GRADE 4

UNIT 1

Lesson 3

Addition and Subtraction of Whole Numbers

In this lesson you will learn when to use addition and when to use subtraction. Very often when we have a word problem it may not be clear which operation to use. In this lesson you will be guided through many word problems to help you to develop your ability to determine when to add and when to subtract.

However, before we start adding and subtracting or trying to solve word problems, we should learn **estimation**. For example, if we are asked to add, 59+31, we could use estimation to arrive at an answer that is close to the actual sum.

Example 1 Add: 59+31.

59 → 60 (59 is rounded to 60 because it is the nearest convenient number to add)
+31 → 30 (31 is rounded to 30 for the same reason)
90 → 90

By estimation we were able to quickly obtain the sum. The answers may not always be the same as in this case, but it is usually very close.

Example 2 Subtract: 103−78.

102 → 100 (102 is rounded to 100)
− 79 → 80 (79 is rounded to 80)
23 → 20 The actual difference is 23 and estimated difference is 20.

Independent Work

Use estimation to find the sum

(1) 88+41

(A) 120

(B) 129

(C) 130

(D) 128

(2) 111+22

(A) 130

(B) 133

(C) 132

(D) 131

(3) 208+131

(A) 339

(B) 338

(C) 341

(D) 340

Use estimation to find the difference

(4) 99−41

(A) 58

(B) 60

(C) 59

(D) 50

(5) 117−68

(A) 50

(B) 52

(C) 49

(D) 47

(6) 237−159

(A) 78

(B) 77

(C) 81

(D) 80

Answer: (1) C; (2) A; (3) D; (4) B; (5) A; (6) D.

Word problems

Example 3

There are 20 children in Tommy's class. This morning 12 of them came early, 6 were late, and 2 were absent. How many children were in the class today?

Steps to solve the problem

1. First determine what the question asks, "How many students were in the class today?"

2. We are not concerned with the number of children in the class, 20, or those who are absent, 2.

3. We must add the number of children who came in early, 12, and the number of those who came in late, 6.

4. 12+6 = 18.

Another method to solve this problem is to subtract the number of students who are absent, 2, from the total number of students in the class, 20. 20 −2 = 18.

Answer to the problem is 18.

Example 4

Janie is 6 years old. Her sister Ally is 2 years older. Their brother Ray is 4 years older than Ally. How old is Ray?

Steps to solve the problem

1. Janie is 6 years old
2. Ally is 2 years older. 6+2 = 8
3. Ally is 8 years old
4. Ray is 4 years older than Ally. 8+4 = 12
5. Ray is 12 years old

Answer to the problem is 12.

Example 5

Natasha must read a book with 89 pages. She has already read 57 pages. How many more pages does she have to read?

Steps to solve the problem

1. Natasha must read 89 pages
2. She has read 57
3. Find the difference between 89 and 57 (89−57 = 32)
4. She has 32 more pages to read

Answer to the problem is 32.

Independent Work

(1) The school play was on for three evenings. Tyrell sold 18 tickets for the first evening, 21 tickets for the second evening, and 17 tickets for the third evening. How many tickets in all did he sell for the concert?

(A) 46

(B) 38

(C) 17

(D) 56

(2) The third-grade class had 13 girls and 12 boys. The fourth-grade class had 15 girls and 11 boys. How many children were there in both classes?

(A) 25

(B) 51

(C) 26

(D) 23

(3) Daquan had some baseball cards. He gave 23 to his friend, now he has 32. How many cards did he have originally?

(A) 55

(B) 23

(C) 32

(D) 9

(4) Teresa had some money in her purse. Her father gave her $11 more, she now has $27. How much money did she have to begin with?

(A) $27

(B) $16

(C) $38

(D) $11

(5) Timmy had 26 stickers. His friend gave him some more and now he has 39 stickers. How many stickers did his friend give him?

(A) 13

(B) 26

(C) 39

(D) 65

Answers: (1) D; (2) B; (3) A; (4) B; (5) A.

Lesson 3 Quiz

In problems 1-5, use estimation to find the sum or difference.

(1) 48+33

(A) 80

(B) 48

(C) 83

(D) 33

(2) 72+27

(A) 72

(B) 27

(C) 100

(D) 97

(3) 69+33

(A) 33

(B) 103

(C) 69

(D) 100

(4) 82−49

(A) 32

(B) 30

(C) 49

(D) 82

(5) 97−42

(A) 42

(B) 58

(C) 97

(D) 60

(6) Add: 69+21

(A) 21

(B) 80

(C) 69

(D) 90

(7) Add: 56+37

(A) 93

(B) 37

(C) 83

(D) 56

(8) Subtract: 53-28

(A) 53

(B) 28

(C) 25

(D) 35

(9) Ray is 9 years old. His sister is 5 years older than him. What is the sum of their ages?

(A) 14

(B) 23

(C) 4

(D) 9

(10) Karl went to the mall with $79. After purchasing a few items, he went home and counted how much money he had left. He found that he had $17 left. How much money did he spend at the mall?

(A) 96

(B) 79

(C) 62

(D) 17

Answers: (1) A; (2) C; (3) D; (4) B; (5) D; (6) D; (7) A; (8) C; (9) B; (10) C.