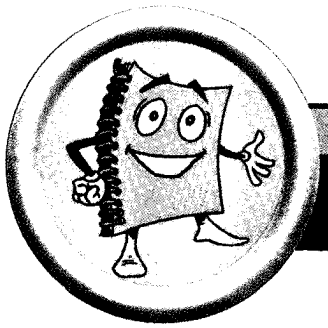


PREFACE

The *Thinking Mathematics* series is based on the latest primary mathematics syllabus. In this series, the concrete-pictorial-abstract format is used to introduce new concepts. The spiral approach is used throughout the series to consolidate and link mathematical concepts.

The series comprises textbooks and workbooks at each level. Textbook 3A comprises 7 units. Each unit is prefaced by a relevant situation from daily life and followed through with the following sections:

Do You Know? Relevant, *thought-provoking* questions are asked with regard to the real life situation presented at the beginning of each unit to *link mathematics and daily life.*

Let's Learn New concepts are explained in a straight-forward and interesting way. *Creative* and *critical thinking,* as well as *an awareness of problem-solving strategy* are developed through worked examples in this section.

Let's Try Guided sums are provided to confirm and consolidate the concepts taught.

Practice Exercises involving *critical* and *creative thinking* are provided to encourage students to look for alternative strategies in problem-solving and thus help them grow into *independent and active learners.*

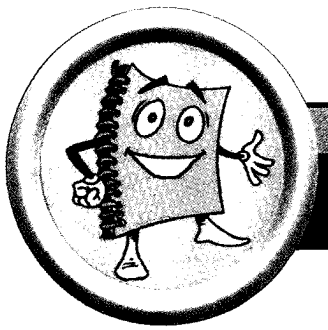
In-Class Activity Active participation from students and creative *application of mathematics to daily life,* including *IT* and hands-on activities, helps to develop lifelong learners. Cooperation and team spirit are encouraged through *group and pair work.*

Fun With Maths Mathematical concepts are extended beyond the boundaries of the classroom and brought into the realm of exploration and experiment to further engage and develop the student's interest in mathematics.

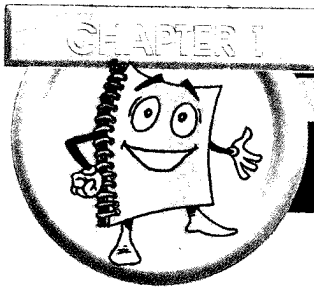
Other features of this series include:

National Education This is integrated, whenever applicable, into the series to promote a sense of nationality in the students.

Revision Exercises are provided to assist students in reviewing the concepts and skills learnt as part of examination preparation.

