

Second Grade Number Talks

Based on *Number Talks* by Sherry Parrish, Math Solutions 2010

Number Talks is a ten-minute classroom routine included in this year's Scope and Sequence. Kindergarten through fifth grade teachers will facilitate Number Talks with all students three days a week.

Number Talks are designed to support proficiency with grade level fluency standards. The goal of Number Talks is for students to compute accurately, efficiently, and flexibly. This includes fluency with single-digit combinations in addition, subtraction, multiplication and division as well as procedural fluency with two or multi digit numbers.

In addition to developing efficient computation strategies, Number Talks encourages students to make sense of mathematics, be able to communicate mathematically, and reason and prove solutions.

The key components of successful Number Talks:

- ***A safe and accepting classroom environment and mathematical community***
- ***Classroom discussions (PROTOCOL)***
 1. Teacher provides the problem.
 2. Teacher provides students opportunity to solve problem mentally.
 3. Students show a visual cue when they are ready with a solution. Students signal if they have solved it in more than one way too. (Quiet form of acknowledgement allows time for students to think, while the process continues to challenge those that are already have an answer)
 4. Teacher calls for answers. S/he collects all answers- correct and incorrect- and records answers.
 5. Students share strategies and justifications with peers.
- ***The teacher's role as a "facilitator, questioner, listener, and learner"***
- ***Use of mental math to increase efficiency and knowledge of number relationships***
- ***Purposeful computation problems that support mathematical goals in number and operations***

Many of the number talks consist of three or more sequential problems. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems. You may:

Number Talks: Second Grade

- Select at random from each category; or
- navigate in a systematic order by selecting problems with smaller numbers from a specific category, then building to larger numbers.

You may also adjust the numbers according to your students' needs and responses. The first grade Number Talks can also act as a resource as an additional support.

Addition: Making Tens

Category 1: Making Tens

The following number talks include two numbers that make a quick ten. This can serve as a review at the start of second grade or support for students who are not fluent with their combinations of ten yet.

$$7 + 3$$

$$7 + 5 + 3$$

$$3 + 6 + 7$$

$$5 + 5$$

$$5 + 6 + 5$$

$$5 + 9 + 5$$

$$9 + 5 + 1$$

$$8 + 9 + 1$$

$$1 + 4 + 9$$

$$8 + 2$$

$$2 + 4 + 8$$

$$8 + 3 + 2$$

$$9 + 1$$

$$9 + 7 + 1$$

$$1 + 6 + 9$$

$$2 + 5 + 8$$

$$4 + 7 + 6$$

$$5 + 5 + 8$$

$$6 + 4$$

$$4 + 9 + 6$$

$$6 + 8 + 4$$

$$3 + 5 + 7$$

$$6 + 5 + 4$$

$$2 + 9 + 8$$

$$3 + 8 + 7$$

$$9 + 1 + 2$$

$$4 + 9 + 6$$

Category 2: Making Tens

The following number talks include problems with two pairs of numbers that make a quick ten.

$4 + 6 + 8 + 2$

$9 + 3 + 1 + 7$

$5 + 6 + 5 + 4$

$3 + 8 + 2 + 7$

$4 + 4 + 6 + 6$

$9 + 1 + 1 + 9$

$5 + 3 + 5 + 4 + 7$

$9 + 5 + 8 + 2 + 1$

$4 + 5 + 6 + 3 + 7$

$3 + 9 + 7 + 1$

$2 + 9 + 8 + 1$

$6 + 4 + 3 + 7$

$5 + 7 + 3 + 5$

$2 + 5 + 5 + 8$

$6 + 6 + 4 + 4$

$3 + 8 + 5 + 5 + 2$

$9 + 1 + 6 + 3 + 4$

$7 + 4 + 3 + 2 + 8$

$3 + 7 + 8 + 2$

$1 + 1 + 9 + 9$

$3 + 7 + 7 + 3$

$4 + 8 + 2 + 6$

$1 + 9 + 2 + 8$

$5 + 3 + 7 + 5$

$2 + 6 + 8 + 3 + 4$

$9 + 3 + 1 + 5 + 5$

$4 + 8 + 6 + 2 + 7$

Category 3: Making Tens

The following number talks require students to decompose at least one number to make a quick ten.

