them to find the empty boxes.

1 $6 \times 27 = (6 \times 20) + (6 \times \square)$

$= 120 + 42 = \square$

2 $8 \times 34 = (8 \times 30) + (8 \times \square)$

$= \square + 32 = 272$

3 $5 \times 46 = (5 \times \square) + (5 \times 6)$

$= 200 + \square = \square$

4 $9 \times 52 = (9 \times 50) + (9 \times 2)$

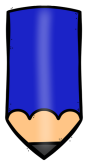
$= 450 + \square = \square$

5 $7 \times 45 = (7 \times \square) + (7 \times \square)$

$= 280 + 35 = 315$

PREVIEW

My name _____



Break at the ten. Fill in the boxes.

Break Apart Multiplication: Break at a Ten

1 $6 \times 14 = (6 \times 10) + (6 \times 4)$

$= \square + \square = \square$

2 $7 \times 12 = (7 \times 10) + (7 \times 2)$

$= \square + \square = \square$

3 $5 \times 16 = (5 \times 10) + (5 \times 6)$

$= \square + \square = \square$

4 $8 \times 13 = (8 \times 10) + (8 \times 3)$

$= \square + \square = \square$

5 $4 \times 18 = (4 \times 10) + (4 \times 8)$

$= \square + \square = \square$

6 $9 \times 15 = (9 \times 10) + (9 \times 5)$

$= \square + \square = \square$

PREVIEW

My name _____



Pick your own break. Solve it.

Break Apart Multiplication: Choose Your Break

1 Pick two parts that make 47.

$4 \times 47 = (\square \times \square) + (\square \times \square)$

$= \square + \square = \square$

2 Pick two parts that make 38.

$6 \times 38 = (\square \times \square) + (\square \times \square)$

$= \square + \square = \square$

3 Pick two parts that make 56.

$3 \times 56 = (\square \times \square) + (\square \times \square)$

$= \square + \square = \square$

4 Pick two parts that make 29.

$7 \times 29 = (\square \times \square) + (\square \times \square)$

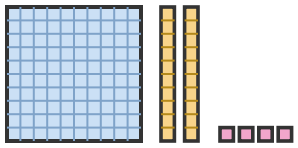
$= \square + \square = \square$

PREVIEW

My name _____

Break the number. Multiply each part.

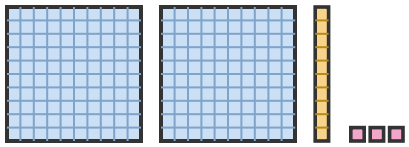
Break Apart Multiplication: Flats, Rods and Ones

1 

124 = ☐ + ☐ + ☐

☐ + ☐ + ☐

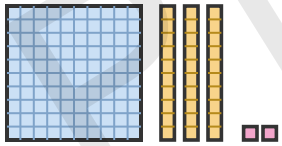
3 x 124 = ☐

2 

213 = ☐ + ☐ + ☐

☐ + ☐ + ☐

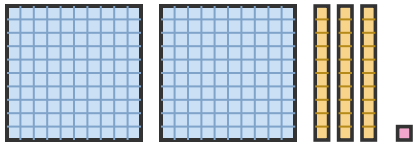
2 x 213 = ☐

3 

132 = ☐ + ☐ + ☐

☐ + ☐ + ☐

4 x 132 = ☐

4 

231 = ☐ + ☐ + ☐

☐ + ☐ + ☐

3 x 231 = ☐

PREVIEW

My name _____



Break apart the second number. Fill in the boxes.

Break Apart Multiplication: Hundreds Equation Chain

1 $2 \times 364 =$

$(2 \times \square) + (2 \times \square) + (2 \times \square)$

$= \square + \square + \square = \square$

2 $3 \times 415 =$

$(3 \times \square) + (3 \times \square) + (3 \times \square)$

$= \square + \square + \square = \square$

3 $5 \times 232 =$

$(5 \times \square) + (5 \times \square) + (5 \times \square)$

$= \square + \square + \square = \square$

4 $4 \times 246 =$

$(4 \times \square) + (4 \times \square) + (4 \times \square)$

$= \square + \square + \square = \square$

PREVIEW

My name _____



Read. Write the facts. Find the total.

