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# Adding Whole Numbers and Money • Subtracting Whole Numbers and Money • Fact Families, Part 1

## WARM-UP†

**Facts Practice:** 64 Addition Facts (Test A)

**Mental Math:** Count by 10's from 10 to 100 and from 100 to 0.  
Count by 100's from 100 to 1000 and from 1000 to 0.

a.  $30 + 30$

b.  $300 + 300$

c.  $80 + 40$

d.  $800 + 400$

e.  $20 + 30 + 40$

f.  $200 + 300 + 400$

**Problem Solving:**

Sam thought of a number between ten and twenty. Then he gave a clue: You say the number when you count by twos and when you count by threes, but not when you count by fours. Of what number was Sam thinking?

## NEW CONCEPTS

**Adding whole numbers and money**

To combine two or more numbers, we add. The numbers that are added together are called **addends**. The answer is called the **sum**. Changing the order of the addends does not change the sum. For example,

$$3 + 5 = 5 + 3$$

This property of addition is called the **commutative property**. When adding numbers, we add digits that have the same place value.

**Example 1** Add:  $345 + 67$

**Solution**

When we add whole numbers on paper, we write the numbers so that the place values are aligned. Then we add the digits by column.

Changing the order of the addends does not change the sum. One way to check an addition answer is to change the order of the addends and add again.

$$\begin{array}{r} 345 \text{ addend} \\ + 67 \text{ addend} \\ \hline 412 \text{ sum} \end{array}$$

$$\begin{array}{r} 67 \\ + 345 \\ \hline 412 \text{ check} \end{array}$$

†For instructions on how to use the Warm-up, please consult the preface.

**Example 2** Add:  $\$1.25 + \$12.50 + \$5$

**Solution** When we add money, we write the numbers so that the decimal points are aligned. We write \$5 as \$5.00 and add the digits in each column.

$$\begin{array}{r} \$1.25 \\ \$12.50 \\ + \$5.00 \\ \hline \$18.75 \end{array}$$

If one of two addends is zero, the sum of the addends is identical to the nonzero addend. This property of addition is called the **identity property of addition**.

$$5 + 0 = 5$$

### Subtracting whole numbers and money

We subtract one number from another number to find the **difference** between the two numbers. In a subtraction problem, the **subtrahend** is taken from the **minuend**.

$$5 - 3 = 2$$

In the problem above, 5 is the minuend and 3 is the subtrahend. The difference between 5 and 3 is 2.

The commutative property does not apply to subtraction; for example,  $2 - 4$  does not equal  $4 - 2$ .

**Example 3** Subtract:  $345 - 67$

**Solution** When we subtract whole numbers, we align the digits by place value. We subtract the bottom number from the top number and regroup when necessary.

$$\begin{array}{r} \overset{2}{3} \overset{13}{4} \overset{1}{5} \\ - \quad 67 \\ \hline 278 \end{array}$$

difference ↗

**Example 4** Jim spent \$1.25 for a hamburger. He paid for it with a five-dollar bill. Find how much change he should get back by subtracting \$1.25 from \$5.

**Solution** Order matters when we subtract. The starting amount is put on top. We write \$5 as \$5.00. We line up the decimal points to align the place values. Then we subtract. Jim should get back \$3.75.

$$\begin{array}{r} \overset{4}{\$} \overset{9}{5} \overset{1}{0} \\ - \$1.25 \\ \hline \$3.75 \end{array}$$

We can check the answer to a subtraction problem by adding. If we add the answer (difference) to the amount subtracted, the total should equal the starting amount. We do not need to



rewrite the problem. We just add the two bottom numbers to see whether their sum equals the top number.

<b>SUBTRACT DOWN</b> To find the difference	$\downarrow$	$\begin{array}{r} \$5.00 \\ - \$1.25 \\ \hline \$3.75 \end{array}$	$\uparrow$	<b>ADD UP</b> To check the answer
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**Fact families, part 1** Addition and subtraction are called **inverse operations**. We can “undo” an addition by subtracting one addend from the sum. The three numbers that form an addition fact also form a subtraction fact. For example,

$$4 + 5 = 9 \quad 9 - 5 = 4$$

The numbers 4, 5, and 9 are a **fact family**. They can be arranged to form the two addition facts and two subtraction facts shown below.

