

# GRADE 4

## UNIT 1

### Lesson 2

#### Place Value

In this lesson you will learn about **place value**. Place value is best understood by using what is sometimes referred to as a **place value chart**. Below is an example of how we could read the number **5,746,304** by using a place value chart. From the chart we can see that the number represents **5 million, 7 hundred thousand, 4 ten thousand, 6 thousand, 3 hundred, zero tens, 4 ones**. This could also be written differently as, **5,000,000 + 700,000 + 40,000 + 6,000 + 300 + 4**. This is called the expanded form of writing the number. Another way of writing numbers is in word form. For example, the number in the chart would be written as: **five million, seven hundred forty-six thousand, three hundred four**.

PLACE VALUE						
Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
5	7	4	6	3	0	4

#### Writing numbers from standard form to word form

Example 1: Write in word form 8,907, 650.

If we place this number in a place value chart like the one above we will see that it is **eight million, nine hundred seven thousand, six hundred fifty**.

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PLACE VALUE						
Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
8	9	0	7	6	5	0

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Example 2: Write in word form 789,164.

Again, using our place value chart, we see that the number written in word form is **seven hundred eighty-nine thousand, one hundred sixty-four**.

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PLACE VALUE						
Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	7	8	9	1	6	4

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### **Writing numbers from word form to standard form**

Example 3: Two hundred five million, six hundred fifteen thousand, eight hundred and one.

Written in standard form this would be **205,615,801**.

Example 4: Fifty million, three hundred thousand, sixty-three. Written in standard form this would be 50,300,063.

### **Independent Work**

(1) Write in word form 107,353.

(A) One thousand seven, three hundred fifty-three.

(B) One hundred seven, thirty-five three.

(C) One hundred seven thousand, three hundred fifty-three.

(D) One hundred seventy thousand, three hundred fifty-three.

(2) Write in word form 676,333,500.

(A) Six hundred seventy-six million, three hundred thirty-three thousand, five hundred

(B) Six hundred seventy-six million, three hundred thirty-three thousand, fifty

(C) Six billion, seventy-six million, three hundred thirty-three thousand, five hundred

(D) Six hundred seventy-six-million, thirty-three thousand, five hundred

(3) Write in word form 909,007,043.

(A) Nine hundred nine million, seventy thousand, forty-three

(B) Nine hundred nine million, seven thousand, forty-three

(C) Nine hundred nine million, seven thousand, four hundred three

(D) Ninety-nine million, seven thousand, forty-three

(4) Write in standard form: four million, two hundred one thousand, thirty-one.

(A) 421,031

(B) 4, 201,310

(C) 4, 210,31

(D) 4,201,031

(5) Write in standard form: three million, five hundred ten thousand.

(A) 3,510,000

(B) 3,501,000

(C) 3,500,010

(D) 3,051,000

(6) Write in standard form: one hundred million, eight hundred fifty-three thousand, eleven.

(A) 1,853,011

(B) 100,800,53,011

(C) 100,853,011

(D) 100,853,110

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

### **Use of place value to do addition**

We may use place value to perform addition. To do this we must write the number in what is called the **Expanded Form**. The expanded form of the number in the first-place value chart above is,  $5,000,000 + 700,000 + 40,000 + 6000 + 300 + 4$ .

Example 5 Add using expanded form:  $1,543 + 426$ .

$$\begin{array}{r} 1543 = 1000 + 500 + 40 + 3 \\ 426 = \quad 400 + 20 + 6 \\ \hline 1000 + 900 + 60 + 9 \end{array}$$

When we add the parts of the expanded form we obtain,  $1000 + 900 + 60 + 9 = 1969$ .

Example 6 Add using expanded form:  $2135+4623$ .

$$2135 = 2000+100+30+5$$

$$4623 = 4000+600+20+3$$

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$$6000+700+50+8$$

Adding the parts of the expanded form we obtain,  $6000+700+50+8 = 6758$ .