Break Apart Multiplication: Stories, Hundreds Given

1 A jar holds 128 pennies. Mia fills 3 jars.

3 x 128 =
(3 x 100) + (3 x 20) + (3 x 8)
= ☐ + ☐ + ☐ = ☐ pennies

2 A craft kit has 213 beads. Sam has 4 kits.

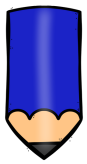
4 x 213 =
(4 x 200) + (4 x 10) + (4 x 3)
= ☐ + ☐ + ☐ = ☐ beads

3 A box holds 346 paper clips. A teacher has 2 boxes.

2 x 346 =
(2 x 300) + (2 x 40) + (2 x 6)
= ☐ + ☐ + ☐ = ☐ paper clips

PREVIEW

My name _____



Multiply the tens. Write the answers.

Break Apart Multiplication: Tens by Tens Warm-Up

Each little box is a flat of 100.

1

30

20

100	100	100
100	100	100

$2 \times 3 =$ ☐

$20 \times 30 =$ ☐

2

40

30

100	100	100	100
100	100	100	100
100	100	100	100

$3 \times 4 =$ ☐

$30 \times 40 =$ ☐

3

50

20

100	100	100	100	100
100	100	100	100	100

$2 \times 5 =$ ☐

$20 \times 50 =$ ☐

4

30

40

100	100	100
100	100	100
100	100	100
100	100	100

$4 \times 3 =$ ☐

$40 \times 30 =$ ☐

5

30

30

100	100	100
100	100	100
100	100	100

$3 \times 3 =$ ☐

$30 \times 30 =$ ☐

6

50

40

100	100	100	100	100
100	100	100	100	100
100	100	100	100	100
100	100	100	100	100

$4 \times 5 =$ ☐

$40 \times 50 =$ ☐

PREVIEW

My name _____



Copy the four boxes. Then add.

Break Apart Multiplication: Add the Four Boxes

1

	20	1
10	200	10
4	80	4

14 x 21

☐ + ☐ + ☐ + ☐ = ☐

2

	10	2
20	200	40
5	50	10

25 x 12

☐ + ☐ + ☐ + ☐ = ☐

3

	10	1
30	300	30
2	20	2

32 x 11

☐ + ☐ + ☐ + ☐ = ☐

4

	10	5
20	200	100
2	20	10

22 x 15

☐ + ☐ + ☐ + ☐ = ☐

PREVIEW

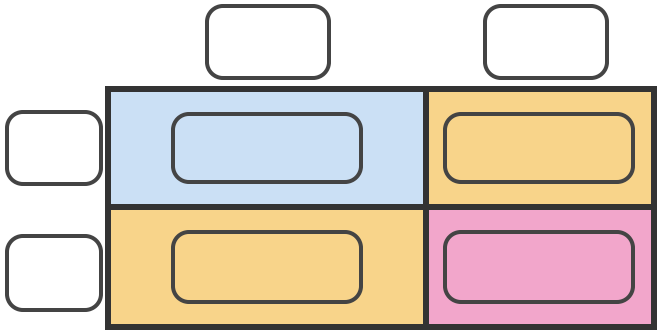
Preview · Bright Path Sped

My name _____

Read. Fill the four boxes. Solve.

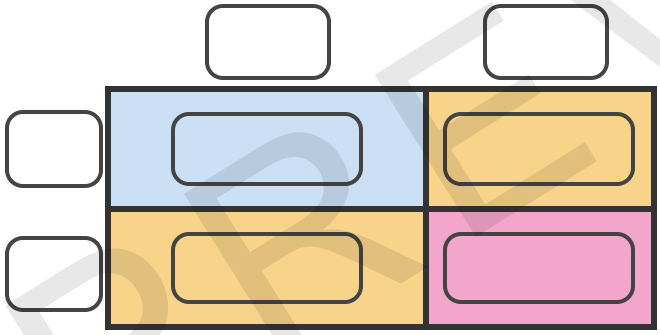
Break Apart Multiplication: Stories, Four Boxes

1 A school orders 12 boxes. Each box holds 24 pencils.



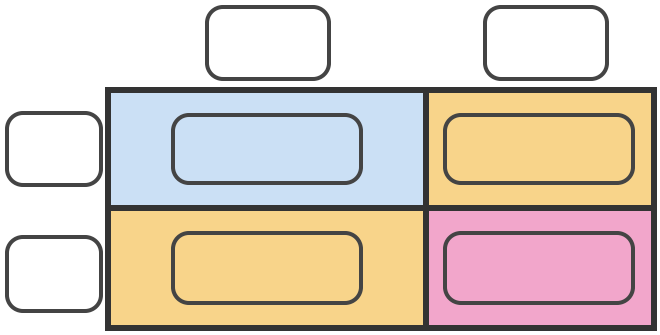
Total ____ pencils

2 A gym has 15 rows. Each row has 21 chairs.



Total ____ chairs

3 A bakery sells 13 trays. Each tray has 32 muffins.



Total ____ muffins

PREVIEW

My name _____



Find the wrong box. Fix it.

