

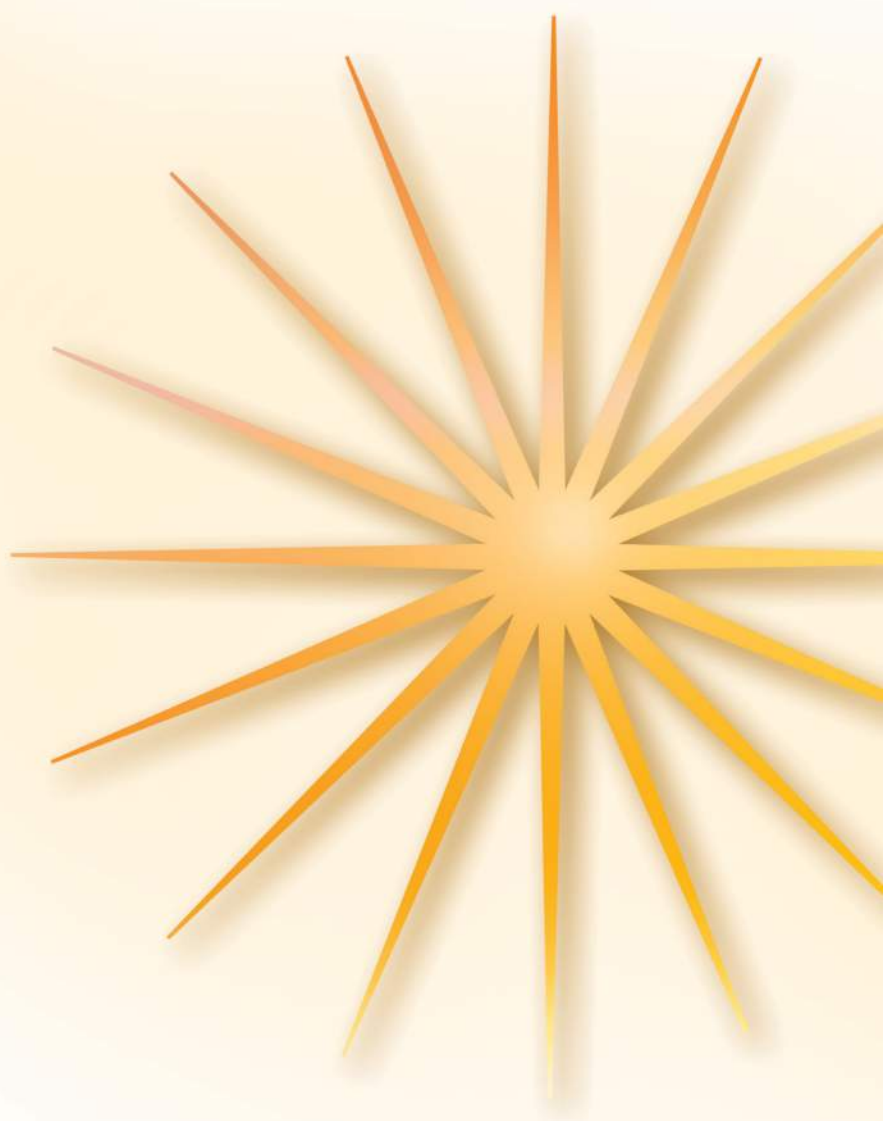
SPECTRUM[®] Math

GRADE
4



Focused Practice for Math Mastery

- Multiplying and dividing
- Fractions and decimals
- Measurement conversions
- Classifying geometric figures
- Preparing for algebra
- Answer key



SPECTRUM[®]

Math

Grade 4

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**Check What You Know****Adding and Subtracting 1 and 2 Digits**

Add or subtract.

	a	b	c	d	e	f
1.	$\begin{array}{r} 35 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ + 13 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ + 24 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ + 12 \\ \hline \end{array}$	$\begin{array}{r} 42 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ + 33 \\ \hline \end{array}$

2.	$\begin{array}{r} 43 \\ + 24 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 63 \\ + 31 \\ \hline \end{array}$	$\begin{array}{r} 82 \\ + 16 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ + 23 \\ \hline \end{array}$	$\begin{array}{r} 74 \\ + 15 \\ \hline \end{array}$
-----------	---	--	---	---	---	---

3.	$\begin{array}{r} 50 \\ + 33 \\ \hline \end{array}$	$\begin{array}{r} 95 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ + 25 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ + 25 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ + 13 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ + 32 \\ \hline \end{array}$
-----------	---	--	---	---	---	---