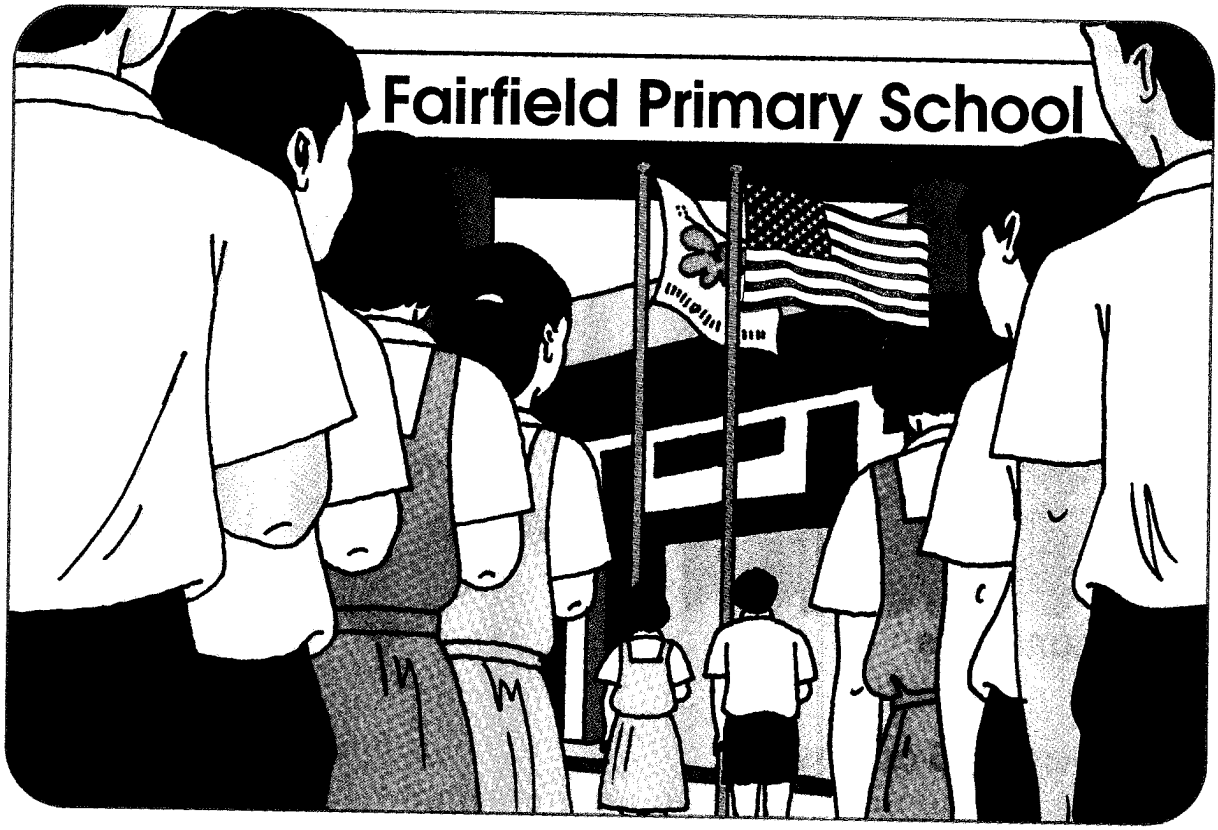


CONTENTS



CHAPTER 1

WHOLE NUMBERS TO 10 000



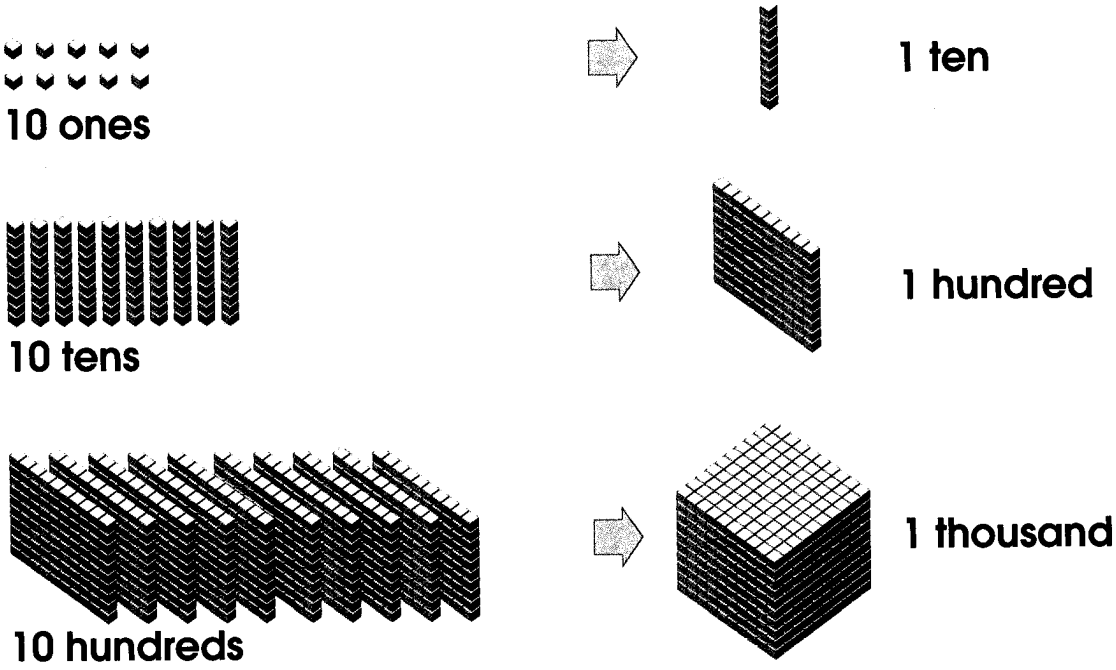
There are more than 1000 students in Fairfield Primary School.