Break Apart Multiplication: Fix the Four Boxes

One box has the wrong product.

1

	10	5
20	A 200	B 10
3	C 30	D 15

23 x 15

Wrong box ☐

Right product ☐

Right total ☐

2

	10	4
30	A 300	B 120
2	C 20	D 6

32 x 14

Wrong box ☐

Right product ☐

Right total ☐

3

	10	3
20	A 200	B 60
4	C 4	D 12

24 x 13

Wrong box ☐

Right product ☐

Right total ☐

PREVIEW

My name _____

Cut out the area models. Glue each one by its equation.

Break Apart Multiplication: Cut and Glue Two Boxes

1
3 x 26 =
(3 x 20) + (3 x 6)

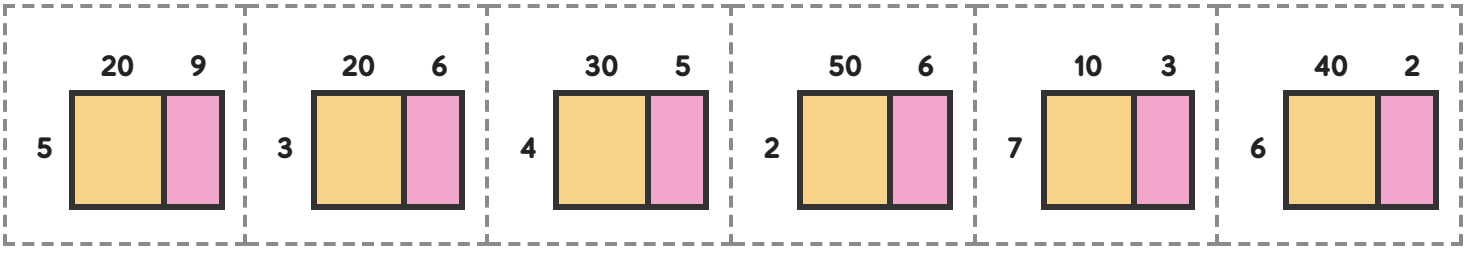
2
4 x 35 =
(4 x 30) + (4 x 5)

3
5 x 29 =
(5 x 20) + (5 x 9)

4
6 x 42 =
(6 x 40) + (6 x 2)

5
7 x 13 =
(7 x 10) + (7 x 3)

6
2 x 56 =
(2 x 50) + (2 x 6)



PREVIEW

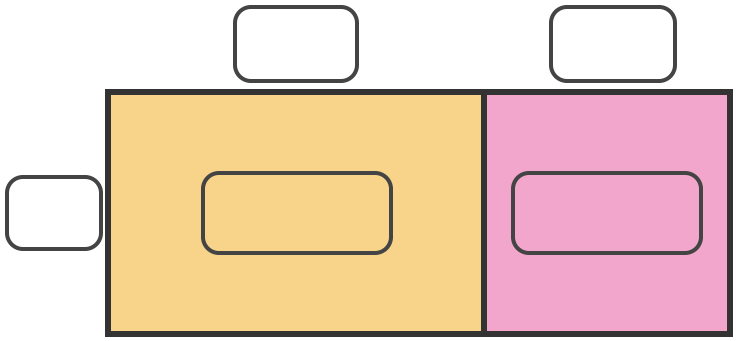
My name _____



Pick a problem. Break it apart. Fill in the model.

Break Apart Multiplication: Make Your Own, Two Boxes

1 **My problem:** ☐ x ☐

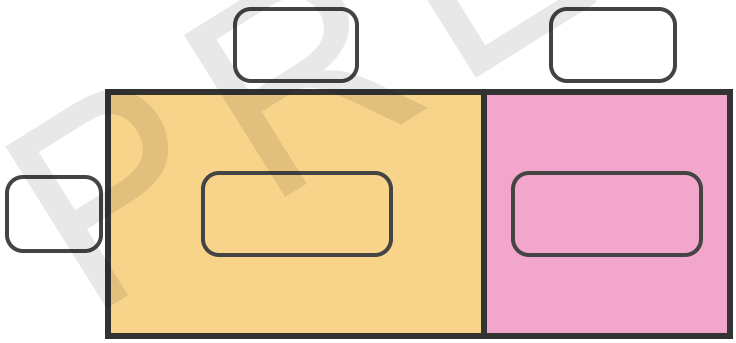


Total ☐

(☐ x ☐) + (☐ x ☐)

= ☐ + ☐ = ☐

2 **My problem:** ☐ x ☐



Total ☐

(☐ x ☐) + (☐ x ☐)

= ☐ + ☐ = ☐

PREVIEW

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Answer Key 2

Each answer is for the problem number on its page. The four-box pages list the parts of the first number (down) and the second (across), then the four products.