$$\begin{array}{c} 9 + 1 \\ 9 + 1 + 4 \\ 9 + 5 \\ 9 + 8 \end{array}$$

$$\begin{array}{c} 8 + 2 \\ 8 + 2 + 3 \\ 8 + 5 \\ 8 + 4 \end{array}$$

$$\begin{array}{c} 7 + 3 \\ 7 + 3 + 2 \\ 7 + 5 \\ 7 + 6 \end{array}$$

Addition: Making Landmark or Friendly Numbers

$$\begin{array}{c} 10 + 5 \\ 9 + 5 \\ 10 + 7 \\ 9 + 7 \end{array}$$

$$\begin{array}{c} 10 + 5 \\ 8 + 5 \\ 10 + 7 \\ 8 + 7 \end{array}$$

$$\begin{array}{c} 10 + 6 \\ 7 + 6 \\ 10 + 4 \\ 7 + 4 \end{array}$$

$$\begin{array}{c} 9 + 3 \\ 9 + 5 \\ 9 + 8 \\ 9 + 9 \end{array}$$

$$\begin{array}{c} 8 + 2 \\ 8 + 5 \\ 8 + 4 \\ 8 + 7 \end{array}$$

$$\begin{array}{c} 7 + 3 \\ 7 + 6 \\ 7 + 4 \\ 7 + 5 \end{array}$$

$$\begin{array}{c} 10 + 14 \\ 9 + 14 \\ 10 + 23 \\ 9 + 23 \end{array}$$

$$\begin{array}{c} 10 + 12 \\ 8 + 12 \\ 10 + 23 \\ 8 + 23 \end{array}$$

$$\begin{array}{c} 10 + 13 \\ 7 + 13 \\ 10 + 25 \\ 7 + 25 \end{array}$$

Category 1: Making Landmark or Friendly Numbers

The following number talks include single-digit numbers that are one away from a landmark or friendly number.

$10 + 2$

$9 + 2$

$9 + 5$

$9 + 8$

$9 + 9$

$29 + 1$

$29 + 5$

$29 + 13$

$29 + 24$

$29 + 29$

$60 + 7$

$59 + 1 + 6$

$59 + 7$

$59 + 12$

$59 + 22$

$20 + 5$

$19 + 5$

$19 + 7$

$19 + 8$

$40 + 4$

$39 + 4$

$39 + 15$

$39 + 39$

$70 + 8$

$69 + 1 + 7$

$69 + 8$

$69 + 13$

$19 + 1$

$19 + 15$

$19 + 27$

$19 + 18$

$49 + 1$

$49 + 8$

$49 + 16$

$49 + 27$

$80 + 4$

$79 + 1 + 3$

$79 + 4$

$79 + 14$

Category 2: Doubles/Near-Doubles

Addition: Double/Near-Doubles

The following number talks consist of doubles using numbers between 10 and 20. (Category 1 consist of doubles using basic facts up to 10.)

$11 + 11$

$12 + 12$

$11 + 12$

$11 + 10$

$14 + 14$

$13 + 13$

$14 + 13$

$14 + 15$

$18 + 18$

$20 + 20$

$18 + 19$

$18 + 17$

$12 + 12$

$13 + 13$

$12 + 11$

$12 + 13$

$15 + 15$

$16 + 16$

$15 + 14$

$15 + 16$

$19 + 19$

$20 + 20$

$19 + 18$

$19 + 20$

$13 + 13$

$14 + 14$

$13 + 12$

$13 + 14$

$16 + 16$

$17 + 17$

$16 + 15$

$16 + 17$

$19 + 19$

$20 + 20$

$19 + 18$

$19 + 20$

Category 3: Doubles/Near-Doubles

The following number talks consist of doubles with numbers between 20 and 50 and with 100.