### **Use of place value to do subtraction**

We can also use place value to do subtraction. We proceed in the same manner as addition the only difference is that instead of adding we subtract.

Example 7 Subtract using expanded form:  $865 - 732$ .

$$865 = 800+60+5$$

$$732 = 700+30+2$$

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$$100+30+3.$$

Adding the parts of the expanded form we obtain,  $100+30+3 = 133$ .

Example 8 Subtract using expanded form:  $3468 - 1253$ .

$$3468 = 3000+400+60+8$$

$$1253 = 1000+200+50+3$$

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$$2000+200+10+5$$

Adding the parts of the extended form we obtain,  $2000+200+10+5 = 2215$ .

### **Independent Work**

Use place value to add or subtract.

(1)  $541+342$

(A)  $8+80+3$

(B)  $80+80+3$

(C)  $800+8+3$

(D)  $800+80+3$

(2)  $714+263$

- (A)  $900+70+7$
- (B)  $90+70+7$
- (C)  $900+7+7$
- (D)  $9+70+7$
- (3)  $458+231$
- (A)  $6+80+9$
- (B)  $600+80+9$
- (C)  $60+80+9$
- (D)  $600+8+9$
- (4)  $956-432$
- (A)  $500+2+4$
- (B)  $50+20+4$
- (C)  $500+20+4$
- (D)  $5+20+4$
- (5)  $876-451$
- (A)  $40+20+5$
- (B)  $40+2+5$
- (C)  $4+20+5$
- (D)  $400+20+5$
- (6)  $636-415$
- (A)  $200+2+1$
- (B)  $200+20+1$
- (C)  $2+20+1$

(D)  $20+20+1$

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

## Lesson 2 Quiz

(1) Write in word form 217,451

(A) Twenty-one thousand, seven hundred, four fifty-one

(B) Two hundred seventeen thousand, four hundred fifty-one

(C) Two million, seventeen thousand, four hundred fifty-one

(D) Two million, one hundred seventy-four thousand, fifty-one

(2) Write in word form 1,234,635.

(A) One million, twenty-three thousand four, six hundred thirty-five

(B) Twelve hundred thirty-four million, six hundred thirty-five

(C) One million, two hundred thirty-four thousand, six hundred thirty-five

(D) One million, two thousand thirty-four, six hundred thirty-five

(3) Write in word form 610,743,513.

(A) Six hundred ten million, seven hundred forty-three thousand, five hundred thirteen

(B) Sixty-one million, seven hundred forty-three thousand, five hundred thirteen

(C) Six hundred ten million, seventy-four thousand three, five hundred thirteen

(D) Six billion, ten million, seven hundred forty-three thousand, five hundred thirteen

(4) Write in standard form: three hundred seventy-five thousand, two hundred one.

(A) 3,750,201

(B) 300,075,201

(C) 375,021

(D) 375,201

(5) Write in standard form: one million, five hundred twenty thousand, two hundred six-two.

(A) 1,502,262

(B) 1,520,200,62

(C) 1,520,262

(D) 152,262

(6) Write in standard form: eight million, two hundred thousand, fifty-five.

(A) 8,020,055

(B) 8,200,055

(C) 8,200,55

(D) 820,055

In questions 7-10 use place value to add or subtract.

(7)  $645+302$

(A)  $900+40+7$

(B)  $90+40+7$

(C)  $9+40+7$

(D)  $900+4+7$

(8)  $375+423$

(A)  $7+90+8$

(B)  $70+90+8$



(C)  $700+9+8$

(D)  $700+90+8$

(9)  $966-745$

(A)  $2+20+1$

(B)  $200+2+1$

(C)  $200+20+1$

(D)  $20+20+1$

(10)  $636-424$

(A)  $20+10+2$

(B)  $200+10+2$

(C)  $2+10+2$

(D)  $200+1+2$

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