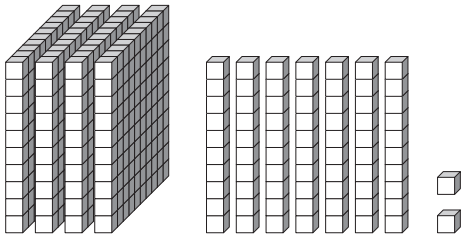
10. [Place Value]

Skill 10.1 Writing numbers illustrated by base 10 blocks (1).

- Count the number of the blocks (10 × 10 × 10), flats (10 × 10), longs (1 × 10) and minis (1) to determine the value of each digit in the number.

Q.

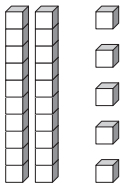


4 hundreds 7 tens 2 ones = ☐

A. ***472***

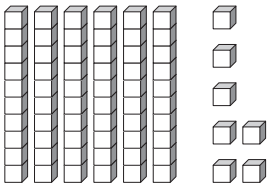
4 hundreds = 400
7 tens = 70
2 ones = 2
400 and 70 and 2 = 472

a)



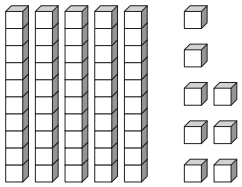
2 tens 5 ones = 25

b)



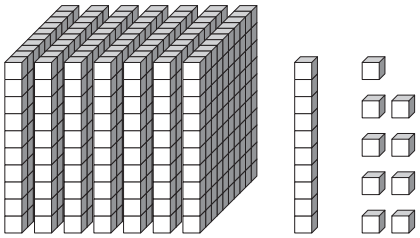
6 tens 7 ones = ☐

c)



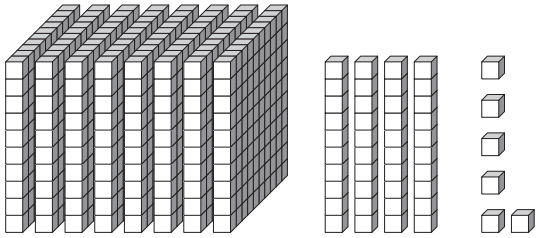
5 tens 8 ones = ☐

d)



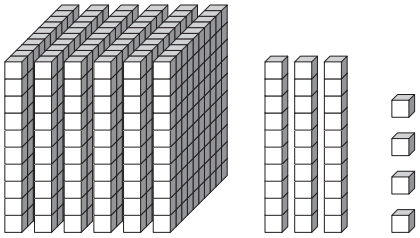
7 hundreds 1 ten 9 ones = ☐

e)



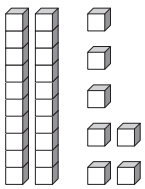
8 hundreds 4 tens 6 ones = ☐

f)



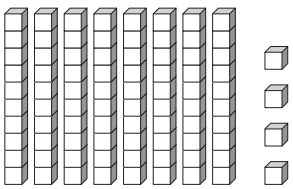
6 hundreds 3 tens 4 ones = ☐

g)



☐ tens ☐ ones = ☐

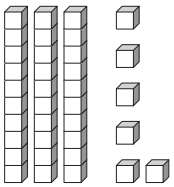
h)



☐ tens ☐ ones = ☐

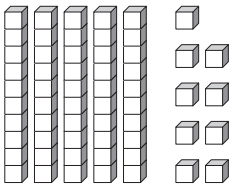
Skill 10.1 Writing numbers illustrated by base 10 blocks (2).

i)



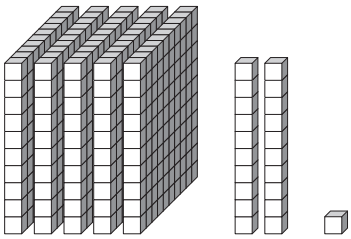
☐ tens ☐ ones = ☐

j)



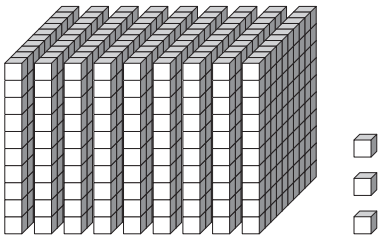
☐ tens ☐ ones = ☐

k)