$$20 + 20$$

$$19 + 19$$

$$19 + 21$$

$$19 + 17$$

$$19 + 19$$

$$20 + 20$$

$$19 + 18$$

$$19 + 20$$

$$45 + 45$$

$$46 + 45$$

$$46 + 46$$

$$44 + 46$$

$$25 + 25$$

$$24 + 25$$

$$25 + 26$$

$$24 + 26$$

$$35 + 35$$

$$35 + 36$$

$$34 + 35$$

$$36 + 37$$

$$100 + 100$$

$$99 + 99$$

$$99 + 98$$

$$99 + 97$$

Category 2: Making Landmark or Friendly Numbers

The following number talks consist of computation problems in which one addend is two away from a multiple of ten or a landmark number.

$$10 + 5$$
$$8 + 2 + 3$$
$$8 + 5$$
$$8 + 7$$
$$8 + 12$$

$$30 + 5$$
$$28 + 2 + 3$$
$$28 + 5$$
$$28 + 7$$
$$28 + 16$$

$$60 + 3$$
$$58 + 2 + 1$$
$$58 + 3$$
$$58 + 14$$
$$58 + 26$$

$$8 + 2$$
$$8 + 14$$
$$8 + 25$$
$$8 + 36$$

$$40 + 4$$
$$38 + 2 + 2$$
$$38 + 4$$
$$38 + 13$$
$$38 + 27$$

$$70 + 7$$
$$68 + 2 + 5$$
$$68 + 7$$
$$68 + 15$$
$$68 + 26$$

$$18 + 2$$
$$18 + 2 + 13$$
$$18 + 15$$
$$18 + 23$$

$$50 + 6$$
$$48 + 2 + 4$$
$$48 + 6$$
$$48 + 13$$
$$48 + 25$$

$$80 + 5$$
$$78 + 2 + 3$$
$$78 + 5$$
$$78 + 15$$
$$78 + 17$$

Category 3: Making Landmark or Friendly Numbers

The following number talks consist of computation problems in which both addends are one or more away from a multiple of ten or a landmark number. The farther the addends are from landmark numbers, the more challenging the strategy.

$10 + 20$

$9 + 19$

$9 + 29$

$9 + 39$

$25 + 25$

$26 + 25$

$26 + 26$

$26 + 27$

$20 + 30$

$19 + 29$

$18 + 28$

$19 + 26$

$10 + 20$

$9 + 18$

$10 + 30$

$9 + 28$

$30 + 30$

$29 + 29$

$28 + 29$

$28 + 28$

$30 + 50$

$29 + 49$

$28 + 48$

$29 + 48$

$20 + 20$

$19 + 19$

$19 + 29$

$19 + 39$

$20 + 20$

$19 + 19$

$18 + 19$

$18 + 29$

$50 + 50$

$49 + 49$

$49 + 48$

$48 + 48$

Addition: Breaking Each Number into Its Place Value

Category 1: Breaking Each Number into Its Place Value

The following number talks are composed of smaller two-digit numbers that do not require regrouping.

$10 + 10$

$10 + 11$

$12 + 13$

$14 + 15$

$20 + 20$

$23 + 25$

$24 + 21$

$22 + 26$

$28 + 11$

$14 + 35$

$22 + 15$

$18 + 31$

$12 + 17$

$15 + 14$

$13 + 16$

$11 + 17$

$20 + 30$

$21 + 32$

$26 + 33$

$27 + 31$

$36 + 22$

$12 + 37$

$13 + 14$

$24 + 32$

$10 + 20$

$11 + 22$

$14 + 23$

$15 + 21$

$10 + 30$

$13 + 31$

$33 + 16$

$18 + 31$

$18 + 31$

$23 + 14$

$37 + 12$

$32 + 25$

Category 2: Breaking Each Number into Its Place Value

The following number talks encourage students to combine the ten from the ones column with the tens from the tens column. The two-digit numbers remain smaller in magnitude.