4.	$\begin{array}{r} 12 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ + 12 \\ \hline \end{array}$	$\begin{array}{r} 55 \\ + 23 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ + 19 \\ \hline \end{array}$	$\begin{array}{r} 92 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ + 23 \\ \hline \end{array}$
-----------	--	---	---	---	--	---

5.	$\begin{array}{r} 45 \\ - 4 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ - 23 \\ \hline \end{array}$	$\begin{array}{r} 66 \\ - 14 \\ \hline \end{array}$	$\begin{array}{r} 95 \\ - 31 \\ \hline \end{array}$	$\begin{array}{r} 84 \\ - 22 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ - 12 \\ \hline \end{array}$
-----------	--	---	---	---	---	---

6.	$\begin{array}{r} 49 \\ - 27 \\ \hline \end{array}$	$\begin{array}{r} 57 \\ - 46 \\ \hline \end{array}$	$\begin{array}{r} 39 \\ - 18 \\ \hline \end{array}$	$\begin{array}{r} 79 \\ - 27 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ - 6 \\ \hline \end{array}$	$\begin{array}{r} 88 \\ - 56 \\ \hline \end{array}$
-----------	---	---	---	---	--	---

7.	$\begin{array}{r} 65 \\ - 55 \\ \hline \end{array}$	$\begin{array}{r} 78 \\ - 33 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ - 42 \\ \hline \end{array}$	$\begin{array}{r} 97 \\ - 26 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ - 15 \\ \hline \end{array}$	$\begin{array}{r} 59 \\ - 48 \\ \hline \end{array}$
-----------	---	---	---	---	---	---

8.	$\begin{array}{r} 54 \\ - 23 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ - 18 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ - 37 \\ \hline \end{array}$	$\begin{array}{r} 99 \\ - 66 \\ \hline \end{array}$	$\begin{array}{r} 89 \\ - 27 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ - 15 \\ \hline \end{array}$
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**Check What You Know****SHOW YOUR WORK****Adding and Subtracting 1 and 2 Digits**

Solve each problem.

- 9.** Mr. Dimas has 15 new students in his fourth-grade class. He already has 21 students in the class. How many students are in Mr. Dimas's class?

There are _____ students in his class.

- 10.** There are 35 pages in Kendrick's science book. Last night, Kendrick read 14 pages. How many more pages does Kendrick have left to read?

There are _____ pages left to read.

- 11.** Kono's father gave him 75 apples so he could pass them out to his friends. If Kono gave 43 away, how many apples does he have left?

There are _____ apples left.

- 12.** Monica and Tania want to throw a surprise party for Rosa. They plan to send out 45 invitations. If Tania writes 24, how many invitations does Monica need to write?

Monica needs to write _____ invitations.

- 13.** Seki's soccer team is in the State Cup Tournament. There were 23 goals made in the entire tournament. Seki's team made 12 of them. How many goals were made by the other teams?

The other teams scored _____ goals.

9.**10.****11.****12.****13.**

Lesson 1.1 Adding 1- and 2-Digit Numbers

$$\begin{array}{r}
 \text{addend} \longrightarrow 6 \quad 60 \\
 \text{addend} \longrightarrow +3 \quad +30 \\
 \text{sum} \longrightarrow \hline 9 \quad 90
 \end{array}$$

	Add the ones.	Add the tens.
$ \begin{array}{r} 23 \\ +16 \\ \hline \end{array} $	$ \begin{array}{r} 23 \\ +16 \\ \hline 9 \end{array} $	$ \begin{array}{r} 23 \\ +16 \\ \hline 39 \end{array} $

If $6 + 3 = 9$, then $60 + 30 = 90$.

Add.

