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

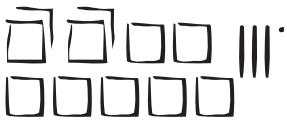
   1000 + 100 + 140 + 3 = 1243

   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. 

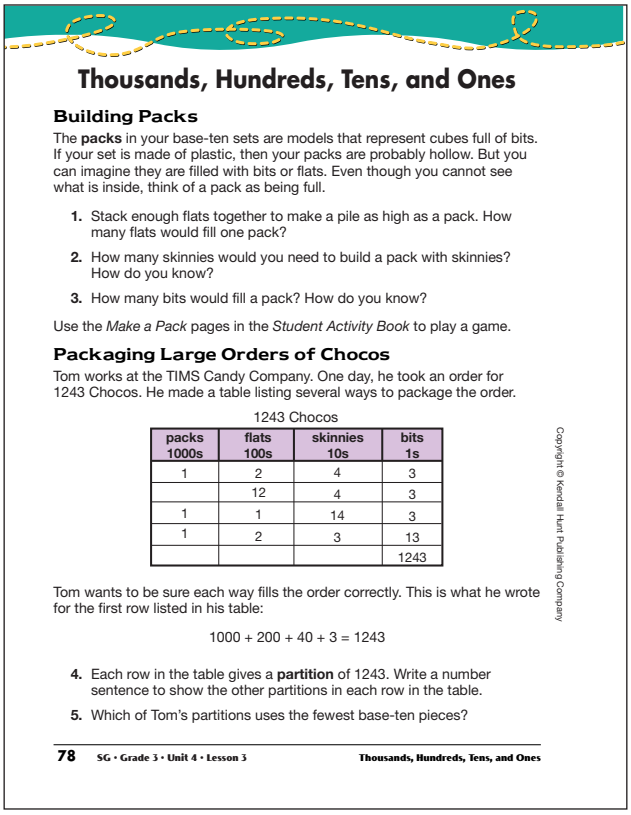
   B. 

   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?

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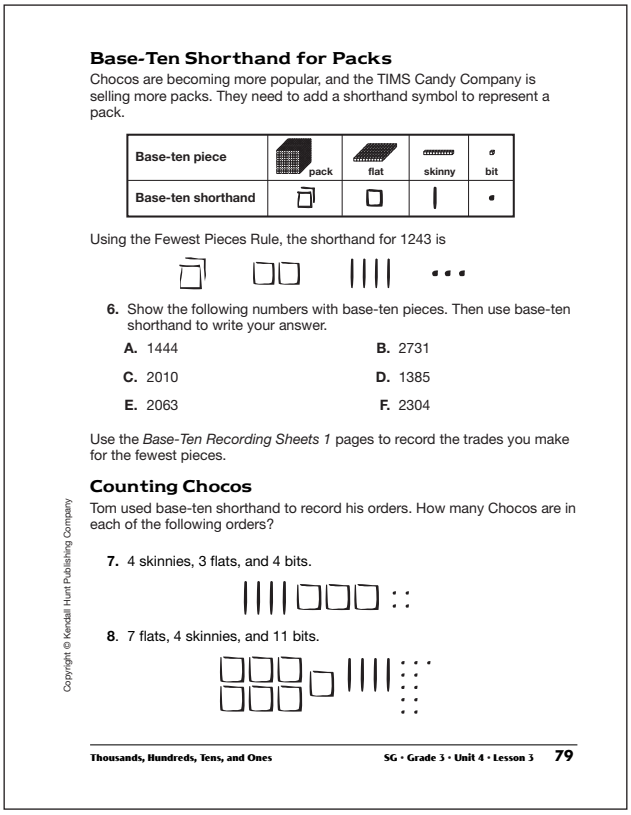

Base-Ten Shorthand for Packs

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.