$10 + 10 + 10$

$13 + 17$

$18 + 12$

$16 + 14$

$15 + 27$

$23 + 18$

$17 + 25$

$16 + 27$

$25 + 35$

$32 + 28$

$36 + 27$

$26 + 24$

$13 + 18$

$16 + 15$

$17 + 14$

$12 + 19$

$22 + 18$

$15 + 26$

$17 + 28$

$16 + 26$

$17 + 33$

$24 + 38$

$16 + 38$

$37 + 18$

$15 + 18$

$17 + 16$

$14 + 18$

$15 + 17$

$26 + 28$

$23 + 27$

$27 + 25$

$28 + 24$

$27 + 15$

$35 + 26$

$17 + 33$

$25 + 38$

Addition: Compensation

When students understand that you can compensate in addition (remove a specific quantity from one addend and add that same quantity to another addend) without altering the sum, they can begin to apply powerful mental computation strategies. Rather than telling students that this will always work, students need to have opportunities to test and prove this idea. Initially you may wish to have students use manipulative to provide proof for their ideas. Numerical fluency (composing and decomposing numbers) is a key component of this strategy.

Category 1: Compensation

The following number talks focus on using compensation as a strategy for basic facts and combinations to 25 by removing 1 from one addend and adding it to the other addend. For example, $5 + 9$ can be changed to $4 + 10$ by removing 1 from the 5 and adding it to the 9.

$5 + 5$

$4 + 6$

$6 + 6$

$5 + 7$

$3 + 9$

$9 + 5$

$7 + 9$

$9 + 6$

$16 + 9$

$9 + 12$

$15 + 9$

$13 + 9$

$7 + 7$

$6 + 8$

$8 + 8$

$7 + 9$

$2 + 9$

$4 + 9$

$6 + 9$

$9 + 8$

$16 + 4$

$19 + 4$

$6 + 19$

$19 + 3$

Category 2: Compensation

The following number talks focus on adding and subtracting 1 using larger numbers.

$19 + 6$

$9 + 16$

$9 + 26$

$29 + 6$

$17 + 19$

$9 + 18$

$13 + 9$

$16 + 19$

$29 + 19$

$29 + 23$

$28 + 29$

$23 + 19$

$7 + 19$

$5 + 29$

$39 + 8$

$49 + 6$

$14 + 9$

$9 + 7$

$15 + 9$

$19 + 6$

$29 + 31$

$29 + 16$

$19 + 26$

$19 + 19$

$11 + 19$

$9 + 29$

$21 + 9$

$19 + 18$

$16 + 14$

$19 + 21$

$26 + 24$

$29 + 31$

$39 + 7$

$49 + 8$

$39 + 16$

$41 + 19$

Category 3: Compensation

The following number talks are designed to make easier number combinations by adding and subtracting 2 or more.

$$\begin{array}{c} 4 + 8 \\ 8 + 6 \\ 8 + 5 \\ 7 + 8 \end{array}$$

$$\begin{array}{c} 27 + 18 \\ 38 + 24 \\ 18 + 22 \\ 48 + 16 \end{array}$$

$$\begin{array}{c} 13 + 17 \\ 23 + 27 \\ 33 + 37 \\ 43 + 47 \end{array}$$

$$\begin{array}{c} 8 + 7 \\ 17 + 8 \\ 13 + 17 \\ 17 + 18 \end{array}$$

$$\begin{array}{c} 17 + 23 \\ 22 + 28 \\ 35 + 27 \\ 38 + 36 \end{array}$$

$$\begin{array}{c} 28 + 45 \\ 53 + 18 \\ 38 + 47 \\ 17 + 78 \end{array}$$

Addition: Adding Up in Chunks

Instructions

Students need to be able to add multiples of ten to any number with ease. Adding up numbers in chunks builds on this idea by encouraging students to keep one number whole while adding “chunks” of the second addend. An open number line or hundreds chart is a helpful tool to use when discussing this strategy.