$\begin{array}{r} 4 \\ + 5 \\ \hline 9 \end{array}$	$\begin{array}{r} 5 \\ + 4 \\ \hline 9 \end{array}$	$\begin{array}{r} 9 \\ - 5 \\ \hline 4 \end{array}$	$\begin{array}{r} 9 \\ - 4 \\ \hline 5 \end{array}$
---	---	---	---

**Example 5** Rearrange the numbers in this addition fact to form another addition fact and two subtraction facts.

$$11 + 14 = 25$$

**Solution** We form another addition fact by reversing the addends.

$$14 + 11 = 25$$

We form two subtraction facts by making the sum, 25, the first number of each subtraction fact. Then each remaining number is subtracted from 25.

$$25 - 11 = 14$$

$$25 - 14 = 11$$

**Example 6** Rearrange the numbers in this subtraction fact to form another subtraction fact and two addition facts.

$$\begin{array}{r} 11 \\ - 6 \\ \hline 5 \end{array}$$

**Solution** The commutative property does not apply to subtraction, so we may not reverse the first two numbers of a subtraction problem. However, we may reverse the last two numbers.

$$\begin{array}{r} 11 \\ - 6 \\ \hline 5 \end{array} \quad \begin{array}{r} 11 \\ - 5 \\ \hline 6 \end{array}$$

For the two addition facts, 11 is the sum.

$$\begin{array}{r} 5 \\ + 6 \\ \hline 11 \end{array} \quad \begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$$

## LESSON PRACTICE

---

**Practice set** Simplify:

- $3675 + 426 + 1357$
- $\$6.25 + \$8.23 + \$12$
- $5374 - 168$
- $\$5 - \$1.35$
- Arrange the numbers 6, 8, and 14 to form two addition facts and two subtraction facts.
- Rearrange the numbers in this subtraction fact to form another subtraction fact and two addition facts.

$$25 - 10 = 15$$

## MIXED PRACTICE

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- Problem set**
- What is the sum of 25 and 40?
  - Johnny had 137 apple seeds in one pocket and 89 in another. He found 9 more seeds in his cuff. Find how many seeds he had in all by adding 137, 89, and 9.
  - What is the difference when 93 is subtracted from 387?
  - Keisha paid \$5 for a movie ticket that cost \$3.75. Find how much change Keisha should get back by subtracting \$3.75 from \$5.
  - Tatiana had \$5.22 and earned \$1.15 more. Find how much money Tatiana had in all by adding \$1.15 to \$5.22.

6. The hamburger cost \$1.25, the fries cost \$0.70, and the drink cost \$0.60. To find the total price of the lunch, add \$1.25, \$0.70, and \$0.60.

7.	63	8.	632	9.	78	10.	432
	47		57		9		579
	<u>+ 50</u>		<u>+ 198</u>		<u>+ 967</u>		<u>+ 3604</u>

11.  $345 - 67$

12.  $678 - 416$

13.  $3764 - 96$

14.  $875 + 1086 + 980$

15.  $10 + 156 + 8 + 27$

16.	\$3.47	17.	\$24.15	18.	\$0.75	19.	\$0.12
	<u>- \$0.92</u>		<u>- \$1.45</u>		<u>+ \$0.75</u>		\$0.46
							<u>+ \$0.50</u>

20. What is the name for the answer when we add?

21. What is the name for the answer when we subtract?

22. The numbers 5, 6, and 11 are a fact family. Form two addition facts and two subtraction facts with these three numbers.

23. Rearrange the numbers in this addition fact to form another addition fact and two subtraction facts.

$$27 + 16 = 43$$

24. Rearrange the numbers in this subtraction fact to form another subtraction fact and two addition facts.

$$50 - 21 = 29$$

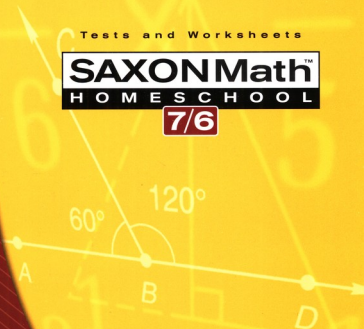
25. Describe a way to check the correctness of a subtraction answer.

Tests and Worksheets

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## A

### 64 Addition Facts

For use with Lesson 1

Name \_\_\_\_\_

Time \_\_\_\_\_

Add.