	a	b	c	d	e	f
1.	$ \begin{array}{r} 11 \\ + 8 \\ \hline \end{array} $	$ \begin{array}{r} 10 \\ +30 \\ \hline \end{array} $	$ \begin{array}{r} 25 \\ +14 \\ \hline \end{array} $	$ \begin{array}{r} 81 \\ +18 \\ \hline \end{array} $	$ \begin{array}{r} 52 \\ +17 \\ \hline \end{array} $	$ \begin{array}{r} 74 \\ +23 \\ \hline \end{array} $
2.	$ \begin{array}{r} 10 \\ +80 \\ \hline \end{array} $	$ \begin{array}{r} 7 \\ +2 \\ \hline \end{array} $	$ \begin{array}{r} 15 \\ + 4 \\ \hline \end{array} $	$ \begin{array}{r} 7 \\ +92 \\ \hline \end{array} $	$ \begin{array}{r} 71 \\ + 6 \\ \hline \end{array} $	$ \begin{array}{r} 70 \\ +10 \\ \hline \end{array} $
3.	$ \begin{array}{r} 7 \\ +22 \\ \hline \end{array} $	$ \begin{array}{r} 20 \\ +30 \\ \hline \end{array} $	$ \begin{array}{r} 92 \\ + 7 \\ \hline \end{array} $	$ \begin{array}{r} 83 \\ +16 \\ \hline \end{array} $	$ \begin{array}{r} 46 \\ +23 \\ \hline \end{array} $	$ \begin{array}{r} 70 \\ +20 \\ \hline \end{array} $
4.	$ \begin{array}{r} 2 \\ +41 \\ \hline \end{array} $	$ \begin{array}{r} 30 \\ +30 \\ \hline \end{array} $	$ \begin{array}{r} 51 \\ +48 \\ \hline \end{array} $	$ \begin{array}{r} 34 \\ +24 \\ \hline \end{array} $	$ \begin{array}{r} 7 \\ +22 \\ \hline \end{array} $	$ \begin{array}{r} 20 \\ +50 \\ \hline \end{array} $
5.	$ \begin{array}{r} 30 \\ +15 \\ \hline \end{array} $	$ \begin{array}{r} 21 \\ +21 \\ \hline \end{array} $	$ \begin{array}{r} 7 \\ +42 \\ \hline \end{array} $	$ \begin{array}{r} 40 \\ +40 \\ \hline \end{array} $	$ \begin{array}{r} 56 \\ +41 \\ \hline \end{array} $	$ \begin{array}{r} 62 \\ +17 \\ \hline \end{array} $
6.	$ \begin{array}{r} 34 \\ +34 \\ \hline \end{array} $	$ \begin{array}{r} 60 \\ +13 \\ \hline \end{array} $	$ \begin{array}{r} 9 \\ +30 \\ \hline \end{array} $	$ \begin{array}{r} 4 \\ +3 \\ \hline \end{array} $	$ \begin{array}{r} 13 \\ + 6 \\ \hline \end{array} $	$ \begin{array}{r} 44 \\ +33 \\ \hline \end{array} $
7.	$ \begin{array}{r} 3 \\ +32 \\ \hline \end{array} $	$ \begin{array}{r} 5 \\ +10 \\ \hline \end{array} $	$ \begin{array}{r} 63 \\ +24 \\ \hline \end{array} $	$ \begin{array}{r} 71 \\ +20 \\ \hline \end{array} $	$ \begin{array}{r} 41 \\ + 8 \\ \hline \end{array} $	$ \begin{array}{r} 32 \\ +30 \\ \hline \end{array} $

Lesson 1.2 Subtracting 1- and 2-Digit Numbers

minuend	→	9	90
subtrahend	→	<u>-3</u>	<u>-30</u>
difference	→	6	60

If $9 - 3 = 6$, then $90 - 30 = 60$.

	Subtract the ones.	Subtract the tens.
$\begin{array}{r} 53 \\ -21 \\ \hline \end{array}$	$\begin{array}{r} 53 \\ -21 \\ \hline 2 \end{array}$	$\begin{array}{r} 53 \\ -21 \\ \hline 32 \end{array}$

Subtract.

	a	b	c	d	e	f
1.	$\begin{array}{r} 33 \\ -12 \\ \hline \end{array}$	$\begin{array}{r} 43 \\ -20 \\ \hline \end{array}$	$\begin{array}{r} 91 \\ -30 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 90 \\ -20 \\ \hline \end{array}$	$\begin{array}{r} 72 \\ -11 \\ \hline \end{array}$
2.	$\begin{array}{r} 88 \\ -24 \\ \hline \end{array}$	$\begin{array}{r} 59 \\ -38 \\ \hline \end{array}$	$\begin{array}{r} 43 \\ -31 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ -40 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ -17 \\ \hline \end{array}$	$\begin{array}{r} 72 \\ -62 \\ \hline \end{array}$
3.	$\begin{array}{r} 25 \\ -15 \\ \hline \end{array}$	$\begin{array}{r} 94 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 50 \\ -30 \\ \hline \end{array}$	$\begin{array}{r} 35 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ -10 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ -12 \\ \hline \end{array}$
4.	$\begin{array}{r} 53 \\ -40 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ -10 \\ \hline \end{array}$	$\begin{array}{r} 55 \\ -42 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ -2 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ -8 \\ \hline \end{array}$
5.	$\begin{array}{r} 49 \\ -18 \\ \hline \end{array}$	$\begin{array}{r} 74 \\ -3 \\ \hline \end{array}$	$\begin{array}{r} 59 \\ -27 \\ \hline \end{array}$	$\begin{array}{r} 68 \\ -7 \\ \hline \end{array}$	$\begin{array}{r} 93 \\ -22 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ -37 \\ \hline \end{array}$
6.	$\begin{array}{r} 79 \\ -35 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ -11 \\ \hline \end{array}$	$\begin{array}{r} 46 \\ -42 \\ \hline \end{array}$	$\begin{array}{r} 78 \\ -64 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ -4 \\ \hline \end{array}$	$\begin{array}{r} 87 \\ -35 \\ \hline \end{array}$
7.	$\begin{array}{r} 25 \\ -13 \\ \hline \end{array}$	$\begin{array}{r} 71 \\ -20 \\ \hline \end{array}$	$\begin{array}{r} 46 \\ -23 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ -41 \\ \hline \end{array}$	$\begin{array}{r} 85 \\ -63 \\ \hline \end{array}$	$\begin{array}{r} 99 \\ -77 \\ \hline \end{array}$