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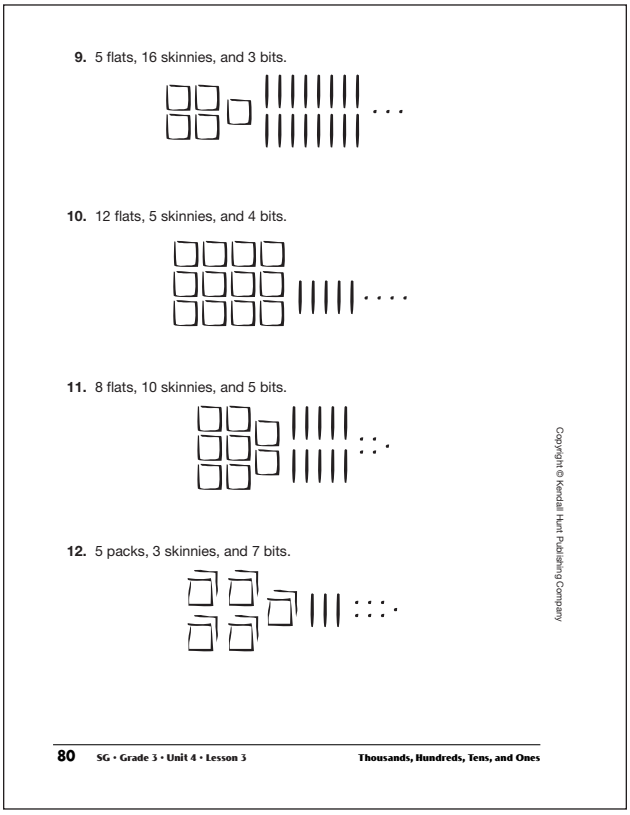

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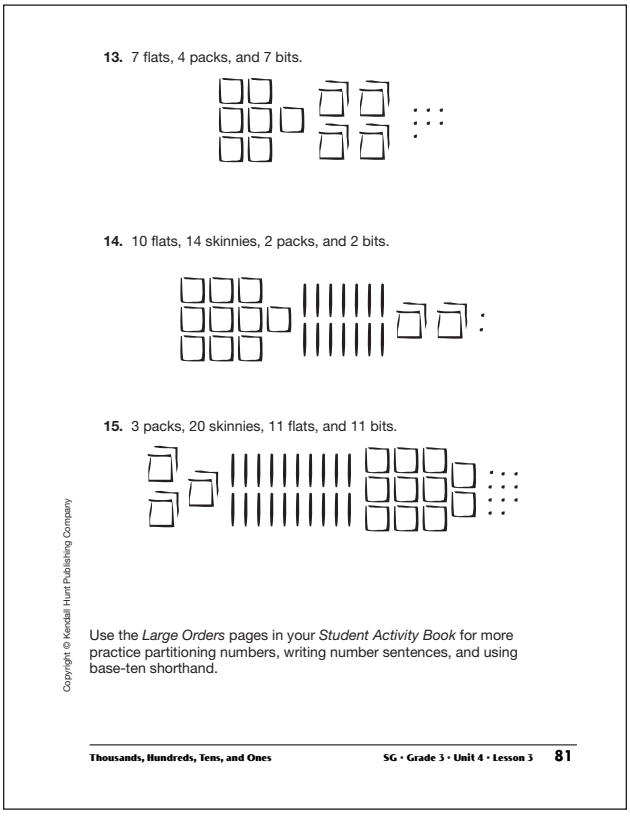

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9. 663
10. 1254
11.* 905
12. 5037
13. 4707
14. 3142
15. 4311

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

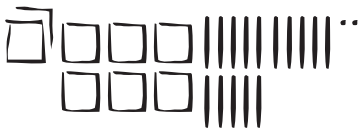
Student Guide

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.