$\begin{array}{r} 7 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 7 \\ \hline \end{array}$
$\begin{array}{r} 9 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$
$\begin{array}{r} 6 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 9 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$
$\begin{array}{r} 3 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 8 \\ \hline \end{array}$
$\begin{array}{r} 4 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 8 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 9 \\ \hline \end{array}$
$\begin{array}{r} 7 \\ + 4 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 3 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 7 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ + 7 \\ \hline \end{array}$

### Instructions

**Step 1:** Carefully cut out each piece on both pages. Label the back of each piece with its corresponding letter label.

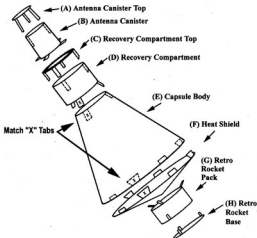
**Step 2:** Glue (B), (D), (E), and (G) in a loop as instructed on each piece. Carefully cut (F) along the dashed line and glue as indicated.

**Step 3:** Attach (A) to (B) by folding the tabs on (A) down and gluing them to (B). Attach (C) to (D) and (H) to (G) in the same manner.

**Step 4:** Attach (G) to (F) by folding out the black tabs on (G) and gluing them to (F). Attach (B) to (C) in the same manner. The tabs on (B) should line up with the white rectangles on (C).

**Step 5:** Locate the tab labeled "X" on (D). Glue this tab to the corresponding rectangle labeled "X" on (E). Then glue the rest of the tabs on (D) to (E). Attach (F) to (E) in the same manner.

### Assembly Diagram



(A) Antenna Canister Top



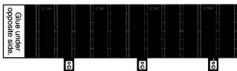
(B) Antenna Canister



(C) Recovery Compartment Top



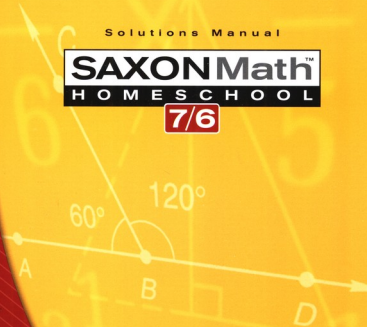
(D) Recovery Compartment



Solutions Manual

**SAXON** Math™  
HOMESCHOOL

**7/6**



Hake  
Saxon

## Solutions Manual



Stephen Hake  
John Saxon

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## LESSON 1, WARM-UP

- a. 60  
b. 600  
c. 120  
d. 1200  
e. 90  
f. 900

## Problem Solving

2's: 10, 12, 14, 16, 18, 20

3's: 12, 15, 18

4's: 12, 16, 20

18

## LESSON 1, LESSON PRACTICE

$$\begin{array}{r} \text{a.} \quad \begin{array}{r} 111 \\ 3675 \\ 426 \\ + 1357 \\ \hline 5458 \end{array} \end{array}$$

$$\begin{array}{r} \text{b.} \quad \begin{array}{r} \$6.25 \\ \$8.23 \\ + \$12.00 \\ \hline \$26.48 \end{array} \end{array}$$

$$\begin{array}{r} \text{c.} \quad \begin{array}{r} 537^6 4 \\ - 168 \\ \hline 5206 \end{array} \end{array}$$

$$\begin{array}{r} \text{d.} \quad \begin{array}{r} \$8.8^9 0 \\ - \$1.35 \\ \hline \$3.65 \end{array} \end{array}$$

$$\begin{array}{r} \text{e.} \quad \begin{array}{r} 6 \quad 8 \quad 14 \quad 14 \\ + 8 \quad + 6 \quad - 6 \quad - 8 \\ \hline 14 \quad 14 \quad 8 \quad 6 \end{array} \end{array}$$

$$\begin{array}{l} \text{f.} \quad 25 - 15 = 10 \\ 10 + 15 = 25 \\ 15 + 10 = 25 \end{array}$$