Lesson 1.3 Adding Three or More Numbers (single digit)

$$\begin{array}{r} 2 \\ 6 \\ +7 \\ \hline \end{array} \rightarrow \begin{array}{r} 8 \\ 7 \\ + \\ \hline 15 \end{array}$$

$$\begin{array}{r} 3 \\ 4 \\ 7 \\ +1 \\ \hline \end{array} \rightarrow \begin{array}{r} 7 \\ 7 \\ +1 \\ \hline \end{array} \rightarrow \begin{array}{r} 14 \\ 1 \\ + \\ \hline 15 \end{array}$$

Add.

	a	b	c	d	e	f	g	h
1.	$\begin{array}{r} 3 \\ 4 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 6 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ 5 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ 3 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ 7 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ 8 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 6 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 7 \\ +6 \\ \hline \end{array}$
2.	$\begin{array}{r} 4 \\ 6 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 5 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 5 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ 5 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ 7 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 8 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 6 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 3 \\ +7 \\ \hline \end{array}$
3.	$\begin{array}{r} 8 \\ 7 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ 3 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 8 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 8 \\ +6 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ 7 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 6 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 8 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ 7 \\ +9 \\ \hline \end{array}$
4.	$\begin{array}{r} 1 \\ 3 \\ 5 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 6 \\ 7 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 5 \\ 9 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 5 \\ 4 \\ +6 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 2 \\ 2 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 7 \\ 8 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ 4 \\ 5 \\ +6 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 4 \\ 6 \\ +8 \\ \hline \end{array}$
5.	$\begin{array}{r} 2 \\ 6 \\ 4 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 2 \\ 8 \\ +7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ 5 \\ 7 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 3 \\ 4 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ 5 \\ 4 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ 3 \\ 7 \\ +1 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ 4 \\ 8 \\ +9 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ 7 \\ 1 \\ +9 \\ \hline \end{array}$
6.	$\begin{array}{r} 9 \\ 1 \\ 7 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ 4 \\ 7 \\ +8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 5 \\ 7 \\ +4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ 3 \\ 6 \\ +5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ 3 \\ 9 \\ +2 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ 6 \\ 8 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ 3 \\ 7 \\ +3 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ 1 \\ 8 \\ +5 \\ \hline \end{array}$

Lesson 1.4 Adding through 2 Digits (with renaming)

Add the ones.

Add the tens.

$$\begin{array}{r} 52 \\ +29 \\ \hline \end{array}$$

2 + 9 = 11 or 10 + 1

$$\begin{array}{r} 1 \\ 52 \\ +29 \\ \hline 81 \end{array}$$

addend
addend
sum

Add.

	a	b	c	d	e	f
1.	$\begin{array}{r} 36 \\ +15 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ +18 \\ \hline \end{array}$	$\begin{array}{r} 57 \\ +23 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ +13 \\ \hline \end{array}$	$\begin{array}{r} 74 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ +27 \\ \hline \end{array}$

2.	$\begin{array}{r} 88 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ +17 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ +47 \\ \hline \end{array}$	$\begin{array}{r} 55 \\ +26 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ +15 \\ \hline \end{array}$	$\begin{array}{r} 51 \\ +19 \\ \hline \end{array}$
-----------	--	--	--	--	--	--

3.	$\begin{array}{r} 65 \\ +26 \\ \hline \end{array}$	$\begin{array}{r} 39 \\ +39 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ +25 \\ \hline \end{array}$	$\begin{array}{r} 45 \\ +45 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ +48 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ +16 \\ \hline \end{array}$
-----------	--	--	--	--	--	--