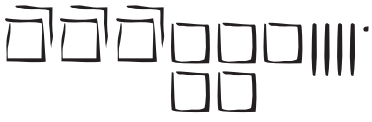
3. **A.** 1252. Already in fewest pieces
   1000 + 200 + 50 + 2 = 1252

   B. 3016. Fewest pieces:

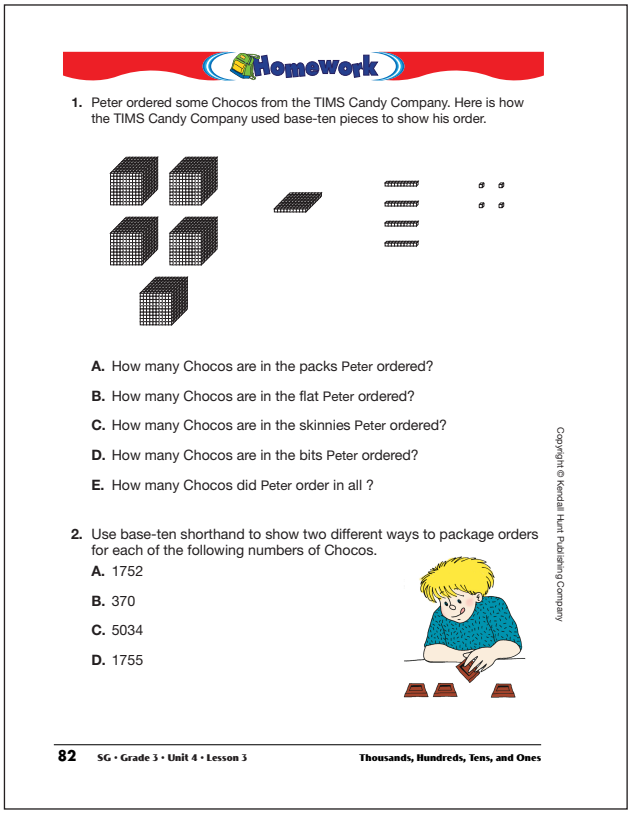
   

   3000 + 10 + 6 = 3016

   C. 3541. Fewest pieces:

   3000 + 500 + 40 + 1 = 3541



Homework

1. Peter ordered some Chocos from the TIMS Candy Company. Here is how the TIMS Candy Company used base-ten pieces to show his order.

A. How many Chocos are in the packs Peter ordered?
B. How many Chocos are in the flat Peter ordered?
C. How many Chocos are in the skinnies Peter ordered?
D. How many Chocos are in the bits Peter ordered?
E. How many Chocos did Peter order in all ?

2. Use base-ten shorthand to show two different ways to package orders for each of the following numbers of Chocos.
A. 1752
B. 370
C. 5034
D. 1755

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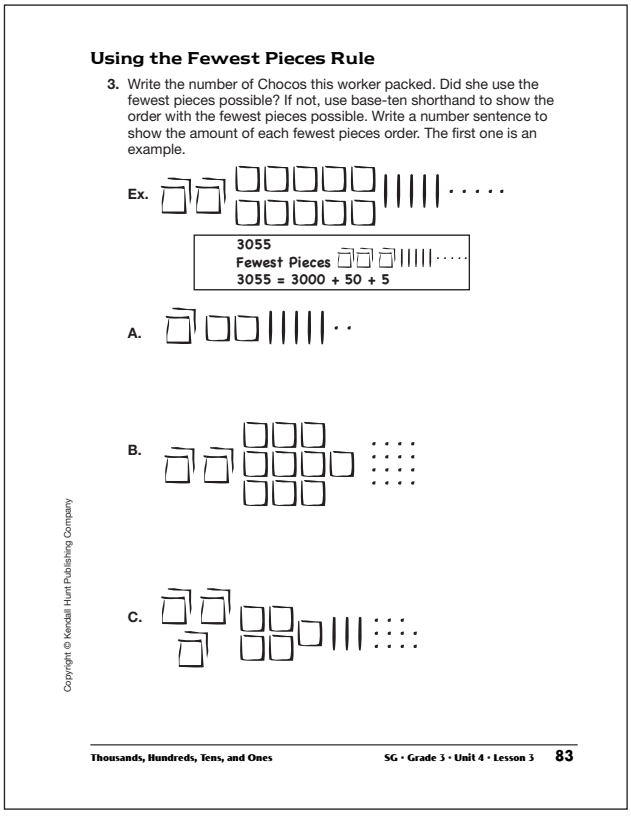

Using the Fewest Pieces Rule

3. Write the number of Chocos this worker packed. Did she use the fewest pieces possible? If not, use base-ten shorthand to show the order with the fewest pieces possible. Write a number sentence to show the amount of each fewest pieces order. The first one is an example.