What is the total number of students in your school?

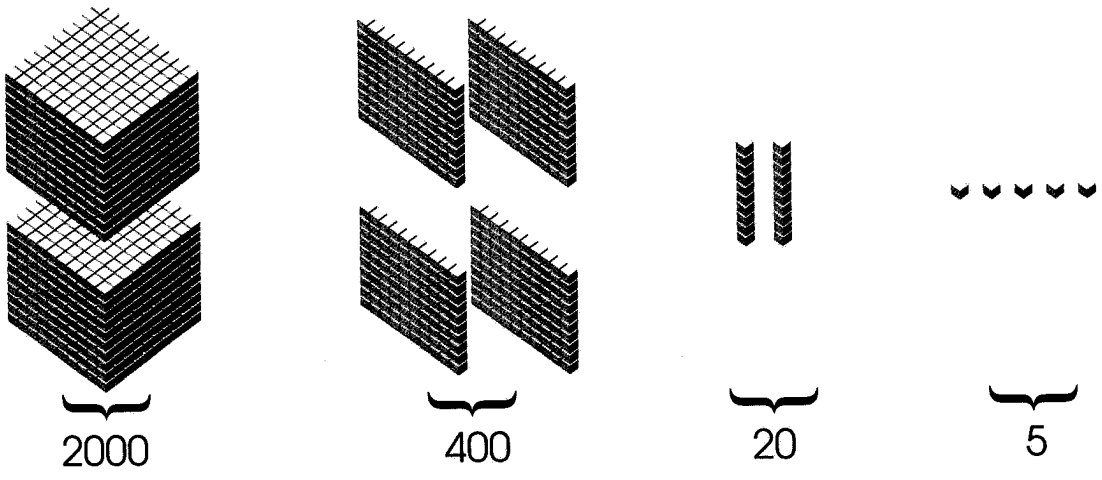
Are there more than one thousand students?

Previously we learnt how to read and write numbers up to 1000. Now we will learn numbers up to 10 000.

Thousands, Hundreds, Tens and Ones



Jane has **2425** cubes.



2000 + 400 + 20 + 5 = 2425

We can show this number on a place value chart using number discs:

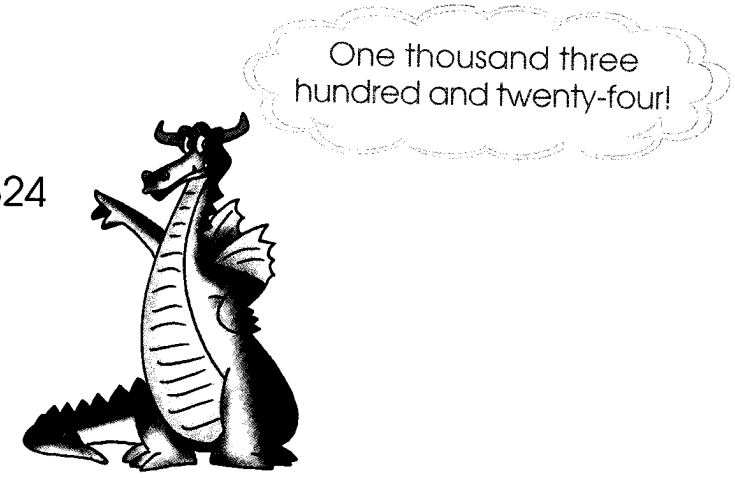
Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100	10 10	1 1 1 1 1

2425 is written in words as **two thousand four hundred and twenty-five.**

Read the following numbers...

Thousands	Hundreds	Tens	Ones
1000	100 100 100	10 10	1 1 1 1

1000 + 300 + 20 + 4 = 1324



Thousands	Hundreds	Tens	Ones
1000 1000 1000 1000	100 100 100 100		1

4000 + 400 + 1 = 4401

Four thousand four hundred and one!

What values do the following digits stand for?

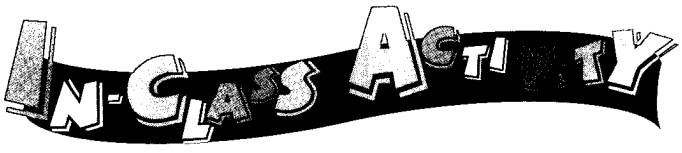
3 4 5 9

The digit 9 stands for '9'.