4.	$\begin{array}{r} 37 \\ +26 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ +48 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ +68 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ +22 \\ \hline \end{array}$	$\begin{array}{r} 37 \\ +17 \\ \hline \end{array}$	$\begin{array}{r} 72 \\ +18 \\ \hline \end{array}$
-----------	--	--	--	--	--	--

5.	$\begin{array}{r} 65 \\ +25 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ +48 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ +77 \\ \hline \end{array}$	$\begin{array}{r} 82 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 28 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ +32 \\ \hline \end{array}$
-----------	--	---	---	--	--	--

6.	$\begin{array}{r} 39 \\ +29 \\ \hline \end{array}$	$\begin{array}{r} 28 \\ +28 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 28 \\ +57 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ +14 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ +72 \\ \hline \end{array}$
-----------	--	--	--	--	--	---

7.	$\begin{array}{r} 75 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ +36 \\ \hline \end{array}$	$\begin{array}{r} 78 \\ +18 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ +19 \\ \hline \end{array}$	$\begin{array}{r} 43 \\ +17 \\ \hline \end{array}$
-----------	--	--	--	--	--	--

Lesson 1.5 Adding Three or More Numbers (2 digits)

Add the ones. Add the tens.

$\begin{array}{r} \text{addend} \longrightarrow 26 \\ \text{addend} \longrightarrow 38 \\ \text{addend} \longrightarrow +56 \\ \hline 6 + 8 + 6 = 20 \end{array}$	$\begin{array}{r} 2 \\ 26 \\ 38 \\ +56 \\ \hline 20 + 0 = 20 \end{array}$	$\begin{array}{r} 2 \\ 26 \\ 38 \\ +56 \\ \hline 120 \\ \text{sum} \end{array}$
$20 + 20 + 30 + 50 = 120 \quad 120 = 100 + 20$		

Add.

	a	b	c	d	e	f
1.	$\begin{array}{r} 27 \\ 32 \\ +43 \\ \hline \end{array}$	$\begin{array}{r} 39 \\ 48 \\ +76 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ 68 \\ +78 \\ \hline \end{array}$	$\begin{array}{r} 97 \\ 85 \\ +63 \\ \hline \end{array}$	$\begin{array}{r} 45 \\ 74 \\ +48 \\ \hline \end{array}$	$\begin{array}{r} 97 \\ 23 \\ +19 \\ \hline \end{array}$
2.	$\begin{array}{r} 77 \\ 99 \\ +32 \\ \hline \end{array}$	$\begin{array}{r} 81 \\ 19 \\ +38 \\ \hline \end{array}$	$\begin{array}{r} 53 \\ 78 \\ +89 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ 69 \\ +78 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ 57 \\ +75 \\ \hline \end{array}$	$\begin{array}{r} 92 \\ 89 \\ +95 \\ \hline \end{array}$
3.	$\begin{array}{r} 37 \\ 29 \\ +49 \\ \hline \end{array}$	$\begin{array}{r} 87 \\ 78 \\ +95 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ 49 \\ +57 \\ \hline \end{array}$	$\begin{array}{r} 42 \\ 28 \\ +66 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ 65 \\ +77 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ 37 \\ +49 \\ \hline \end{array}$
4.	$\begin{array}{r} 35 \\ 73 \\ 57 \\ +66 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ 28 \\ 40 \\ +66 \\ \hline \end{array}$	$\begin{array}{r} 88 \\ 22 \\ 38 \\ +82 \\ \hline \end{array}$	$\begin{array}{r} 75 \\ 24 \\ 93 \\ +51 \\ \hline \end{array}$	$\begin{array}{r} 29 \\ 93 \\ 37 \\ +55 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ 62 \\ 45 \\ +38 \\ \hline \end{array}$
5.	$\begin{array}{r} 51 \\ 71 \\ 89 \\ +99 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ 18 \\ 39 \\ +47 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ 45 \\ 83 \\ +97 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ 58 \\ 74 \\ +63 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ 39 \\ 57 \\ +89 \\ \hline \end{array}$	$\begin{array}{r} 57 \\ 33 \\ 71 \\ +66 \\ \hline \end{array}$
6.	$\begin{array}{r} 39 \\ 29 \\ 58 \\ +78 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ 25 \\ 77 \\ +89 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ 53 \\ 68 \\ +74 \\ \hline \end{array}$	$\begin{array}{r} 27 \\ 48 \\ 31 \\ +97 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ 17 \\ 39 \\ +45 \\ \hline \end{array}$	$\begin{array}{r} 39 \\ 49 \\ 66 \\ +77 \\ \hline \end{array}$

Lesson 1.6 Subtracting 2 Digits from 3 Digits (renaming)

To subtract the ones, rename 5 tens and 3 ones as "4 tens and 13 ones."

