Grade 4 Math

Compare and Multiply

Equal groups, extra amounts and place-value models

Tape diagrams for three kinds of unknown

Area models, arrays and partial products

Two- and four-digit factors with space to explain

Original stories, a code page and Mixed Review

12 practice pages and 12 matching worked keys

Georgia's K-12 Mathematics Standards

4.NR.2.2 | 4.NR.2.3

26 pages | Print at 100% | Answer keys included

TOUCHSTONE STANDARDS

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Georgia's K-12 Mathematics Standards

4.NR.2
Using part-whole strategies, solve problems involving addition and subtraction through the hundred-thousands place, as well as multiplication and division of multi-digit whole numbers presented in real-life, mathematical situations.

4.NR.2.2
Interpret, model, and solve problems involving multiplicative comparison.

4.NR.2.3
Solve relevant problems involving multiplication of a number with up to four digits by a 1-digit whole number or involving multiplication of two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Students should be able to distinguish multiplicative comparison from additive comparison.

Students should be able to demonstrate an understanding of simple multiplicative relationships by using concrete materials, drawings, and equations with a variable for the unknown number to represent the problem.

Multiplicative comparison: a comparison situation based on one set of a quantity being a particular multiple of the other set within the comparison.

Additive comparison: involves two distinct quantities and the difference between them.

Students should be able to illustrate and explain their calculations using equations, rectangular arrays, and/or area models for all numbers included in the learning objective.

Page map: practice / key / element

3 / 15 Times As Many (2.2)
4 / 16 How Many Times? (2.2)
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7 / 19 Tens, Hundreds, Thousands (2.3)
8 / 20 Area Models: 2-Digit by 1-Digit (2.3)
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10 / 22 Two-Digit by Two-Digit (2.3)
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13 / 25 Product Code (2.2 + 2.3)
14 / 26 Mixed Review (2.2 + 2.3)

Teaching notes

Every times task has equal tape units; extra-amount tasks add one extra part. Rotate the unknown: total, part size or number of parts.

All area models are schematic, not drawn to scale. Arrays use 0.20-inch squares at 100%.

Show partial products without requiring one calculation method. Any correct strategy earns full credit. Nothing is timed.

Comparison bases are 100 to 999 and times factors 2 to 5 in this packet, a layout choice within the wider element.

Answers without commas are also correct. Example drawings and explanations may vary.

Follow Touchstone Standards on TPT for new Grade 4 resources. After use, an honest review helps us improve.

Print at 100%. This bar must measure 2 inches.



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How Many Times?

Name _____ Print at 100%

Finish the equal-size units in each times diagram. Find n.

Strategy Spotlight

$179 \times n = 895$

Count how many equal parts fit.

$179 + 179 + 179 + 179 + 179 = 895$

$179 \times 5 = 895$

$n = 5$

1 Tags: number of equal parts.

$163 \times n = 652$

_____

A 163

B _____ 652

n = _____ times

2 Tags: amount in one of 3 equal parts.

$n \times 3 = 774$

_____

A n

B _____ 774

n = _____ tags

3 Tags: 39 extra tags.

$n + 39 = 163$

_____

A n

B n 39 163

n = _____ tags

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Answer Key: How Many Times?

Name _____ Print at 100%

Finish the equal-size units in each times diagram. Find n.

Strategy Spotlight

$179 \times n = 895$

Count how many equal parts fit.

179 + 179 + 179 + 179 + 179 = 895
179 × 5 = 895
n = 5

1 Tags: number of equal parts.

$163 \times n = 652$

163 + 163 + 163 + 163 = 652
163 × 4 = 652
n = 4

A [163]

B [ ][ ][ ][ ] 652

n = **4** times

2 Tags: amount in one of 3 equal parts.

$n \times 3 = 774$

774 ÷ 3 = 258
258 × 3 = 774

A [n]

B [ ][ ][ ] 774

n = **258** tags

3 Tags: 39 extra tags.

$n + 39 = 163$

163 − 39 = 124
124 + 39 = 163

A [n]

B [n][39] 163

n = **124** tags

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Two-Digit by Two-Digit

Name _____ Print at 100%

Fill all four parts. Explain the product with a sum.

Strategy Spotlight

53 × 24 = n

Each part uses one row and one column label.

50 × 20 = 1,000
3 × 20 = 60
50 × 4 = 200
3 × 4 = 12
1,000 + 60 + 200 + 12 = 1,272

1 72 × 48 = n

n = ☐

	70	2
40		
8		

2 86 × 59 = n

n = ☐

	80	6
50		
9		

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Answer Key: Two-Digit by Two-Digit

Name _____ Print at 100%

Fill all four parts. Explain the product with a sum.

Strategy Spotlight

53 × 24 = n

Each part uses one row and one column label.

50 × 20 = 1,000
3 × 20 = 60
50 × 4 = 200
3 × 4 = 12
1,000 + 60 + 200 + 12 = 1,272

1 72 × 48 = n

n = **3,456**

	70	2
40	**2,800**	**80**
8	**560**	**16**

70 × 40 = 2,800
2 × 40 = 80
70 × 8 = 560
2 × 8 = 16
2,800 + 80 + 560 + 16 = 3,456

2 86 × 59 = n

n = **5,074**

	80	6
50	**4,000**	**300**
9	**720**	**54**

80 × 50 = 4,000
6 × 50 = 300
80 × 9 = 720
6 × 9 = 54
4,000 + 300 + 720 + 54 = 5,074

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