

Multiplication & Division

Word Problems and 2 x 1 Multiplication

2 x 1 Traditional Multiplication

5

Step 1

$$\begin{array}{r} 35 \\ \times 4 \\ \hline 0 \end{array}$$

Multiply 4 x 5. If the answer is 2-digits, write the digit in the ones place below the line. Then write the digit in the tens place above the 3, so that it can be grouped with the tens.

Step 2

$$\begin{array}{r} 35 \\ \times 4 \\ \hline 140 \end{array}$$

Multiply 4 x 3. Add the 2 tens you recorded in the box in the last step. Record the answer below the line.

$$\begin{array}{r} 57 \\ \times 2 \\ \hline 114 \end{array}$$

$$\begin{array}{r} 42 \\ \times 5 \\ \hline 210 \end{array}$$

$$\begin{array}{r} 62 \\ \times 3 \\ \hline 186 \end{array}$$

$$\begin{array}{r} 36 \\ \times 4 \\ \hline 144 \end{array}$$

©Melissa Johnson www.marvellmath.com

Practice the Strategies

9

3.OA.A.3
TEKS 3.4K, 3.5B

Diego has 12 donuts to put into 3 boxes. Each box will get the same number of donuts. How many donuts will go in each box?

Use the following strategies to show you understand the problem:

Act It Out: Describe how you would act this problem out with cubes that represent donuts:

I will use 12 cubes
because there are 12
donuts. I can draw 3
boxes on a paper. I can
put the cubes equally in
the boxes until all the
cubes are in boxes.

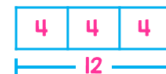
Draw Equal Groups



Draw an Array



Draw a Strip Diagram



Equation $12 \div 3 = ?$ or $3 \times ? = 12$

Solution 4 donuts will go in each



©Melissa Johnson

Notebook

MARVELMath

3rd GRADE

Easy-to-Use Student Pages

4.NBT.B.5
TEKS 3.4G

2 x 1 Multiplication

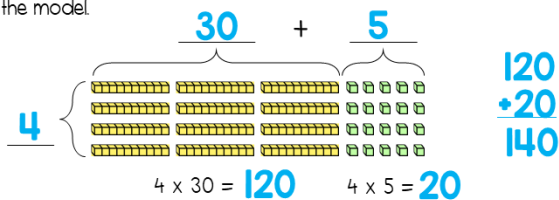
3

We can multiply two-digit numbers by one-digit numbers.

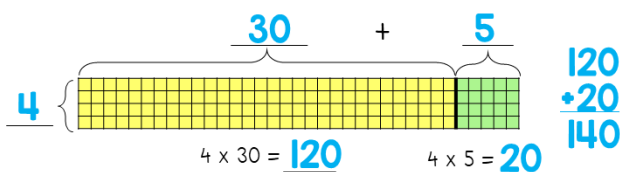
4×35 means 4 groups of 35.

Here is an area model for this problem using base 10 blocks. 4 and 35 are the side lengths of the model.

Write the 2-digit number in expanded form to label the model.



Here is an area model for this problem.



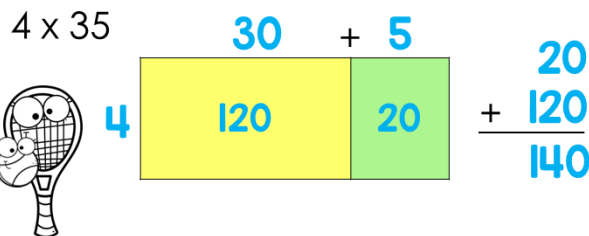
©Melissa Johnson www.MarvelMath.com

4.NBT.B.5
TEKS 3.4G

2 x 1 Area Model & Partial Products

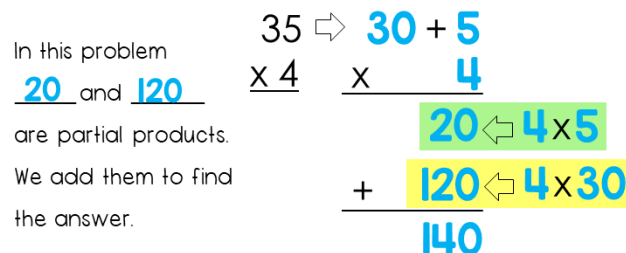
4

We can also use an open box area model to multiply. Each box shows a partial product.



Partial Products are parts of the product.