Page 18: Flats, Rods and Ones

1) 124 = 100 + 20 + 4; 300 + 60 + 12 = **372**
2) 213 = 200 + 10 + 3; 400 + 20 + 6 = **426**
3) 132 = 100 + 30 + 2; 400 + 120 + 8 = **528**
4) 231 = 200 + 30 + 1; 600 + 90 + 3 = **693**

Page 19: Three Boxes, Find Areas

1) 2 x 341: 600 + 80 + 2 = **682**
2) 3 x 215: 600 + 30 + 15 = **645**
3) 4 x 123: 400 + 80 + 12 = **492**
4) 2 x 432: 800 + 60 + 4 = **864**

Page 20: Write the Three Parts

1) 5 x 124: 500 + 100 + 20 = **620**
2) 3 x 252: 600 + 150 + 6 = **756**
3) 6 x 143: 600 + 240 + 18 = **858**
4) 4 x 321: 1200 + 80 + 4 = **1284**

Page 21: Hundreds Equation Chain

1) 2 x 364: 600 + 120 + 8 = **728**
2) 3 x 415: 1200 + 30 + 15 = **1245**
3) 5 x 232: 1000 + 150 + 10 = **1160**
4) 4 x 246: 800 + 160 + 24 = **984**

Page 22: A Zero in the Tens Place

1) 4 x 305: 1200 + 0 + 20 = **1220** (4 x 0 = 0)
2) 3 x 402: 1200 + 0 + 6 = **1206** (3 x 0 = 0)
3) 5 x 208: 1000 + 0 + 40 = **1040** (5 x 0 = 0)
4) 2 x 706: 1400 + 0 + 12 = **1412** (2 x 0 = 0)

Page 23: Stories, Hundreds Given

1) 300 + 60 + 24 = **384** pennies
2) 800 + 40 + 12 = **852** beads
3) 600 + 80 + 12 = **692** paper clips

Page 24: Stories, Hundreds Yourself

1) 600 + 60 + 24 = **684** stickers
2) 800 + 80 + 24 = **904** miles
3) 700 + 210 + 7 = **917** bales

Page 26: Tens by Tens Warm-Up

1) 2 x 3 = 6; 20 x 30 = **600**
2) 3 x 4 = 12; 30 x 40 = **1200**
3) 2 x 5 = 10; 20 x 50 = **1000**
4) 4 x 3 = 12; 40 x 30 = **1200**
5) 3 x 3 = 9; 30 x 30 = **900**
6) 4 x 5 = 20; 40 x 50 = **2000**

Page 27: Four Boxes, Find Areas

1) 13 x 12: 10,3 by 10,2; 100 + 20 + 30 + 6 = **156**
2) 21 x 14: 20,1 by 10,4; 200 + 80 + 10 + 4 = **294**
3) 24 x 11: 20,4 by 10,1; 200 + 20 + 40 + 4 = **264**

Page 28: Write the Four Parts

1) 12 x 23: 10,2 by 20,3; 200 + 30 + 40 + 6 = **276**
2) 31 x 12: 30,1 by 10,2; 300 + 60 + 10 + 2 = **372**
3) 15 x 13: 10,5 by 10,3; 100 + 30 + 50 + 15 = **195**

Page 29: Add the Four Boxes

1) 14 x 21: 10,4 by 20,1; 200 + 10 + 80 + 4 = **294**
2) 25 x 12: 20,5 by 10,2; 200 + 40 + 50 + 10 = **300**
3) 32 x 11: 30,2 by 10,1; 300 + 30 + 20 + 2 = **352**
4) 22 x 15: 20,2 by 10,5; 200 + 100 + 20 + 10 = **330**

Page 30: Draw Your Four Boxes

1) 26 x 13: 20,6 by 10,3; 200 + 60 + 60 + 18 = **338**
2) 34 x 12: 30,4 by 10,2; 300 + 60 + 40 + 8 = **408**
3) 15 x 22: 10,5 by 20,2; 200 + 20 + 100 + 10 = **330**

Page 31: Stories, Four Boxes

1) 200 + 40 + 40 + 8 = **288** pencils
2) 200 + 10 + 100 + 5 = **315** chairs
3) 300 + 20 + 90 + 6 = **416** muffins