Subtract the ones.

Subtract the tens.

Subtract the hundreds.

$$\begin{array}{r} \text{minuend} \rightarrow 153 \\ \text{subtrahend} \rightarrow - 37 \\ \hline \text{difference} \rightarrow \end{array}$$

$$\begin{array}{r} ^4 ^{13} \\ 1\cancel{5}\cancel{3} \\ - 37 \\ \hline \end{array}$$

$$\begin{array}{r} ^4 ^{13} \\ 1\cancel{5}\cancel{3} \\ - 37 \\ \hline 6 \end{array}$$

$$\begin{array}{r} ^4 ^{13} \\ 1\cancel{5}\cancel{3} \\ - 37 \\ \hline 16 \end{array}$$

$$\begin{array}{r} ^4 ^{13} \\ 1\cancel{5}\cancel{3} \\ - 37 \\ \hline 116 \end{array}$$

Subtract.

- | | a | b | c | d | e | f |
|-----------|--|--|--|--|--|--|
| 1. | $\begin{array}{r} 175 \\ - 38 \\ \hline \end{array}$ | $\begin{array}{r} 132 \\ - 17 \\ \hline \end{array}$ | $\begin{array}{r} 175 \\ - 56 \\ \hline \end{array}$ | $\begin{array}{r} 134 \\ - 29 \\ \hline \end{array}$ | $\begin{array}{r} 144 \\ - 28 \\ \hline \end{array}$ | $\begin{array}{r} 156 \\ - 38 \\ \hline \end{array}$ |
| 2. | $\begin{array}{r} 182 \\ - 73 \\ \hline \end{array}$ | $\begin{array}{r} 177 \\ - 59 \\ \hline \end{array}$ | $\begin{array}{r} 123 \\ - 18 \\ \hline \end{array}$ | $\begin{array}{r} 141 \\ - 33 \\ \hline \end{array}$ | $\begin{array}{r} 173 \\ - 54 \\ \hline \end{array}$ | $\begin{array}{r} 182 \\ - 48 \\ \hline \end{array}$ |
| 3. | $\begin{array}{r} 141 \\ - 29 \\ \hline \end{array}$ | $\begin{array}{r} 193 \\ - 47 \\ \hline \end{array}$ | $\begin{array}{r} 165 \\ - 46 \\ \hline \end{array}$ | $\begin{array}{r} 152 \\ - 37 \\ \hline \end{array}$ | $\begin{array}{r} 172 \\ - 29 \\ \hline \end{array}$ | $\begin{array}{r} 161 \\ - 27 \\ \hline \end{array}$ |
| 4. | $\begin{array}{r} 183 \\ - 68 \\ \hline \end{array}$ | $\begin{array}{r} 127 \\ - 18 \\ \hline \end{array}$ | $\begin{array}{r} 134 \\ - 19 \\ \hline \end{array}$ | $\begin{array}{r} 172 \\ - 57 \\ \hline \end{array}$ | $\begin{array}{r} 124 \\ - 17 \\ \hline \end{array}$ | $\begin{array}{r} 153 \\ - 37 \\ \hline \end{array}$ |
| 5. | $\begin{array}{r} 171 \\ - 39 \\ \hline \end{array}$ | $\begin{array}{r} 146 \\ - 27 \\ \hline \end{array}$ | $\begin{array}{r} 183 \\ - 68 \\ \hline \end{array}$ | $\begin{array}{r} 191 \\ - 72 \\ \hline \end{array}$ | $\begin{array}{r} 173 \\ - 47 \\ \hline \end{array}$ | $\begin{array}{r} 157 \\ - 38 \\ \hline \end{array}$ |
| 6. | $\begin{array}{r} 128 \\ - 19 \\ \hline \end{array}$ | $\begin{array}{r} 172 \\ - 36 \\ \hline \end{array}$ | $\begin{array}{r} 156 \\ - 29 \\ \hline \end{array}$ | $\begin{array}{r} 177 \\ - 39 \\ \hline \end{array}$ | $\begin{array}{r} 152 \\ - 19 \\ \hline \end{array}$ | $\begin{array}{r} 174 \\ - 38 \\ \hline \end{array}$ |
| 7. | $\begin{array}{r} 145 \\ - 26 \\ \hline \end{array}$ | $\begin{array}{r} 161 \\ - 33 \\ \hline \end{array}$ | $\begin{array}{r} 173 \\ - 37 \\ \hline \end{array}$ | $\begin{array}{r} 127 \\ - 18 \\ \hline \end{array}$ | $\begin{array}{r} 153 \\ - 28 \\ \hline \end{array}$ | $\begin{array}{r} 191 \\ - 73 \\ \hline \end{array}$ |