Ex.

3055
Fewest Pieces
3055 = 3000 + 50 + 5

A.

B.

C.

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Name _____ Date _____

Large Orders

1. Eric recorded his Choco orders on a Base-Ten Recording Sheet. The sheet below shows three ways he can package one of his orders. He wrote a number sentence to show the number of Chocos in the order. Complete his sheet with a number sentence for each of the other ways.

1000s	100s	10s	1s	Number Sentence
	2	3	7	237 = 200 + 30 + 7
	1	13	7	
	2	2	17	

2. For each Choco order below, write a number sentence to show the number ordered. Then write a different way to fill the order, along with a number sentence to match.

A.

1000s	100s	10s	1s	Number Sentence
2		5		

B.

1000s	100s	10s	1s	Number Sentence
3	4		7	

C.

1000s	100s	10s	1s	Number Sentence
6	2	5		

***Student Activity Book* - Page 105**

Name _____ Date _____

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

3. Professor Peabody used base-ten shorthand to show the Chocos he made at the TIMS Candy Company. Figure out how many Chocos Professor Peabody made. Write a number sentence to show your answer.

A.

B.

4. Professor Peabody used base-ten shorthand to take an order for Chocos. Draw the same number of Chocos using the Fewest Pieces Rule. Then write down how many Chocos were made.

A.

B.

C.

***Student Activity Book* - Page 106**

Student Activity Book

Large Orders (SAB pp. 105–106)
Questions 1–4

1.

1000s	100s	10s	1s	Number Sentence
	2	3	7	237 = 200 + 30 + 7
	1	13	7	**237 = 100 + 130 + 7**
	2	2	17	**237 = 200 + 20 + 17**

2. A.* Possible responses:

1000s	100s	10s	1s	Number Sentence
2		5		**2000 + 50 = 2050**
2		**4**	**10**	**2000 + 40 + 10 = 2050**

B.*

1000s	100s	10s	1s	Number Sentence
3	4		7	**3000 + 400 + 7 = 3407**
3	**3**	**10**	**7**	**3000 + 300 + 100 + 7 = 3407**

C.

1000s	100s	10s	1s	Number Sentence
6	2	5		**6000 + 200 + 50 + 0 = 6250**
5	**12**	**5**		**5000 + 1200 + 50 + 0 = 6250**

3. A. 40 + 6 = 46 Chocos

B. 1000 + 200 + 10 + 7 = 1217 Chocos

4. A.

23 Chocos

B.

2150 Chocos

C.*

102 Chocos

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

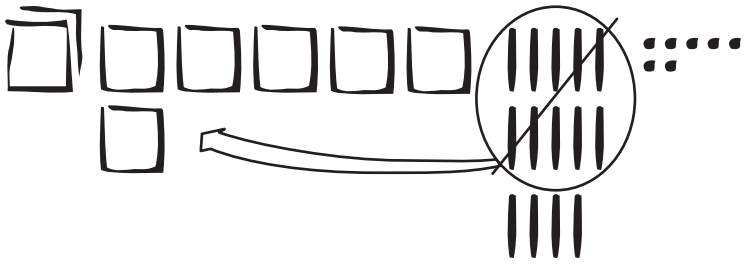
Teacher Guide

How Many Chocos? (TG p. 1)

1647 Chocos

Students' responses will vary. One possible response:

I started with one pack, 5 flats, 14 skinnies, and 7 bits. I traded 10 skinnies for a flat. Then I had the fewest pieces.



Then it was easy to write the number because 1 pack means 1000, 6 flats means 600, 4 skinnies is 40, 7 bits is 7, so 1647.

Another possible response using the Base-Ten Recording Sheet.

 1000s	 100s	10s	1s	Number Sentence
1	**5**	**14**	**7**	**1000 + 500 + 140 + 7 = 1647**
1	**6**	**4**	**7**	**1000 + 600 + 40 + 7 = 1647**