PREVIEW

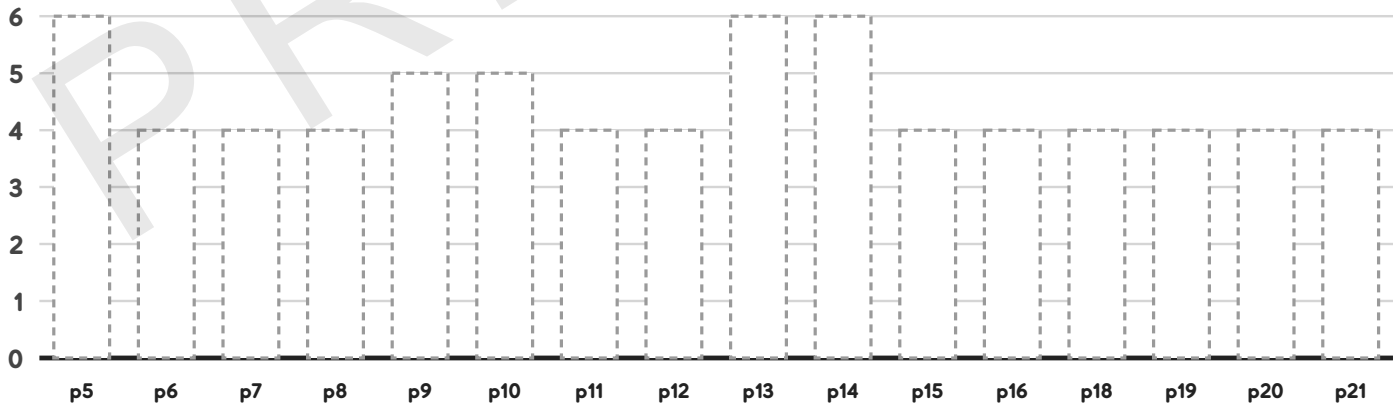
Tracker and Roll-Up, Part 1

Write the date and how many were right. Then color the column for that sheet. A blank row means not done yet, never wrong.

Student _____ Teacher _____ School year _____

Page	Sheet	Date	Right	Out of	Notes
5	Tens Facts Warm-Up			6	
6	Rods and Ones			4	
7	Two Boxes, Find Each Area			4	
8	Write the Parts			4	
9	Equation Chain			5	
10	Find the Missing Part			5	
11	Stories, Parts Given			4	
12	Stories, Break It Yourself			4	
13	Break at a Ten			6	
14	Friendly 25s and 50s			6	
15	Compare Two Breaks			4	
16	Choose Your Break			4	
18	Flats, Rods and Ones			4	
19	Three Boxes, Find Areas			4	
20	Write the Three Parts			4	
21	Hundreds Equation Chain			4	

Roll-up: color one column for each sheet, up to the number right. The dashed box is the most it can be.



Notes for the team

PREVIEW

Break Apart at Home

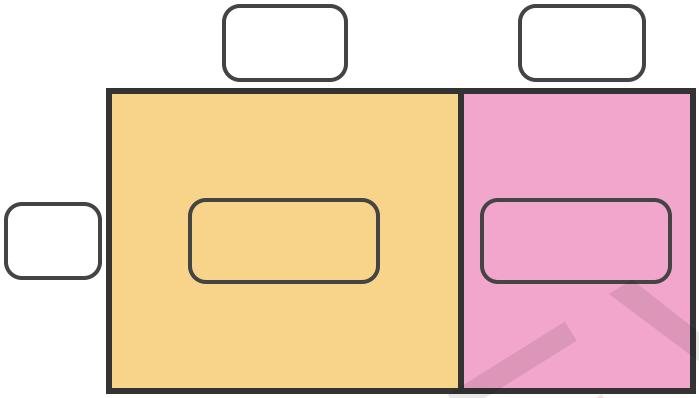
Send this page home with a child, or hand it to a family at a conference.

Student _____ Week of _____

How to help at home, in three steps

- Pick a multiplication problem such as 6 x 47. Say it out loud: 6 groups of 47.
- Break the 47 into tens and ones: 40 and 7. Multiply each part: 6 x 40 and 6 x 7.
- Add the two answers. Check that the parts still make the whole number.

Our family area model



Our problem ☐ x ☐

= (☐ x ☐) + (☐ x ☐)

= ☐ + ☐ = ☐

Try saying

- "What are the tens? What are the ones?"
- "Do your two parts add up to the number you started with?"

A quick game

- Roll one die for the first number. Roll two dice for the second number: the first die is the tens, the second is the ones.
- Break the second number into tens and ones, multiply each part, add, and check each other's work.

Note from the teacher

Note from home

PREVIEW