Lesson 1.6 Subtracting 2 Digits from 3 Digits (renaming)

Rename 515 as
"5 hundreds, 0
tens, and 15 ones."
Subtract the ones.

$$\begin{array}{r} 515 \\ - 27 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ 5\cancel{1}\cancel{5} \\ - 27 \\ \hline 8 \end{array}$$

Then, rename
"4 hundreds, 10
tens, and 15 ones."
Subtract the tens.

$$\begin{array}{r} 41015 \\ 5\cancel{1}\cancel{5} \\ - 27 \\ \hline 88 \end{array}$$

Subtract
the
hundreds.

$$\begin{array}{r} 41015 \\ 5\cancel{1}\cancel{5} \leftarrow \text{minuend} \\ - 27 \leftarrow \text{subtrahend} \\ \hline 488 \leftarrow \text{difference} \end{array}$$

Subtract.

	a	b	c	d	e	f
1.	$\begin{array}{r} 138 \\ - 59 \\ \hline \end{array}$	$\begin{array}{r} 162 \\ - 79 \\ \hline \end{array}$	$\begin{array}{r} 155 \\ - 66 \\ \hline \end{array}$	$\begin{array}{r} 128 \\ - 59 \\ \hline \end{array}$	$\begin{array}{r} 147 \\ - 58 \\ \hline \end{array}$	$\begin{array}{r} 174 \\ - 85 \\ \hline \end{array}$

2.	$\begin{array}{r} 131 \\ - 49 \\ \hline \end{array}$	$\begin{array}{r} 153 \\ - 67 \\ \hline \end{array}$	$\begin{array}{r} 167 \\ - 79 \\ \hline \end{array}$	$\begin{array}{r} 144 \\ - 58 \\ \hline \end{array}$	$\begin{array}{r} 172 \\ - 89 \\ \hline \end{array}$	$\begin{array}{r} 125 \\ - 38 \\ \hline \end{array}$
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3.	$\begin{array}{r} 114 \\ - 37 \\ \hline \end{array}$	$\begin{array}{r} 134 \\ - 56 \\ \hline \end{array}$	$\begin{array}{r} 181 \\ - 92 \\ \hline \end{array}$	$\begin{array}{r} 133 \\ - 44 \\ \hline \end{array}$	$\begin{array}{r} 127 \\ - 49 \\ \hline \end{array}$	$\begin{array}{r} 174 \\ - 88 \\ \hline \end{array}$
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4.	$\begin{array}{r} 122 \\ - 88 \\ \hline \end{array}$	$\begin{array}{r} 154 \\ - 77 \\ \hline \end{array}$	$\begin{array}{r} 161 \\ - 94 \\ \hline \end{array}$	$\begin{array}{r} 166 \\ - 87 \\ \hline \end{array}$	$\begin{array}{r} 127 \\ - 58 \\ \hline \end{array}$	$\begin{array}{r} 172 \\ - 99 \\ \hline \end{array}$
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5.	$\begin{array}{r} 177 \\ - 88 \\ \hline \end{array}$	$\begin{array}{r} 123 \\ - 45 \\ \hline \end{array}$	$\begin{array}{r} 147 \\ - 68 \\ \hline \end{array}$	$\begin{array}{r} 181 \\ - 95 \\ \hline \end{array}$	$\begin{array}{r} 175 \\ - 89 \\ \hline \end{array}$	$\begin{array}{r} 141 \\ - 83 \\ \hline \end{array}$
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6.	$\begin{array}{r} 185 \\ - 97 \\ \hline \end{array}$	$\begin{array}{r} 173 \\ - 87 \\ \hline \end{array}$	$\begin{array}{r} 142 \\ - 84 \\ \hline \end{array}$	$\begin{array}{r} 177 \\ - 98 \\ \hline \end{array}$	$\begin{array}{r} 136 \\ - 49 \\ \hline \end{array}$	$\begin{array}{r} 123 \\ - 77 \\ \hline \end{array}$
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7.	$\begin{array}{r} 127 \\ - 58 \\ \hline \end{array}$	$\begin{array}{r} 126 \\ - 78 \\ \hline \end{array}$	$\begin{array}{r} 166 \\ - 89 \\ \hline \end{array}$	$\begin{array}{r} 137 \\ - 88 \\ \hline \end{array}$	$\begin{array}{r} 153 \\ - 84 \\ \hline \end{array}$	$\begin{array}{r} 175 \\ - 97 \\ \hline \end{array}$
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Lesson 1.7 Thinking Subtraction for Addition