The digit 5 stands for '50'.

The digit 4 stands for '400'.

The digit 3 stands for '3000'.



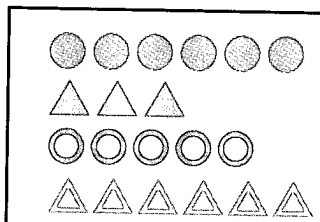
Work in pairs. Think of 3 real-life situations where we need to use numbers from 1000 to 10 000. For example, there are about 5000 books in the school library.

Let's Try

1. Fill in the missing numbers in the place value charts referring to the following symbols.

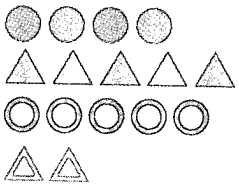
○ represents 1	△ represents 10	◎ represents 100	△ represents 1000

a)



Th	H	T	O
6			

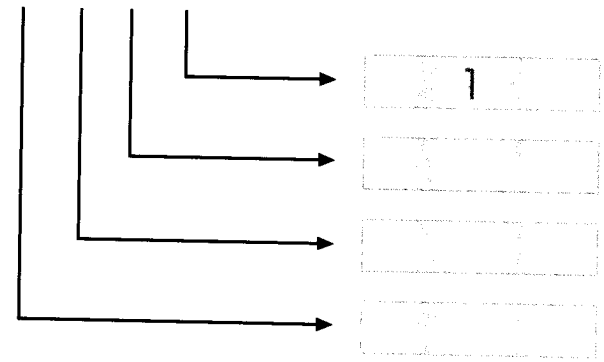
b)

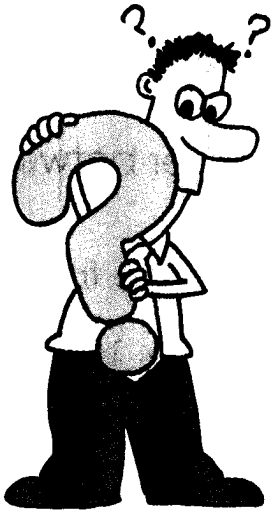


Th	H	T	O

2. What value does each digit stand for?

5 9 9 1





Practice 1A

1. Write the correct value in the box provided.

Thousands	Hundreds	Tens	Ones
1000 1000	100	10	1 1 1

2. Write in numbers.

a) Nine hundred and eighty-nine: _____

b) One thousand one hundred and twenty-five: _____

c) Two thousand and twelve: _____

d) Ten thousand: _____

3. Fill in the blanks.

a) The number just after 1100 is _____.

b) The number just before 10 000 is _____.

c) The number between 2567 and 2569 is _____.

4. Complete the following number sentences.

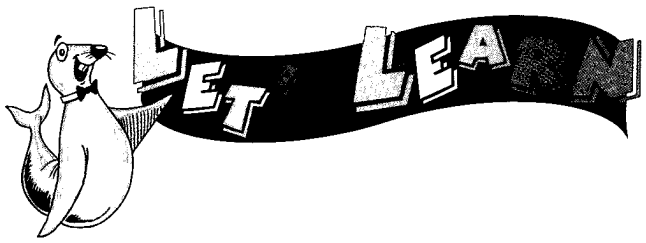
a) 2000 + 500 + 10 + 4 = 2514

b) 6000 + 200 + 3 = _____

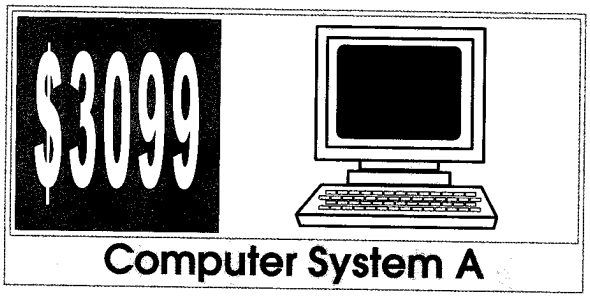
c) 8000 + _____ + 30 + 7 = 8537

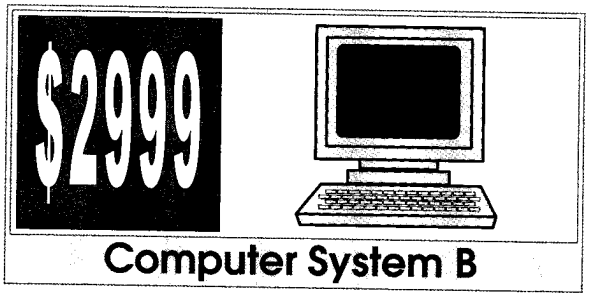
d) 9219 = 9000 + 200 + _____ + 9

Workbook Exercise



Comparing Numbers





Which computer system is more expensive?