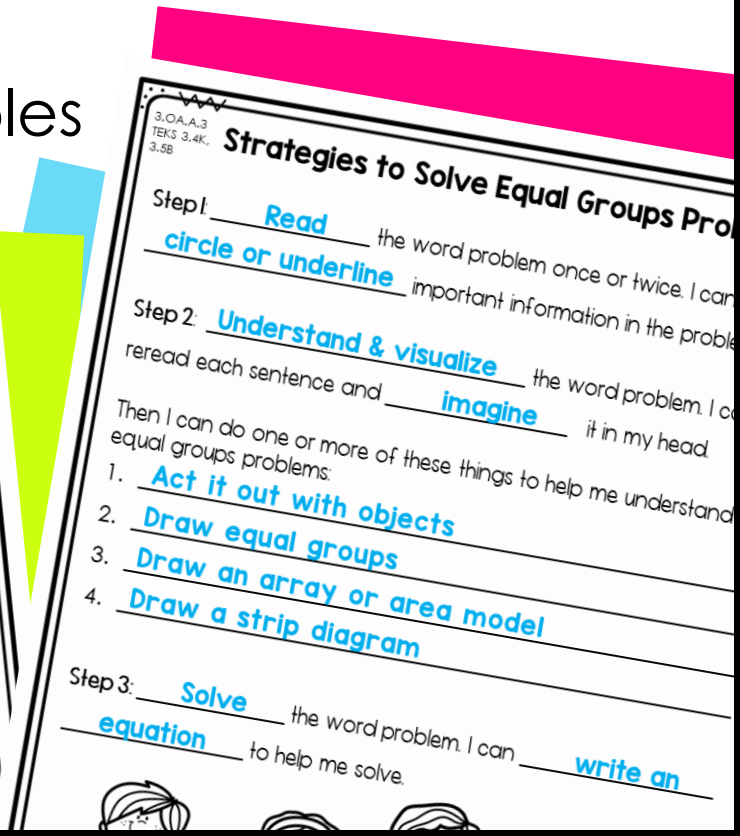
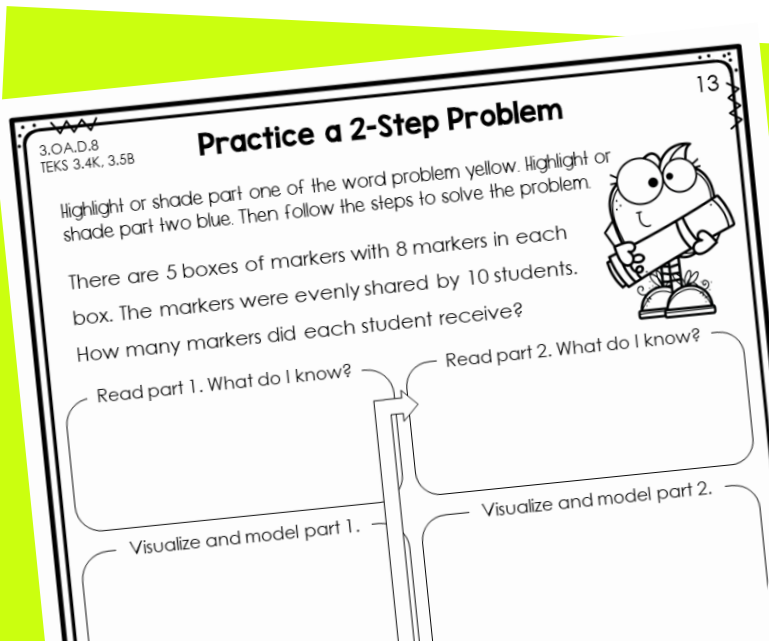
We can write the 2-digit factor in expanded form and then multiply each part.



©Melissa Johnson www.MarvelMath.com

Teaches these Multiplication & Division Topics:

- 2 x 1 Multiplication
- 1-Step Word Problems
- 2-Step Word Problems
- Strategies to Solve Word Problems
- Finding “Hidden Numbers” in Word Problems
- Strip Diagrams
- Relationships in Tables



No Cutting or Gluing Required

- Make stapled packets
- 3-hole punch to use in a binder
- Make the most of class time

3rd grade TEKS ALIGNED

MULTIPLICATION & DIVISION

Problem Solving & 2 x 1 Multiplication

NOTEBOOK



There are 5 bags

3.OA.A.3
TEKS 3.5E

Working with Tables

Multiplication & Division

30

Write the multiplication and division relationships in the arrows. Make sure they work for the numbers in each row. Then complete the sentences to name the relationships.