Category 1: Adding Up in Chunks

The following number talks focus on adding multiples of ten to any number.

$7 + 10$

$7 + 20$

$7 + 30$

$7 + 40$

$23 + 10$

$23 + 20$

$23 + 40$

$23 + 50$

$28 + 10$

$28 + 50$

$28 + 30$

$28 + 40$

$15 + 10$

$15 + 20$

$15 + 30$

$15 + 40$

$36 + 10$

$36 + 30$

$36 + 50$

$36 + 60$

$55 + 10$

$55 + 20$

$55 + 30$

$55 + 40$

$19 + 10$

$19 + 20$

$19 + 30$

$19 + 40$

$39 + 20$

$39 + 40$

$39 + 30$

$39 + 50$

$42 + 10$

$42 + 20$

$42 + 40$

$42 + 50$

Category 2: Adding Up in Chunks

The following number talks build gradually from adding multiples of ten to a number to adding in chunks.

$7 + 3$

$7 + 3 + 2$

$7 + 5$

$7 + 6$

$26 + 10$

$26 + 30$

$26 + 50$

$26 + 53$

$32 + 10$

$32 + 14$

$32 + 20$

$32 + 25$

$16 + 10$

$16 + 20$

$16 + 40$

$16 + 42$

$35 + 10$

$35 + 20$

$35 + 40$

$35 + 42$

$44 + 10$

$44 + 12$

$44 + 30$

$44 + 35$

$24 + 10$

$24 + 30$

$24 + 50$

$24 + 55$

$57 + 10$

$57 + 20$

$57 + 30$

$57 + 33$

$53 + 20$

$53 + 25$

$53 + 40$

$53 + 42$

Category 3: Adding Up in Chunks

The following number talks pose problems to add up in chunks and then break apart the 1s into friendly combinations. For example, $28 + 24$ could be "chunked" as $28 + 20 = 48$; $48 + 4$ could be added by breaking the 4 apart into $2 + 2$. The problem could then be solved as $(48 + 2) + 2 = 50 + 2 = 52$.

$18 + 10$

$18 + 13$

$18 + 20$

$18 + 23$

$29 + 10$

$29 + 15$

$29 + 20$

$29 + 24$

$57 + 10$

$57 + 14$

$57 + 30$

$57 + 36$

$16 + 20$

$16 + 25$

$16 + 30$

$16 + 36$

$38 + 20$

$38 + 26$

$38 + 30$

$38 + 33$

$17 + 25$

$28 + 24$

$36 + 38$

$37 + 35$

$17 + 10$

$17 + 14$

$17 + 30$

$17 + 35$

$45 + 30$

$45 + 38$

$45 + 40$

$45 + 46$

$44 + 27$

$48 + 34$

$55 + 16$

$58 + 25$

Subtraction Number Talks

Students start to understand the importance of tens, how to break apart numbers into place value for addition strategies, and how to reason more confidently with numbers. They are often ready to use their understanding of addition to lay a foundation for reasoning with subtraction. The stronger a student is with addition, the better she will be able to access subtraction.

Subtraction: Adding Up

This strategy allows students to build up on their strength with addition by adding up from the number being subtracted (subtrahend) to the whole (minuend). The larger the jumps, the more efficient the strategy will be. In thinking about how much more to add to reach the whole, students can build on their knowledge of basic facts, double, making ten, and counting on.

Category 1: Adding Up

The following number talks consist of computation problems in which the wholes are multiples of ten.