Look at the digit in the 'thousands' place:

The thousands digit for computer system A is 3.

The thousands digit for computer system B is 2.

Computer system A :$ **3**099
Computer system B :$ **2**999

3 is greater than 2.

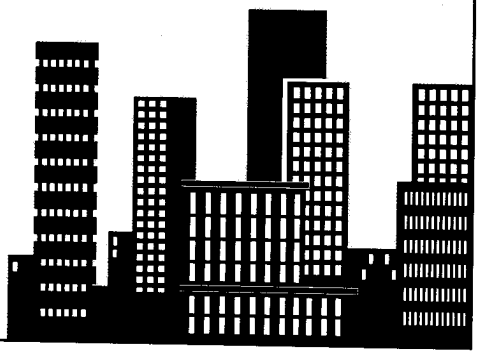
The more expensive computer system is A.

Let's compare the population of 3 Housing Estates in a city:

Housing Estates A : 8976 residents

Housing Estates B : 8892 residents

Housing Estates C : 8953 residents



Which Housing Estate is the most populated?

First we compare the digits in the **thousands** place.

8 9 7 6
8 8 9 2
8 9 5 3

All the digits in the thousands place are the same!

Then we compare the digit in the **hundreds** place.

8 **9** 7 6
8 **8** 9 2
8 **9** 5 3

9 is greater than 8.

Therefore Housing Estate B has the least number of residents.

We compare the digits in the **tens** place of the number of residents in Estates A and C.

8 9 **7** 6
8 9 **5** 3

7 is greater than 5.

Hence, Estate A is the most populated among the three Estates .

Can you arrange the populations in **ascending** (from the smallest to the largest) order?

8953	8892	8976

_____, _____, _____.

Arrange the following numbers in **descending** order (from the largest to the smallest number):

6521	6547	6541

_____, _____, _____.

Compare the digits in the thousands place first, followed by the digits in the hundreds place, then the digits in the tens place and finally the digits in the ones place.

IN-CLASS ACTIVITY

Use base-ten materials to show the following numbers:

a) 2987

b) 2980

c) 2935

d) 2915

Which is the **smallest** number?

Which is the **largest** number?

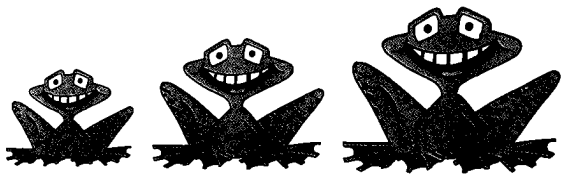
Let's Try

1. Circle the larger number.

a) 1343 1342

b) 4044 4440

c) 8800 8008



2. Arrange the following numbers in ascending order.

a) 7853, 7852, 7951 : _____, _____, _____.

b) 7021, 6091, 7091 : _____, _____, _____.