5 hundreds 2 tens 1 one = ☐

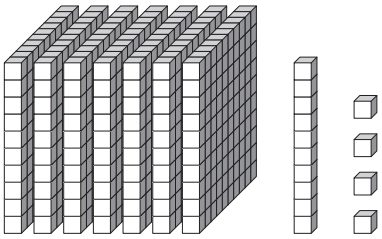
l)



☐ hundreds ☐ tens ☐ ones

= ☐

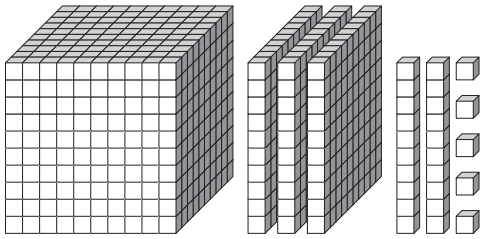
m)



☐ hundreds ☐ ten ☐ ones

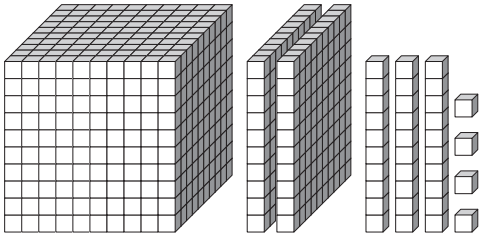
= ☐

n)



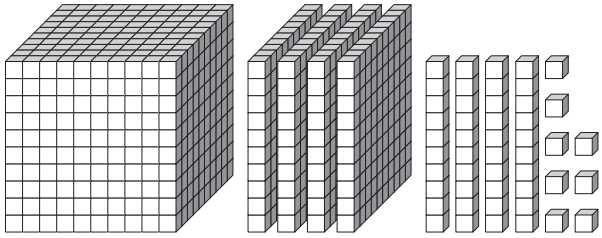
1 thousand 3 hundreds
2 tens 5 ones = ☐

o)



1 thousand 2 hundreds
3 tens 4 ones = ☐

p)

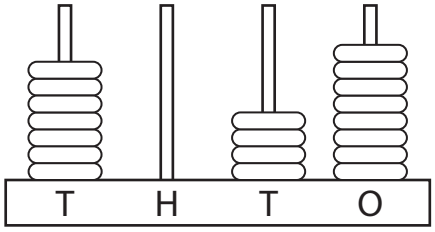


1 thousand 4 hundreds
4 tens 8 ones = ☐

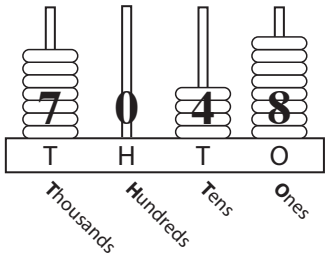
Skill 10.2 Writing numbers illustrated by an abacus showing place values (1).

- Count the discs in each column.
- Write the digits in the appropriate places to form a number.

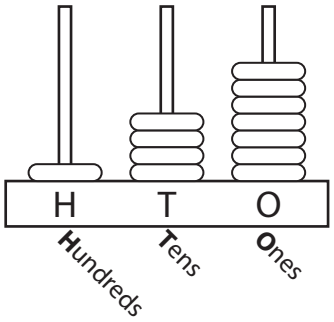
Q. Write the numeral.



A. ***7048***

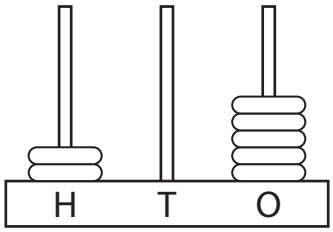


a) Write the numeral.

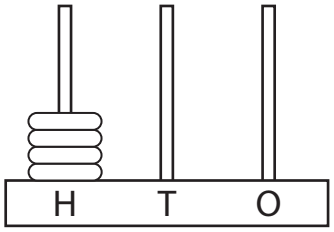


147

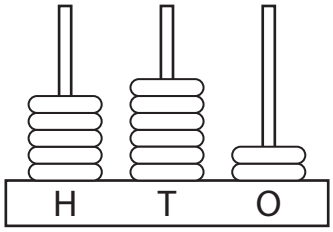
b) Write the numeral.



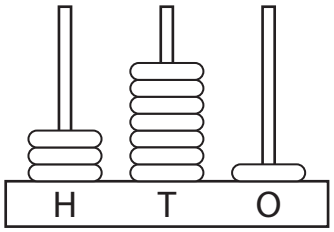
c) Write the numeral.