These numbers should be the same.

$$\begin{array}{r}
 55 \\
 +43 \\
 \hline
 98 \\
 -43 \\
 \hline
 55
 \end{array}$$

To check

$$\begin{array}{l}
 55 + 43 = 98, \\
 \text{subtract 43 from 98.}
 \end{array}$$

Add. Then, check your answer.

	a	b	c	d	e	f
1.	$ \begin{array}{r} 32 \\ +47 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 63 \\ +19 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 38 \\ +24 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 52 \\ +47 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 28 \\ +15 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 75 \\ +15 \\ \hline \\ \hline \end{array} $
2.	$ \begin{array}{r} 48 \\ +27 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 82 \\ +10 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 56 \\ +38 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 44 \\ +27 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 28 \\ +27 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 39 \\ +32 \\ \hline \\ \hline \end{array} $
3.	$ \begin{array}{r} 31 \\ +59 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 43 \\ +18 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 61 \\ +29 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 125 \\ + 17 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 155 \\ + 38 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 205 \\ + 69 \\ \hline \\ \hline \end{array} $
4.	$ \begin{array}{r} 199 \\ + 14 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 128 \\ + 33 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 125 \\ + 50 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 109 \\ + 32 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 155 \\ + 27 \\ \hline \\ \hline \end{array} $	$ \begin{array}{r} 137 \\ + 29 \\ \hline \\ \hline \end{array} $

Lesson 1.8 Thinking Addition for Subtraction

These numbers should be the same.

$$\begin{array}{r}
 138 \\
 - 24 \\
 \hline
 114 \\
 + 24 \\
 \hline
 138
 \end{array}$$

To check

$$\begin{array}{l}
 138 - 24 = 114, \\
 \text{add } 24 \text{ to } 114.
 \end{array}$$

Subtract. Then, check your answer.

	a	b	c	d	e	f	
1.	$ \begin{array}{r} 88 \\ -45 \\ \hline \end{array} $	$ \begin{array}{r} 23 \\ -19 \\ \hline \end{array} $	$ \begin{array}{r} 47 \\ -28 \\ \hline \end{array} $	$ \begin{array}{r} 95 \\ -38 \\ \hline \end{array} $	$ \begin{array}{r} 74 \\ -27 \\ \hline \end{array} $	$ \begin{array}{r} 98 \\ -73 \\ \hline \end{array} $	
	+	+	+	+	+	+	
2.	$ \begin{array}{r} 38 \\ -17 \\ \hline \end{array} $	$ \begin{array}{r} 68 \\ -27 \\ \hline \end{array} $	$ \begin{array}{r} 54 \\ -36 \\ \hline \end{array} $	$ \begin{array}{r} 49 \\ -32 \\ \hline \end{array} $	$ \begin{array}{r} 29 \\ -10 \\ \hline \end{array} $	$ \begin{array}{r} 78 \\ -39 \\ \hline \end{array} $	
	+	+	+	+	+	+	
3.	$ \begin{array}{r} 155 \\ - 28 \\ \hline \end{array} $	$ \begin{array}{r} 132 \\ - 38 \\ \hline \end{array} $	$ \begin{array}{r} 179 \\ - 82 \\ \hline \end{array} $	$ \begin{array}{r} 127 \\ - 89 \\ \hline \end{array} $	$ \begin{array}{r} 141 \\ - 62 \\ \hline \end{array} $	$ \begin{array}{r} 137 \\ - 52 \\ \hline \end{array} $	
	+	+	+	+	+	+	
4.	$ \begin{array}{r} 187 \\ - 99 \\ \hline \end{array} $	$ \begin{array}{r} 119 \\ - 20 \\ \hline \end{array} $	$ \begin{array}{r} 192 \\ - 73 \\ \hline \end{array} $	$ \begin{array}{r} 108 \\ - 39 \\ \hline \end{array} $	$ \begin{array}{r} 188 \\ - 90 \\ \hline \end{array} $	$ \begin{array}{r} 164 \\ - 78 \\ \hline \end{array} $	
	+	+	+	+	+	+	