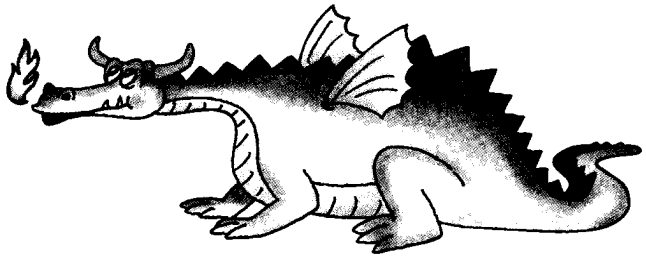
Practice 1B

1. Cross-out the smaller number.

a) 3074 ◄- - -► 3003

b) 4233 ◄- - -► 4332

c) 9099 ◄- - -► 9909



2. Compare the numbers. Circle the larger number.

a) 3605 3615

b) 2095 2090

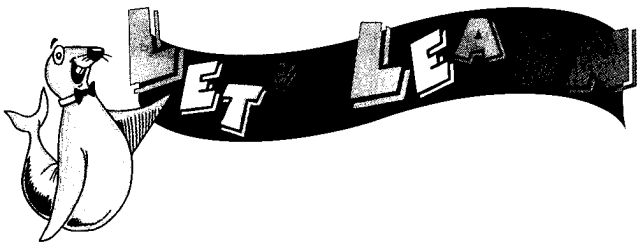
c) 9854 8964

3. Put the numbers in descending order.

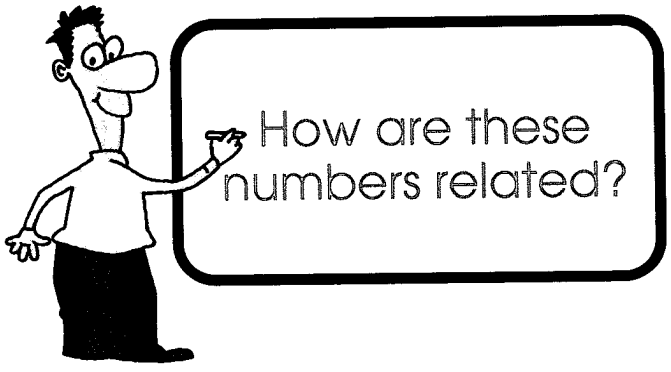
a) 2999, 8299, 999 : _____, _____, _____.

b) 5034, 5094, 5036 : _____, _____, _____.

Workbook Exercise 2

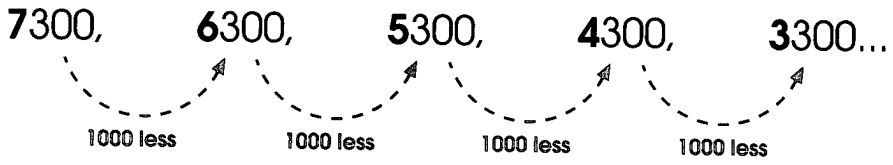


Number Patterns



7300, 6300, 5300, 4300, 3300...

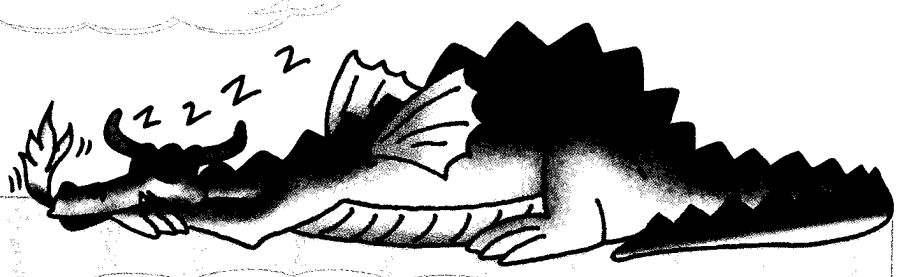
Compare the digits in the thousands place:



The numbers are arranged in a pattern.

6300 is 1000 less than 7300.
5300 is 1000 less than 6300.

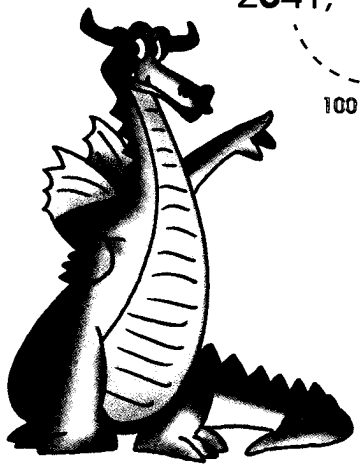
The numbers are arranged in descending order of 1000.

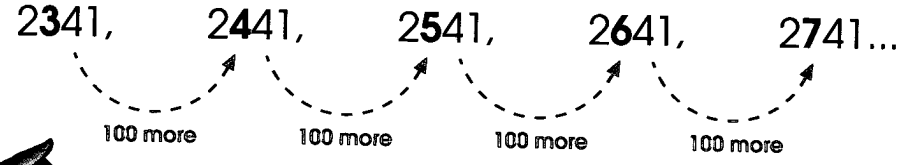


Can you identify a number pattern in the number arrangement below?