## LESSON 1, MIXED PRACTICE

$$\begin{array}{r} 1. \quad \begin{array}{r} 25 \\ + 40 \\ \hline 65 \end{array} \end{array}$$

$$\begin{array}{r} 2. \quad \begin{array}{r} 12 \\ 137 \\ 89 \\ + 9 \\ \hline 235 \text{ seeds} \end{array} \end{array}$$

$$\begin{array}{r} 3. \quad \begin{array}{r} 2 \\ 8^8 7 \\ - 93 \\ \hline 294 \end{array} \end{array}$$

$$\begin{array}{r} 4. \quad \begin{array}{r} 4 \quad 9 \\ \$8.8^9 0 \\ - \$3.75 \\ \hline \$1.25 \end{array} \end{array}$$

$$\begin{array}{r} 5. \quad \begin{array}{r} \$1.15 \\ + \$5.22 \\ \hline \$6.37 \end{array} \end{array}$$

$$\begin{array}{r} 6. \quad \begin{array}{r} 1 \\ \$1.25 \\ \$0.70 \\ + \$0.60 \\ \hline \$2.55 \end{array} \end{array}$$

$$\begin{array}{r} 7. \quad \begin{array}{r} 1 \\ 63 \\ 47 \\ + 50 \\ \hline 160 \end{array} \end{array}$$

$$\begin{array}{r} 8. \quad \begin{array}{r} 11 \\ 632 \\ 57 \\ + 198 \\ \hline 887 \end{array} \end{array}$$

$$\begin{array}{r} 9. \quad \begin{array}{r} 2 \\ 78 \\ 9 \\ + 967 \\ \hline 1054 \end{array} \end{array}$$

$$\begin{array}{r} 10. \quad \begin{array}{r} 11 \\ 432 \\ 1579 \\ + 3604 \\ \hline 4615 \end{array} \end{array}$$

$$\begin{array}{r} 11. \quad \begin{array}{r} 8 \overline{) 67} \\ - 56 \\ \hline 11 \end{array} \end{array}$$

$$\begin{array}{r} 12. \quad \begin{array}{r} 678 \\ - 416 \\ \hline 262 \end{array} \end{array}$$

$$\begin{array}{r} 13. \quad \begin{array}{r} 37 \overline{) 141} \\ - 111 \\ \hline 30 \end{array} \end{array}$$

$$\begin{array}{r} 14. \quad \begin{array}{r} 875 \\ + 1086 \\ \hline 1961 \end{array} \end{array}$$

$$\begin{array}{r} 15. \quad \begin{array}{r} 10 \\ + 156 \\ \hline 166 \end{array} \end{array}$$

$$\begin{array}{r} 16. \quad \begin{array}{r} \$3.47 \\ - \$0.92 \\ \hline \$2.55 \end{array} \end{array}$$

$$\begin{array}{r} 17. \quad \begin{array}{r} \$24.15 \\ - \$1.45 \\ \hline \$22.70 \end{array} \end{array}$$

$$\begin{array}{r} 18. \quad \begin{array}{r} \$0.75 \\ + \$0.75 \\ \hline \$1.50 \end{array} \end{array}$$

$$\begin{array}{r} 19. \quad \begin{array}{r} \$0.12 \\ + \$0.50 \\ \hline \$0.62 \end{array} \end{array}$$

20. Sum

21. Difference

$$\begin{array}{r} 22. \quad \begin{array}{r} 5 \\ + 6 \\ \hline 11 \end{array} \quad \begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array} \quad \begin{array}{r} 11 \\ - 6 \\ \hline 5 \end{array} \quad \begin{array}{r} 11 \\ - 5 \\ \hline 6 \end{array} \end{array}$$

$$23. \quad 16 + 27 = 43$$

$$43 - 16 = 27$$

$$43 - 27 = 16$$

$$24. \quad 50 - 29 = 21$$

$$29 + 21 = 50$$

$$21 + 29 = 50$$

25. One way to check is to add the answer (difference) to the amount subtracted. The total should equal the starting amount.

## LESSON 2, WARM-UP

a. 540

b. 260

c. 270

d. 770

e. 480

f. 480

Problem Solving

$$1 + 2 + 3 + 4 + 5 = 15 \text{ coins}$$

$$1 + 2 + 3 + 4 + 5 + 6 = 21 \text{ coins}$$

## LESSON 2, LESSON PRACTICE

$$\begin{array}{r} a. \quad \begin{array}{r} 37 \\ \times 20 \\ \hline 740 \end{array} \text{ or } \$7.40 \end{array}$$

$$\begin{array}{r} b. \quad \begin{array}{r} 37 \\ \times 0 \\ \hline 0 \end{array} \end{array}$$

$$\begin{array}{r} c. \quad \begin{array}{r} 407 \\ \times 37 \\ \hline 2849 \\ 12210 \\ \hline 15089 \end{array} \end{array}$$