## AT-A-GLANCE LIST OF BASIC FACT STRATEGIES

STRATEGY NAME

| Addition |
| :--- |
| Near Doubles |
| Making 10 |
| Pretend-a-10 <br> (Compensation) |
| Subtraction |
| Think Addition |

Down Under 10

Take From 10

| Multiplication |
| :--- |
| Doubling |
| Add-a-Group |

Subtract-a-Group

Near Squares

## Division

Think Multiplication

HOW THE STRATEGY WORKS
Example: 8 + 6
Student looks for a double they know that is similar to the problem. In this case, $8+8$, $6+6$, or even 7+7.

Student moves some from one addend to the other so that one addend is 10 .

Student pretends the larger addend is 10 , adds, then adjusts the answer.

## Example: 14-9

Student thinks how to get from the subtrahend (9) to the minuend (14)
$[9+\ldots=14]$.
Note: Subtraction as compare
Student jumps from minuend (14) to 10 and then jumps the rest of the subtrahend (9).
Note: Subtraction as take away
Student subtracts the subtrahend (9) from 10, then adds on the extra ones from the minuend.
Note:Subtraction as take away

EXAMPLE STUDENT TALK

That's 14 - 6 plus 6 plus 2.

It's 14. Imoved two over and thought 10 +4 .

It's 14. Well, 10 and 6 is 16 , and I have to take two away, so that's 14.

It's 5 . I pictured a number line and jumped up 1 to 10 and then 4 more.

It's 5 . I broke 9 into 4 and 5. I jumped down 4 to 10 , and then 5 more to 5.

I got 5. I thought of 14 as 10 and 4, subtracted 9 from 10 and got 1, added the 4 back on and its 5 .

Student sees an even factor, finds the product of half of that factor, and doubles the answer.

Student thinks of a known fact where one of the factors is one less (e.g., $5 \times 7$ or $6 \times 6$ ), multiplies, and then adds a group back on.

Student thinks of a known fact where one of the factors is one more, multiplies, and then adds a group back on.

Student uses a square fact they know and then adds or subtracts a group.
Note: This is an undertaught but useful strategy.

I got 42 . I know 3 times 7 is 21 , and I doubled 21.

When I see a 6 , I use my 5 s. 5 times 7 is 35 , and 6 more is 42 .

I know 7 groups of 7 is 49 , so 1 subtract one group of 7 and have 42.

Well, 6 times 6 is 36 , and I add 6 more and get 42 .

Example: $36 \div 9$
Student thinks, how many groups of 9 equal 36 ?

I know 9 times 4 is 36 , so it's 4 . OR I used Doubling to get to 18, doubled again, and got 36 , so it is 4 .

[^0]
[^0]:    Retrieved from the companion website for Figuring Out Fluency in Mathematics Teaching and Learning, Grades K-8: Moving Beyond Basic Facts and Memorization by Jennifer M. Bay-Williams and John J. SanGiovanni. Thousand Oaks, CA: Corwin, www.corwin.com. Copyright © 2021 by Corwin Press, Inc. All rights reserved. Reproduction authorized for educational use by educators, local school sites, and/or noncommercial or nonprofit entities that have purchased the book.