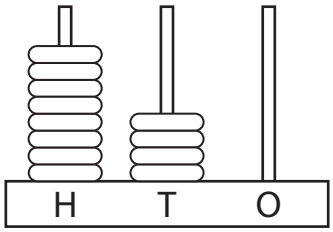
d) Write the numeral.



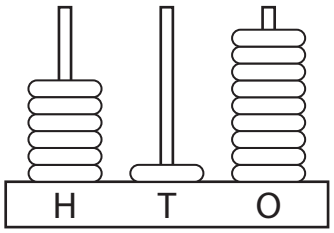
e) Write the numeral.



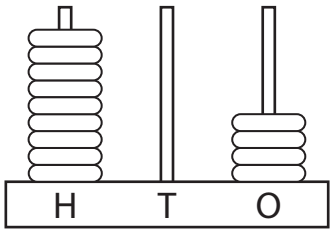
f) Write the numeral.



g) Write the numeral.

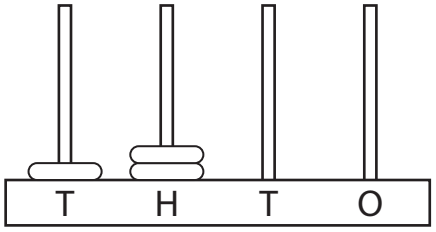


h) Write the numeral.

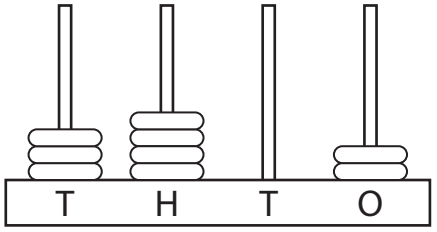


Skill 10.2 Writing numbers illustrated by an abacus showing place values (2).

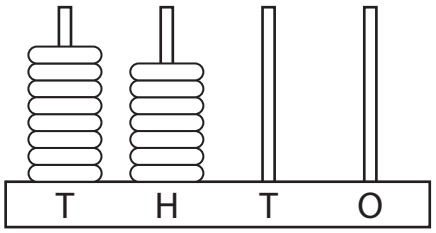
i) Write the numeral.



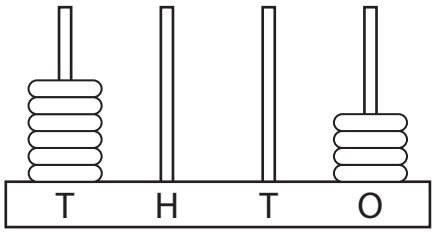
j) Write the numeral.



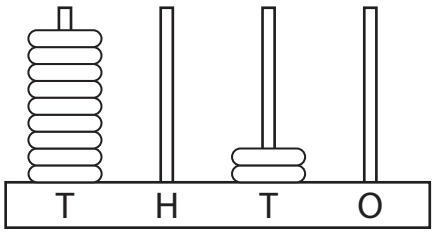
k) Write the numeral.



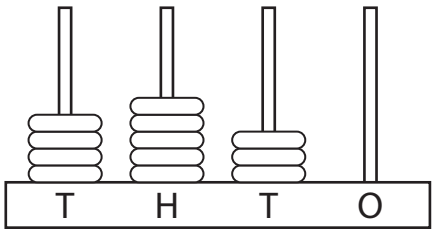
l) Write the numeral.



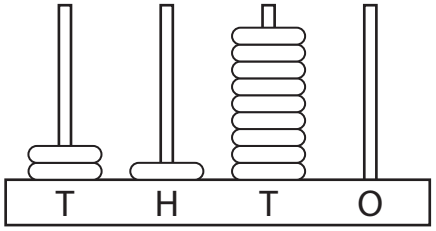
m) Write the numeral.



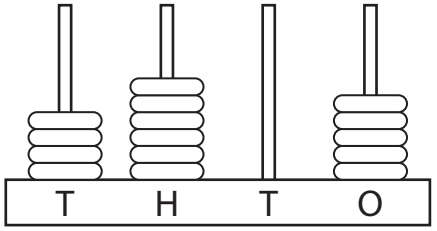
n) Write the numeral.