$20 - 15$

$20 - 14$

$20 - 12$

$20 - 11$

$30 - 19$

$30 - 14$

$30 - 24$

$30 - 21$

$50 - 39$

$50 - 44$

$50 - 24$

$50 - 33$

$20 - 10$

$20 - 9$

$20 - 7$

$20 - 8$

$30 - 25$

$30 - 23$

$30 - 15$

$30 - 12$

$40 - 34$

$40 - 29$

$40 - 20$

$40 - 18$

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$$60 - 49$$
$$60 - 29$$
$$60 - 39$$
$$60 - 19$$

$$70 - 59$$
$$70 - 34$$
$$70 - 49$$
$$78 - 18$$

Category 2: Adding Up

The following number talks consist of computation problems in which the whole is no longer a multiple of ten and is below fifty.

$$15 - 9$$
$$17 - 9$$
$$14 - 9$$
$$16 - 9$$

$$23 - 19$$
$$23 - 16$$
$$23 - 14$$
$$23 - 9$$

$$44 - 39$$
$$44 - 35$$
$$44 - 29$$
$$44 - 25$$

$$21 - 10$$
$$21 - 9$$
$$21 - 7$$
$$21 - 8$$

$$31 - 29$$
$$31 - 26$$
$$31 - 24$$
$$31 - 15$$

$$41 - 34$$
$$41 - 28$$
$$41 - 24$$
$$41 - 19$$

$$25 - 19$$
$$25 - 16$$
$$25 - 18$$
$$25 - 9$$

$$32 - 28$$
$$32 - 25$$
$$32 - 19$$
$$32 - 15$$

$$23 - 19$$
$$33 - 19$$
$$42 - 29$$
$$41 - 18$$

Category 3: Adding Up

The following number talks consist of a mixture of numbers that lend themselves to the Adding Up strategy.

$20 - 14$

$24 - 19$

$22 - 13$

$26 - 17$

$50 - 24$

$50 - 39$

$56 - 28$

$56 - 17$

$80 - 39$

$80 - 68$

$81 - 49$

$81 - 58$

$30 - 15$

$33 - 19$

$33 - 14$

$36 - 27$

$60 - 49$

$60 - 27$

$63 - 56$

$63 - 19$

$90 - 79$

$90 - 74$

$92 - 89$

$92 - 69$

$40 - 19$

$45 - 19$

$42 - 23$

$42 - 34$

$70 - 61$

$70 - 34$

$74 - 49$

$74 - 36$

$100 - 97$

$100 - 89$

$100 - 49$

$100 - 24$

Subtraction: Removal

If students primarily view subtraction as taking away, they will gravitate toward this strategy. Starting with the whole, the subtrahend is removed in parts. The ability to decompose numbers into easy-to-remove parts gives students access to this strategy. Encouraging students to keep the whole (minuend) intact and remove the subtrahend in parts is important; otherwise, it is easy for them to lose sight of the whole and the part. The following number talks sequences help promote this idea.

Students may initially count back from the whole to solve subtraction problems. Students are more likely to make errors with this strategy and it is helpful to guide them to realize when this is and is not an efficient strategy. The closer the whole (minuend) and part (subtrahend) are, the more likely students are to use Counting Back as a strategy. At times this can be an efficient strategy as evidenced in the following problem, $21 - 19$. However, if the numbers were farther apart as in $21 - 9$, counting back by 1s would be more cumbersome. Counting back by chunks is more efficient as the numbers get farther apart. For example, with the problem $21 - 9$, the 9 could be decomposed into $1 + 8$. The student could then remove 1 from the 21 with 20 as the answer, and then remove 8 from 20. Developing a sequence of problems to foster this strategy is not necessary. Instead look for appropriate times to discuss when this strategy is and is not appropriate.