Number of Riders		Number of Carts Used
4	$\div 2$	2
6		3
10		5
12		6

The number of riders divided by 2 equals the number of carts used.

There are 2 riders in a cart.



Number of Tickets		Total Cost
2	$\times 4$	8
3		12
5		20
10		40

The number of tickets times 4 equals the total cost.

The cost of each ticket is \$ 4.

©Melissa Johnson www.MarvelMath.com

Or Glue Entire Page in Notebook

3.OA.A.3
TEKS 3.4K,
3.5B

Unknowns in Equal Groups Problems

7

A cake shop has 6 cakes. Each cake has 3 layers. How many layers are there in all?

Unknown



--	--	--	--	--	--

Aisha has 24 party hats to put on 4 tables. She will put an equal number of hats on each table. How many hats will she put on each table?

Unknown

--	--	--	--	--



Brody has 21 balloons to decorate for a party. How many groups of 3 balloons can Brody make?

Unknown



--

©Melissa Johnson www.MarvellMath.com

Essential Vocabulary

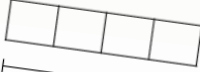
Easy-to-Use Student Reference Tool

MARVELMath

ESSENTIAL MULTIPLICATION & DIVISION VOCABULARY

Term	Picture or Example	Definition
Expanded Form	$25 = 20 + 5$	Writing a number as an addition problem showing the value of each digit
Partial Products	$\begin{array}{r} 20 + 5 \\ \times 2 \\ \hline 10 \\ + 400 \\ \hline 410 \end{array}$ $\swarrow 2 \times 5$ $\swarrow 2 \times 20$	Parts of the product We can add them together to find the product.
Numerical Expression	$12 \div 2$ 4×9	Has an operation, but does not have an equal sign
Equation	$7 \times 9 = 63$ $4 \times 4 = 2 \times 8$	Both sides of an equal sign are equal in value
Strip Diagram	$4 \times 12 = 48$ 	A visual model to represent a problem solution

ESSENTIAL MULTIPLICATION & DIVISION VOCABULARY

Term	Picture or Example	
Expanded Form		
Partial Products	$\begin{array}{r} 20 + 5 \\ \times 2 \\ \hline \\ + \\ \hline \end{array}$ $\swarrow 2 \times 5$ $\swarrow 2 \times 20$	
Numerical Expression		
Equation		
Diagram		

Built for the Standards

MULTIPLICATION & DIVISION

Problem Solving & 2 x 1 Multiplication

table of contents

TOPIC	TEKS	CCSS	Page(s)
Vocabulary	All		1
Multiplying by Tens	3.4G	3.NBT.A.3	2
2 x 1 Multiplication	3.4G	4.NBT.B.5	3
2 x 1 Area Model & Partial Products	3.4G	4.NBT.B.5	4
2 x 1 Traditional Multiplication	3.4G	4.NBT.B.5	5
Practice Traditional Multiplication	3.4G	4.NBT.B.5	6
Unknowns in Equal Groups Problems	3.4K, 3.5B	3.OA.A.3	7
Strategies to Solve Equal Groups Problems	3.4K, 3.5B	3.OA.A.3	8
Practice the Strategies	3.4K, 3.5B	3.OA.A.3	9
Multiplicative Comparison Problems	3.4K, 3.5B, 3.5C	3.OA.A.3	10
Unknowns in Multiplicative Comparison Problems	3.4K, 3.5B, 3.5C	3.OA.A.3	11
Strategies to Solve 2-Step Problems	3.4K, 3.5B	3.OA.D.8	12
Practice a 2-Step Problem	3.4K, 3.5B	3.OA.D.8	13
Create 2-Step Problems	3.4K, 3.5B	3.OA.D.8	14-15
	3.4K, 3.5B	3.OA.D.8	16

Resource Includes



31 Student Pages



**Pages to introduce
Multiplication and Division
Problem Solving
and 2×1 Multiplication**



Detailed Teacher KEY



**Essential Vocabulary
Section**

About the Author

This resource was created by Melissa Johnson, who has 16 years of k-10 teaching experience and a masters degree in Mathematics Education. Her resources build conceptual understanding, make connections between math topics and engage students in the mathematics they are learning.