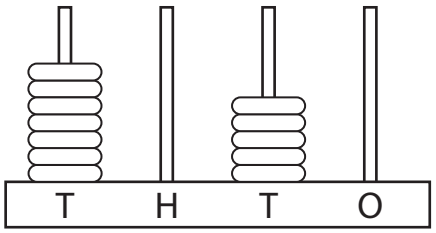
o) Write the numeral.



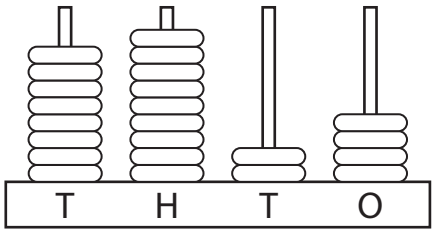
p) Write the numeral.



q) Write the numeral.



r) Write the numeral.



Skill 10.3 Writing the expansion of a number by identifying the digit in each place.

- Identify the place of each digit.
  Hint: Starting from the right the places are: ones, tens, hundreds and thousands.
- Write the digit to match the place.

Q. Expand 508 by filling in the place value table.

Hundreds	Tens	Ones

A.

Hundreds	Tens	Ones
5	*0*	*8*

a) Expand 45.

4 tens 5 ones

b) Expand 51.

___ tens ___ one

c) Expand 62.

___ tens ___ ones

d) Expand 39.

___ tens ___ ones

e) Expand 228.

hundreds tens ones

f) Expand 583.

hundreds tens ones

g) Expand 476.

hundreds tens ones

h) Expand 901.

hundreds tens one

i) Expand 156 by filling in the place value table.

Hundreds	Tens	Ones

j) Expand 749 by filling in the place value table.

Hundreds	Tens	Ones

k) Expand 6815 by filling in the place value table.

Thousands	Hundreds	Tens	Ones

l) Expand 2703 by filling in the place value table.

Thousands	Hundreds	Tens	Ones

Skill 10.4 Writing numbers by using the place values of each digit.

- Write the digits in order from left to right to form the number.
  Example: 7 thousands + 3 hundreds + 0 tens + 5 ones = 7305

Place			
Thousands	Hundreds	Tens	Ones
7	*3*	*0*	*5*

Q. Write the number:
3 hundreds + 5 tens + 9 ones =

A. ***359***

Place		
Hundreds	Tens	Ones
3	*5*	*9*

a) Write the number:
6 tens + 4 ones

64

b) Write the number:
5 tens + 2 ones

c) Write the number:
8 tens + 0 ones

d) Write the number:
7 hundreds + 1 ten + 3 ones =

e) Write the number:
4 hundreds + 3 tens + 7 ones =

f) Write the number:
1 hundred + 6 tens + 5 ones =

g) Write the number:
8 hundreds + 0 tens + 2 ones =

h) Write the number:
9 hundreds + 4 tens + 0 ones =

i) Write the number:
4 thousands + 5 hundreds + 8 tens + 5 ones =

j) Write the number:
7 thousands + 8 hundreds + 2 tens + 2 ones =

k) Write the number:
1 thousand + 3 hundreds + 6 tens + 9 ones =

l) Write the number:
5 thousands + 0 hundreds + 6 tens + 7 ones =

Skill 10.5 Writing the expansion of a number by adding the values of each digit based on its place.

- Say the number out loud.
  Example: 275 reads "two hundred and seventy-five".

  so 275 = 200 + 70 + 5

  Hint: Consider the exceptions for 2-digit numbers like 15 and 20.
  15 = 10 + 5
  20 = 20 + 0

Place		
Hundreds	Tens	Ones
2	*7*	*5*

Value		
200	*70*	*5*

Q. Write the value of each digit.

392 = ☐ + 90 + ☐

A. *392 =* ***300*** *+ 90 +* ***2***

three hundred and ninety-two

a) Write the value of each digit.

483 = 400 + 80 + 3

b) Write the value of each digit.

928 = 900 + ☐ + ☐

c) Write the value of each digit.

614 = 600 + ☐ + ☐

d) Write the value of each digit.

750 = 700 + ☐ + ☐

e) Write the value of each digit.

345 = ☐ + 40 + ☐

f) Write the value of each digit.

826 = ☐ + 20 + ☐

g) Write the value of each digit.

219 = ☐ + 10 + ☐

h) Write the value of each digit.

470 = ☐ + 70 + ☐

i) Write the value of each digit.

6257 = + 200 + + 7

j) Write the value of each digit.

