# Multiplication and Division 

By Bill Davidson

## Bridges to Skip Counting

Add and subtract by 2 Add and subtract by 3 Add and subtract by 4 Add and subtract by 5 Add and subtract by 6 Add and subtract by 7 Add and subtract by 8
Add and subtract by 9

## Skip Counting

Skip count by twos
Skip count by threes
Skip count by fours
Skip count by fives
Skip count by sixes
Skip count by sevens
Skip count by eights
Skip count by nines
Skip count by tens
Mixed skip counting

## Bridges to Multiplication

Doubles
Doubles (2)
Arrays (rows and columns)
Connect repeated addition to equal groups
Equal groups as multiplication
Equivalent expressions with multiplication Equivalent expressions with multiplication (2)
Add 10 , Subtract 1 as a method to multiply by 9
Even and odd sums and products
Connect addition and multiplication
Multiply by Single-Digit Multiples
Multiply by 2
Multiply by 3
Multiply by 4
Multiply by 5
Multiply by 6
Multiply by 7
Multiply by 8

| Standard(s) | Pages |
| :--- | :--- |
| 3.OA.7, 3.OA. 9 | $1-2$ |
| 3.OA.7, 3.OA. 9 | $3-4$ |
| 3.OA.7,3.OA. 9 | $5-6$ |
| 3.OA.7, 3.OA. 9 | $7-8$ |
| 3.OA.7, 3.OA.9 | $9-10$ |
| 3.OA.7, 3.OA. 9 | $11-12$ |
| 3.OA.7, 3.OA. 9 | $13-14$ |
| 3.OA.7, 3.OA. 9 | $15-16$ |

Standard(s) Pages
3.OA.7,3.OA. $9 \quad 17-18$
3.OA.7,3.OA. $9 \quad 19-20$
3.OA.7,3.OA. $9 \quad 21-22$
3.OA.7,3.OA. $9 \quad 23-24$
3.OA.7,3.OA. $9 \quad 25-26$
3.OA.7,3.OA. $9 \quad 27-28$
3.OA.7,3.OA. $9 \quad 29-30$
3.OA.7,3.OA. $9 \quad 31-32$
K.CC.1, K.CC. 2 33-34
3.OA.7, 3.OA. $9 \quad 35-36$

Standard(s) Pages
2.OA.2,2.OA. $37-38$
2.OA.2,2.OA. $3 \quad 39-40$
2.OA. 4 41-42
2.OA.4 43-44
3.OA.7,3.OA. $9 \quad 45-46$
3.OA. $5 \quad 47-48$
3.OA. $5 \quad 49-50$
3.OA. $7 \quad 51-52$
6.NS. $4 \quad 53-54$
6.EE. $3 \quad 55-56$

Standard(s) Pages
3.OA. $7 \quad 57-58$
3.OA. $7 \quad 59-60$
3.OA. $7 \quad 61-62$
3.OA. $7 \quad 63-64$
3.OA. $7 \quad 65-66$
3.OA. $7 \quad 67-68$
3.OA. $7 \quad 69-70$

Multiply by 9

## Bridges to Division

Connect addition and division
Connect missing factors and division
Connect missing factors and division (2)
Connect division and subtraction
Connect multiplication and division

## Factors

2 as a factor within 100
3 as a factor within 100
4 as a factor within 100
5 as a factor within 100
6 as a factor within 100
7 as a factor within 100
8 as a factor within 100
9 as a factor within 100
Missing factors in a 3 -step multiplication sentence
Greatest Common Factor

## Division with Single-Digit Divisors

Divide by 2
Divide by 3
Divide by 4
Divide by 5
Divide by 6
Divide by 7
Divide by 8
Divide by 9
Mixed division