Category 1: Removal

The following number talks use numbers that encourage removing the subtrahend in parts that are the same as the digit in the minuend.

$$20 - 5$$

$$20 - 6$$

$$20 - 7$$

$$20 - 8$$

$$21 - 1$$

$$21 - 6$$

$$23 - 3$$

$$23 - 6$$

$$35 - 5$$

$$35 - 6$$

$$35 - 8$$

$$35 - 9$$

Category 2: Removal

The following number talks that encourage removal in place-value chunks without regrouping.

$20 - 10$

$20 - 16$

$30 - 10$

$30 - 12$

$47 - 10$

$47 - 16$

$47 - 20$

$47 - 24$

$78 - 20$

$78 - 23$

$78 - 50$

$78 - 54$

$26 - 10$

$26 - 13$

$28 - 10$

$28 - 15$

$39 - 10$

$39 - 13$

$39 - 20$

$39 - 22$

$69 - 30$

$69 - 35$

$69 - 50$

$69 - 52$

$35 - 10$

$35 - 13$

$35 - 20$

$35 - 24$

$56 - 10$

$56 - 12$

$56 - 30$

$56 - 35$

$87 - 40$

$87 - 44$

$87 - 50$

$87 - 53$

Subtraction: Adjusting One Number to Create an Easier Problem

In students do not have a strong understanding of the part-whole relationship in subtraction; they will be limited in the strategies they can use. When either the minuend or subtrahend is adjusted to make a friendlier number, the strategy will warrant that the remainder or answer also be adjusted. For the problem $50 - 24$, some students changed the problem to $49 - 24$. Since the child changed the whole by removing 1, she has to add back one to the answer of 25 to get 26 (adjust the minuend): $(50 - 1) - 24 = 26 = 25 + 1 = (49 - 24)$.

For the same problem, other students might change the 24 to 25 to think about doubles or money. They have removed one too many and will need to add back one to the answer (adjust the subtrahend): $50 - (24 + 1) = 26 = (50 - 24) = 25 + 1$

These are the types of discussions that will need to occur when using this strategy.

Category 1: Adjusting One Number to Create an Easier Problem

The following number talks consist of smaller quantities- even basic facts- to help students consider what happens when numbers are adjusted in a subtraction problem. The following problems focus on adjusting the whole or the minuend

$9 - 4$

$10 - 4$

$19 - 14$

$20 - 14$

$31 - 15$

$30 - 15$

$29 - 15$

$32 - 15$

$30 - 19$

$29 - 19$

$40 - 19$

$39 - 19$

$15 - 5$

$14 - 5$

$10 - 5$

$11 - 5$

$51 - 25$

$50 - 25$

$49 - 25$

$52 - 25$

$37 - 18$

$38 - 18$

$44 - 25$

$45 - 25$

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$20 - 15$

$21 - 15$

$19 - 15$

$22 - 15$

$50 - 28$

$49 - 28$

$60 - 28$

$59 - 28$

$99 - 73$

$100 - 73$

$100 - 64$

$100 - 82$

Category 2: Adjusting One Number to Create an Easier Problem

The following number talks include problems that focus on adjusting the subtrahend- the part being removed- to create an easier problem.

$20 + 10$

$20 - 9$

$20 - 11$

$21 - 9$

$30 - 15$

$30 - 16$

$30 - 14$

$30 - 19$

$70 - 30$

$70 - 31$

$70 - 29$

$70 - 49$

$25 - 15$

$25 - 16$

$25 - 18$

$25 - 19$

$50 - 25$

$50 - 24$

$50 - 26$

$50 - 19$

$80 - 40$

$80 - 39$

$80 - 41$

$80 - 49$

$40 - 20$

$40 - 19$

$40 - 21$

$40 - 18$

$60 - 30$

$60 - 29$

$60 - 31$

$60 - 39$

$100 - 50$

$100 - 51$

$100 - 49$

$100 - 52$

Category 3: Adjusting One Number to Create an Easier Problem

The following number talks require students to make decisions about which number might be adjusted to create an easier problem.