3142 = 3000 + + 40 +

k) Write the value of each digit.

1875 = 1000 + 800 + +

l) Write the value of each digit.

8390 = 8000 + + + 0

Skill 10.6 Recognising the place value of a digit in a number.

Hint: Starting from the right, the places are: ones, tens, hundreds and thousands.

Place			
Thousands	Hundreds	Tens	Ones
1	*0*	*6*	*9*

Q. In the number 761 which of the digits 7, 6 or 1 lies in the tens place? ☐

A. *6*

Place		
Hundreds	Tens	Ones
7	*6*	*1*

a) In the number 25 which of the digits 2 or 5 lies in the tens place? 2

b) In the number 63 which of the digits 6 or 3 lies in the ones place? ☐

c) In the number 84 which of the digits 8 or 4 lies in the tens place? ☐

d) In the number 324 which of the digits 3, 2 or 4 lies in the ones place? ☐

e) In the number 562 which of the digits 5, 6 or 2 lies in the tens place? ☐

f) In the number 816 which of the digits 8, 1 or 6 lies in the hundreds place? ☐

g) In the number 359 which of the digits 3, 5 or 9 lies in the hundreds place? ☐

h) In the number 490 which of the digits 4, 9 or 0 lies in the ones place? ☐

i) Circle the hundreds digit in the number:

7 5 1

j) Circle the tens digit in the number:

2 8 4

k) Circle the ones digit in the number:

4 8 3

l) Circle the thousands digit in the number:

5 1 4 9

m) Circle the hundreds digit in the number:

1 8 3 6

n) Circle the thousands digit in the number:

6 2 4 0

Skill 10.7 Finding the value of a digit in a number.

- If the digit is in the thousands place, add 3 zeros to show its value.
- If the digit is in the hundreds place, add 2 zeros to show its value.
- If the digit is in the tens place, add 1 zero to show its value.
- If the digit is in the ones place, that is its value.

Place			
Thousands	Hundreds	Tens	Ones
3	*4*	*2*	*0*
Value			
3000	*400*	*20*	*0*

Q. In which number does the digit 5 have lesser value?

A) 845 B) 512

A. ***A***

845 5 is in the ones place ⇒ value 5
512 5 is in the hundreds place ⇒ value 500
5 < 500

a) What is the value of the 8 in 248?

A) 8
B) 80
C) 800

A

b) What is the value of the 5 in 659?

A) 5
B) 50
C) 500

c) What is the value of the 4 in 4327?

A) 40
B) 400
C) 4000

d) What is the value of the 6 in 1768?

A) 60
B) 600
C) 6000

e) What is the value of the underlined digit in 3<u>7</u>5?

A) 7
B) 70
C) 700

f) What is the value of the underlined digit in <u>3</u>27?

A) 3
B) 30
C) 300

g) In which number does the digit 1 have lesser value?

A) 461 B) 217

h) In which number does the digit 7 have lesser value?

A) 270 B) 587

i) In which number does the digit 4 have greater value?

A) 748 B) 419

j) In which number does the digit 8 have greater value?

A) 281 B) 958

k) In which number does the digit 5 have lesser value?

A) 2359 B) 1564

l) In which number does the digit 3 have greater value?

A) 1432 B) 5903

Skill 10.8 Comparing numbers by using <, = or >.

- Compare the value of the digits in the same place, one at a time.
- Work from left to right across each number.
- Use less than (<) when the number on the left is less than the number on the right.
- Use greater than (>) when the number on the left is greater than the number on the right.

Q. 51 is less than (<) 26
True or false?

A. ***false***
5 is greater than 2 so
51 is greater than 26, **not** less than.

a) 35 is less than (<) 76
True or false? true

b) 42 is greater than (>) 83
True or false? ☐

c) 8407 = 8470
True or false? ☐

d) 891 is greater than (>) 934
True or false? ☐

e) 8471 is greater than (>) 8714
True or false? ☐

f) 7265 is less than (<) 7256
True or false? ☐

g) Use greater than (>) or less than (<) to make this statement true.
158 ☐ 185

h) Use greater than (>) or less than (<) to make this statement true.
462 ☐ 426

i) Use <, = or > to make this statement true.
273 ☐ 237

j) Use <, = or > to make this statement true.
859 ☐ 895

k) Use <, = or > to make this statement true.
1870 ☐ 187

l) Use <, = or > to make this statement true.
2703 ☐ 7200

m) Use <, = or > to make this statement true.
10 200 ☐ 12 010

n) Use <, = or > to make this statement true.
15 445 ☐ 15 545

Skill 10.9 Making the largest or the smallest number when the digits are given.