## Divisibility Rules

Divisibility rules for 2 and 5
Divisibility rules for 3
Divisibility rules for 4
Divisibility rules for 6
Divisibility rules for 7
Divisibility rules for 8
Divisibility rules for 9
Letter Representations in Multiplication Sentences
Unknown products
Unknown products (2)
Unknown factors
Unknown factors (2)
Unknown factors and products
Unknown factors and products (2)
3.OA. 7
$71-72$

| Standard(s) | Pages |
| :--- | :--- |
| 3.OA.2, 3.OA.6 | $73-74$ |
| 3.OA.6 | $75-76$ |
| 3.OA.6 | $77-78$ |
| 6.EE.3 | $79-80$ |
| 6.EE.3 | $81-82$ |


| Standard(s) | Pages |
| :--- | :--- |
| 4.OA.4 | $83-84$ |
| 4.OA.4 | $85-86$ |
| 4.OA.4 | $87-88$ |
| 4.OA.4 | $89-90$ |
| 4.OA.4 | $91-92$ |
| 4.OA.4 | $93-94$ |
| 4.OA.4 | $95-96$ |
| 4.OA.4 | $97-98$ |
| 5.MD.5 | $99-100$ |
| 6.NS.4 | $101-102$ |

## Standard(s) <br> Pages

3.OA.4, 3.OA. $7 \quad 103-104$
3.OA.4, 3.OA. $7 \quad 105-106$
3.OA.4, 3.OA. $7 \quad 107-108$
3.OA.4, 3.OA. $7 \quad 109-110$
3.OA.4, 3.OA. $7 \quad 111-112$
3.OA.4, 3.OA. $7 \quad 113-114$
3.OA.4, 3.OA. $7 \quad 115-116$
3.OA.4, 3.OA. $7 \quad 117-118$
3.OA.4, 3.OA. $7 \quad 119-120$

| Standard(s) | Pages |
| :--- | :--- |
| 6.NS.4 | $121-122$ |
| 6.NS.4 | $123-124$ |
| 6.NS.4 | $125-126$ |
| 6.NS.4 | $127-128$ |
| 6.NS.4 | $129-130$ |
| 6.NS.4 | $131-132$ |
| 6.NS.4 | $133-134$ |

Standard(s) Pages
3.OA.4, 3.OA. $8 \quad 135-136$
3.OA. $4,3 . \mathrm{OA} .8 \quad 137-138$
3.OA.4, 3.OA. $8 \quad 139-140$
3.OA.4, 3.OA. $8 \quad 141-142$
3.OA.4,3.OA. $8 \quad 143-144$
3.OA.4, 3.OA. $8 \quad 145-146$

## Letter Representations in Division Sentences

Unknown quotients
Unknown quotients (2)
Unknown dividends
Unknown dividends (2)
Unknown divisors
Unknown divisors (2)
Unknown parts of a division sentence
Unknown parts of a division sentence (2)
Unknown of a multiplication or division sentence
Unknown of a multiplication or division sentence (2)

## Mental Multiplication

Multiply by multiples of 10
Multiply by 10,100 , and 1,000
Multiply by multiples of 10,100 , and 1,000
Multiply 2-digit numbers by 1-digit numbers
Multiply 3-digit numbers by 1-digit numbers
Multiply 2-digit multiples of 10 by 2-digit numbers
Multiply 3-digit numbers by multiples of 10 and 100
Multiplication expressions with parentheses
Multiply 3 factors
Multiply 1 more or 1 less than a multiple of 10
Multiply multiples of 4 by 25
Multiply by 2-digit numbers with 5 in the ones place

## Mental Division

Quotient and remainder
Divide 2 and 3-digit numbers by 1-digit divisors
Divide multiples of 10,100 , and 1,000 by 1 -digit divisors
Divide by multiples of 10
Divide multiples of 10 by single-digit divisors
Divide by multiples of 10,100 , and 1,000

## Distributive Property of Multiplication

Distributive Property with multiples of 2
Distributive Property with multiples of 3
Distributive Property with multiples of 4
Distributive Property with multiples of 5
Distributive Property with multiples of 6
Distributive Property with multiples of 7
Distributive Property with multiples of 8
Distributive Property with multiples of 9
Distributive Property with multiplication

