Student Guide

Thousands, Hundreds, Tens, and Ones
(SG pp. 78–81)
Questions 1–15

1. 10 flats

2. 100 skinnies. Possible response: 1 flat is the same as 10 skinnies. So 10 flats with 10 skinnies each is 100 skinnies.

3. 1000 bits. Possible responses: 1 flat is the same as 100 bits. So 10 flats with 100 bits each is 1000 bits. Or, skip count by 100 ten times to find the number of bits in 1000. 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000 bits.

4. $1200 + 40 + 3 = 1243$

   $1000 + 100 + 140 + 3 = 1243$

   $1000 + 200 + 30 + 13 = 1243$

   $1243 = 1243$

5. The first partition,

   1 pack, 2 flats, 4 skinnies, 3 bits

6. Possible responses are shown using the Fewest Pieces Rule.

   A.

   B.

   C.

   D.

   E.

   F.

7. 344

8. 751

Thousands, Hundreds, Tens, and Ones

Building Packs

The **packs** in your base-ten sets are models that represent cubes full of bits. If your set is made of plastic, then your packs are probably hollow. But you can imagine they are filled with bits or flats. Even though you cannot see what is inside, think of a pack as being full.

1. Stack enough flats together to make a pile as high as a pack. How many flats would fill one pack?

2. How many skinnies would you need to build a pack with skinnies? How do you know?

3. How many bits would fill a pack? How do you know?

Use the *Make a Pack* pages in the *Student Activity Book* to play a game.

Packaging Large Orders of Chocos

Tom works at the TIMS Candy Company. One day, he took an order for 1243 Chocos. He made a table listing several ways to package the order.

1243 Chocos

packs 1000s	flats 100s	skinnies 10s	bits 1s
1	2	4	3
	12	4	3
1	1	14	3
1	2	3	13
			1243

Tom wants to be sure each way fills the order correctly. This is what he wrote for the first row listed in his table:

$$1000 + 200 + 40 + 3 = 1243$$

4. Each row in the table gives a **partition** of 1243. Write a number sentence to show the other partitions in each row in the table.

5. Which of Tom's partitions uses the fewest base-ten pieces?

Thousands, Hundreds, Tens, and Ones

Student Guide - Page 78

Base-Ten Shorthand for Packs

Chocos are becoming more popular, and the TIMS Candy Company is selling more packs. They need to add a shorthand symbol to represent a pack.

Base-ten piece	pack	flat	skinny	bit
Base-ten shorthand		□			•

Using the Fewest Pieces Rule, the shorthand for 1243 is

6. Show the following numbers with base-ten pieces. Then use base-ten shorthand to write your answer.

   A. 1444   B. 2731

   C. 2010   D. 1385

   E. 2063   F. 2304

Use the *Base-Ten Recording Sheets 1* pages to record the trades you make for the fewest pieces.

Counting Chocos

Tom used base-ten shorthand to record his orders. How many Chocos are in each of the following orders?

7. 4 skinnies, 3 flats, and 4 bits.

8. 7 flats, 4 skinnies, and 11 bits.
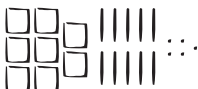
Student Guide - Page 79

9. 5 flats, 16 skinnies, and 3 bits.

10. 12 flats, 5 skinnies, and 4 bits.

11. 8 flats, 10 skinnies, and 5 bits.

12. 5 packs, 3 skinnies, and 7 bits.

9. 663
10. 1254
11.* 905
12. 5037
13. 4707
14. 3142
15. 4311

Student Guide **- Page 80**

13. 7 flats, 4 packs, and 7 bits.

14. 10 flats, 14 skinnies, 2 packs, and 2 bits.

15. 3 packs, 20 skinnies, 11 flats, and 11 bits.

Use the *Large Orders* pages in your *Student Activity Book* for more practice partitioning numbers, writing number sentences, and using base-ten shorthand.

Student Guide **- Page 81**

*Answers and/or discussion are included in the lesson.

Student Guide

Thousands, Hundreds, Tens and Ones
(SG pp. 82–83)
Homework
Questions 1–3

1. **A.** 5000 Chocos

   B. 100 Chocos

   C. 40 Chocos

   D. 4 Chocos

   E. 5144 Chocos

2. Student answers may vary. One possible response is given.

   A.

   B.

   C.

   D.

3. **A.** 1252. Already in fewest pieces
   $$1000 + 200 + 50 + 2 = 1252$$

   B. 3016. Fewest pieces:

   $$3000 + 10 + 6 = 3016$$

   C. 3541. Fewest pieces:

   $$3000 + 500 + 40 + 1 = 3541$$

Student Guide - Page 82

Student Guide - Page 83