MM2.2 1 1 2 2 3 3 4 4
MM3.1 1 1 2 2 3 3 4 4

Writing the largest number
- Write the digits from largest to smallest.

Writing the smallest number
- Write the digits from smallest to largest.

Q. Write the smallest 3-digit number that contains the digits 4, 7 and 3.

A. ***347***

a) Write the largest 2-digit number that contains the digits 3 and 7.

73

b) Write the largest 2-digit number that contains the digits 4 and 9.

c) Write the largest 3-digit number that contains the digits 7, 2 and 4.

d) Write the smallest 3-digit number that contains the digits 8, 3 and 6.

e) Write the smallest 3-digit number that contains the digits 6, 1 and 8.

f) Write the largest 3-digit number that contains the digits 7, 4 and 9.

g) Write the smallest 4-digit number that contains the digits 3, 1, 5 and 2.

h) Write the largest 4-digit number that contains the digits 5, 7, 9 and 3.

i) Write the largest 4-digit number that contains the digits 2, 9, 4 and 7.

j) Write the smallest 4-digit number that contains the digits 6, 1, 5 and 2.

k) Using the digits 3, 9 and 8 write a number between 920 and 960.

l) Using the digits 5, 7 and 2 write a number between 700 and 750.

m) Write the largest 4-digit number less than 7000, that contains the digits 2, 7, 6 and 4.

n) Using the digits 6, 8, 5 and 1 write a number between 5800 and 5850.

Skill 10.10 Ordering numbers.

Hint: 1-digit numbers are less than 2-digit numbers, which are less than 3-digit numbers, etc.

- Compare the size of the digits in the same place, one at a time.
- Work from left to right across each number.

Q. Place in order from largest to smallest:

189, 93, 4, 11, 240

A. ***240, 189, 93, 11, 4***

3-digit numbers: 189, 240
2 is larger than 1 so 240 is larger than 189.

2-digit numbers: 93, 11
9 is larger than 1 so 93 is larger than 11.

1-digit numbers: 4

a) Place in order from smallest to largest:

31, 13, 3, 11

3, 11, 13, 31

b) Place in order from largest to smallest:

7, 87, 17, 71, 8

c) Place in order from largest to smallest:

66, 604, 406, 46

d) Place in order from smallest to largest:

209, 90, 29, 92, 200

e) Place in order from largest to smallest:

32, 75, 311, 40, 128

f) Place in order from smallest to largest:

13, 521, 38, 124, 9

g) Place in order from smallest to largest:

546, 456, 54, 56, 465

h) Place in order from largest to smallest:

312, 123, 231, 321

i) Place in order from largest to smallest:

8431, 3148, 4183, 1384

j) Place in order from smallest to largest:

8070, 8870, 4748, 7408

Skill 10.11 Rounding whole numbers to the nearest 10 or 100.

- Underline the digit to the right of the requested place.
- If this digit is 0, 1, 2, 3 or 4 (< 5) - round down - keep the digit in the requested place the same.
  5, 6, 7, 8 or 9 (≥ 5) - round up - add 1 to the digit in the requested place.
- Keep the number of digits in the answer the same as in the question by using zeros to fill the vacated spaces.

Q. Round 4158 to the nearest ten.

A. ***4160***

4158
The digit to the right of the tens place is 8.
8 ≥ 5 so round up.
Add 1 to the 5 in the tens place to make 6.
Put a zero in the units place.

a) Circle the number closest to 150.

154 (151) 15 145 155 105

b) Circle the number closest to 300.

310 389 292 305 301 203

c) Which of these numbers is closest to 400?

418 , 490 , 403 , 590 , 508 , 493

d) Which of these numbers is closest to 500?

555 , 495 , 510 , 105 , 550 , 506

e) Round 5319 to the nearest ten.

f) Round 2371 to the nearest ten.

g) Round 6348 to the nearest ten.

h) Round 7015 to the nearest ten.

i) Round 12 321 to the nearest hundred.

j) Round 15 398 to the nearest hundred.

k) Round 10 479 to the nearest hundred.

l) Round 21 450 to the nearest hundred.