## Distributive Property of Division

Distributive Property with divisors of 2

| Standard(s) | Pages |
| :--- | :--- |
| 3.OA.4, 3.OA.8 | $147-148$ |
| 3.OA.4, 3.OA.8 | $149-150$ |
| 3.OA.4, 3.OA.8 | $151-152$ |
| 3.OA.4, 3.OA.8 | $153-154$ |
| 3.OA.4, 3.OA.8 | $155-156$ |
| 3.OA.4, 3.OA.8 | $157-158$ |
| 3.OA.4, 3.OA.8 | $159-160$ |
| 3.OA.4, 3.OA.8 | $161-162$ |
| 3.OA.4, 3.OA.8 | $163-164$ |
| 3.OA.4, 3.OA.8 | $165-166$ |


| Standard(s) | Pages |
| :--- | :--- |
| 4.NBT.5 | $167-168$ |
| 4.NBT.5 | $169-170$ |
| 4.NBT.5 | $171-172$ |
| 4.NBT.5 | $173-174$ |
| 4.NBT.5 | $175-176$ |
| 4.NBT.5 | $177-178$ |
| 5.NBT.1, 5.NBT.2 | $179-180$ |
| 5.OA.1 | $181-182$ |
| 5.MD.5 | $183-184$ |
| 5.NBT.5 | $185-186$ |
| 5.NBT.5 | $187-188$ |
| 5.NBT.5 | $189-190$ |


| Standard(s) | Pages |
| :--- | :--- |
| 4.NBT.6 | $191-192$ |
| 4.NBT.6 | $193-194$ |
| 4.NBT.6 | $195-196$ |
| 5.NBT.1, 5.NBT.2 | $197-198$ |
| 4.NBT.6 | $199-200$ |
| 5.NBT.1, 5.NBT.2 | $201-202$ |


| Standard(s) | Pages |
| :--- | :--- |
| 3.OA.5 | $203-204$ |
| 3.OA.5 | $205-206$ |
| 3.OA.5 | $207-208$ |
| 3.OA.5 | $209-210$ |
| 3.OA.5 | $211-212$ |
| 3.OA.5 | $213-214$ |
| 3.OA.5 | $215-216$ |
| 3.OA.5 | $217-218$ |
| 3.OA.5 | $219-220$ |


| Standard(s) | Pages |
| :--- | :--- |
| 3.OA. 5 | $221-222$ |

Distributive Property with divisors of 3
Distributive Property with divisors of 4
Distributive Property with divisors of 5
Distributive Property with divisors of 6
Distributive Property with divisors of 7
Distributive Property with divisors of 8
Distributive Property with divisors of 9
Distributive Property with division

## Other Rules and Properties

Multiply and divide by 0 and 1
Prime and composite numbers
Least Common Multiple
Multiply and divide within 100
Even and odd products
Commutative Property of Multiplication
Commutative Property of Multiplication (2)
Associative Property of Multiplication
Multiply by multiples of 10 using the Associative Property
3.OA. 5

223-224
3.OA. $5 \quad 225-226$
3.OA. $5 \quad 227-228$
3.OA. $5 \quad 229-230$
3.OA. 5 231-232
3.OA. $5 \quad 233-234$
3.OA. $5 \quad 235-236$
3.OA. $5 \quad 237-238$

## Standard(s) Pages

3.OA. $7 \quad 239-240$
4.OA. $4 \quad 241-242$
6.NS. $4 \quad 243-244$
3.OA.4, 3.OA. $7 \quad 245-246$
6.NS. $4 \quad 247-248$
3.OA. $5 \quad 249-250$
3.OA. $5 \quad 251-252$
3.OA. $5 \quad 253-254$
3.OA. $5 \quad 255-256$

