FIGURING OUT
Fluency
MULTIPLICATION & DIVISION
With Whole Numbers

A Classroom Companion

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CORWIN Mathematics

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ACTIVITY 2.5
PROMPTS FOR TEACHING HALVE AND DOUBLE

Use the following prompts as opportunities to develop understanding of and reasoning with the strategy. Have students use representations and tools to justify their thinking, including base-10 models, number lines, arrays, and so on. After students work with the prompt(s), bring the class together to exchange ideas. These could be useful for collecting evidence of student understanding. Any prompt can be easily modified to feature different numbers (e.g., three-digit or four-digit numbers) and any prompt can be offered more than once if modified.

- David stated that 18×6 is the same as 9×3. Kayce disagreed and said that 18×6 is the same as 9×12. How do we know that Kayce is correct? What was David's mistake?

- Sara said the halve and double strategy works with division too, but it is halve and halve instead (or double and double). For example, $240 \div 6$ is the same as $120 \div 3$. Justify whether or not this is always true.

- Ciera said that doubling and halving always works. Is that correct? If not, give an example of when it doesn't work.

- Is Halve and Double the most effective strategy when solving for 20×15? Why or why not?

- Does halving and doubling always work well? Create problems to justify your thinking.

- Che says you can't use Halve and Double for 15×17. Maria says she can use the strategy. She says she just has to make one of the factors even. She gives 1 from 17 to 15, creating 16×16. What do you think about Maria's strategy?

- Russ says 4×15 is perfect for using the Halve and Double strategy but that 12×15 and 9×15 aren't good examples of when to use the strategy. Explain why you agree or disagree with Russ.

- Write your own multiplication word problems that could be solved using the Halve and Double strategy.

- Michael used the Halve and Double strategy to solve 8×15. He halved 8 and doubled 15. Michael came up with 4×30 and found a product of 120. Would the strategy still be efficient if Michael halved 15 and doubled 8 instead?

- Create a story problem for 5×22. Solve using Halve and Double.