$49 - 28$

$50 - 30$

$50 - 28$

$53 - 28$

$52 - 40$

$49 - 39$

$52 - 39$

$51 - 37$

$149 - 118$

$151 - 120$

$151 - 118$

$155 - 128$

$39 - 19$

$38 - 20$

$38 - 19$

$35 - 18$

$75 - 40$

$79 - 39$

$75 - 39$

$77 - 39$

$172 - 60$

$169 - 59$

$172 - 59$

$179 - 88$

$59 - 47$

$60 - 50$

$60 - 47$

$62 - 45$

$99 - 69$

$100 - 70$

$100 - 69$

$101 - 68$

$199 - 98$

$200 - 100$

$200 - 98$

$203 - 99$

Subtraction: Keeping a Constant Difference

Instructions

With the Constant Difference strategy, both the minuend and the subtrahend are adjusted by the same amounts. This strategy can be efficient and beneficial because it allows the students to adjust the numbers to make a friendlier easier problem.

An example of the effectiveness of this strategy can be seen with the problem $51 - 26$. If both numbers are adjusted by subtracting 1, the problem is $50 - 25$, a common money problem. The answer of 25 is the same for either problem, because the numbers have both shifted the same amount.

Category 1: Keeping a Constant Difference

The following number talks consist of computation problems that use numbers up to one hundred and are focused on adjusting both numbers by adding or subtracting one or two.

$14 - 10$

$13 - 9$

$14 - 7$

$15 - 6$

$42 - 20$

$39 - 17$

$41 - 19$

$51 - 19$

$61 - 29$

$62 - 30$

$59 - 27$

$49 - 17$

$20 - 15$

$19 - 14$

$21 - 16$

$41 - 16$

$50 - 25$

$49 - 24$

$51 - 26$

$71 - 36$

$90 - 45$

$89 - 44$

$91 - 46$

$98 - 52$

$30 - 15$

$29 - 14$

$31 - 16$

$51 - 16$

$35 - 20$

$30 - 15$

$34 - 19$

$44 - 29$

$100 - 51$

$99 - 50$

$100 - 36$

$100 - 48$

Category 2: Keeping a Constant Difference

The following number talks include computation problems with numbers above one hundred.

$101 - 50$

$99 - 48$

$100 - 49$

$109 - 51$

$150 - 125$

$149 - 124$

$151 - 126$

$171 - 136$

$342 - 120$

$339 - 117$

$341 - 119$

$351 - 119$

$139 - 60$

$138 - 59$

$114 - 90$

$112 - 88$

$153 - 100$

$151 - 98$

$173 - 160$

$171 - 158$

$199 - 90$

$200 - 91$

$299 - 150$

$300 - 151$

$135 - 120$

$130 - 115$

$134 - 119$

$164 - 119$

$261 - 129$

$262 - 130$

$259 - 127$

$249 - 117$

$498 - 310$

$500 - 312$

$499 - 366$

$500 - 367$

Category 3: Keeping a Constant Difference

The following number talks consist of computation problems that do not build one upon the others. Instead, each problem offers opportunities for students to choose the best method for keeping a constant difference. Many of the problems can be adjusted up or down to create easier problems.

$32 - 19$

$48 - 29$

$35 - 18$

$41 - 13$

$111 - 56$

$134 - 68$

$127 - 88$

$122 - 77$

$234 - 119$

$271 - 158$

$251 - 158$

$209 - 151$

$35 - 17$

$53 - 29$

$62 - 37$

$44 - 26$

$133 - 95$

$114 - 89$

$123 - 105$

$100 - 34$

$391 - 146$

$359 - 127$

$251 - 116$

$315 - 106$

$86 - 47$

$90 - 36$

$78 - 59$

$52 - 35$

$236 - 119$

$200 - 137$

$287 - 118$

$151 - 98$

$300 - 214$

$500 - 289$

$700 - 477$

$1000 - 674$