2341, 2441, 2541, 2641, 2741...

All the digits in the thousands place are the same so we compare the digits in the hundreds place:





The number pattern is in ascending order of 100.

IN-CLASS ACTIVITY

Identify a number pattern in the following sequences:

1) 99, 1099, 2099, ...

2) 3256, 3266, 3276, 3286, ...

Make a pattern using all 4-digit numbers in descending order of 100.

Let's Try

1. Complete the following. The first one has been done for you.

a) 1456 `+ 1000` ---► 2456

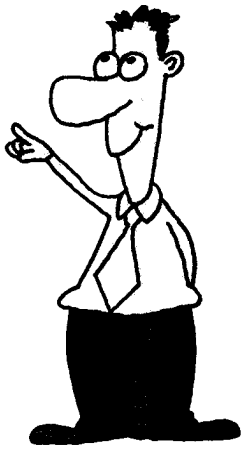
b) 9560 `[ ]` ---► 8560

c) 7649 `[ ]` ---► 7659

d) 1456 `[ ]` ---► 1356

e) 5036 `[ ]` ---► 5037

f) 3910 `[ ]` ---► 3909



2. Identify a number pattern for each of the following. Write down the next 3 numbers.

a) 1200, 1300, 1400, 1500, _____, _____, _____.

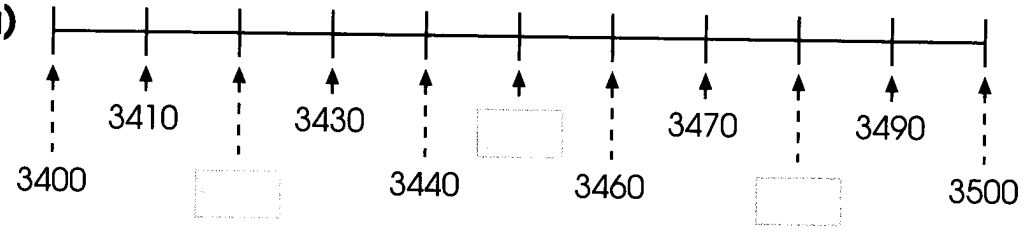
b) 2418, 2408, 2398, 2388, _____, _____, _____.

c) 4055, 5155, 6255, _____, _____, _____.

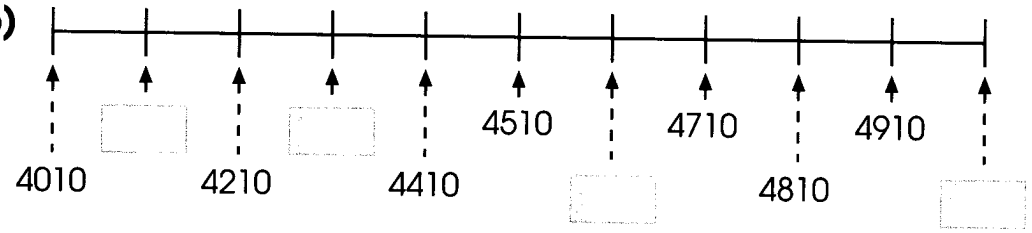
Practice 1C

1. What is the missing number in the boxes?

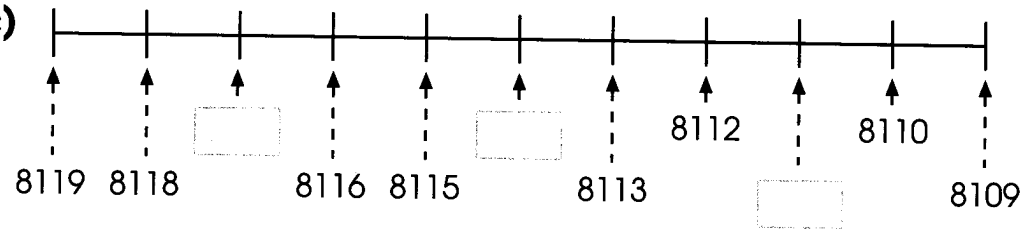
a)



b)



c)



2. Identify a number pattern for each of the following. Fill in the missing numbers.

a) 988, 998, _____, _____, 1028.

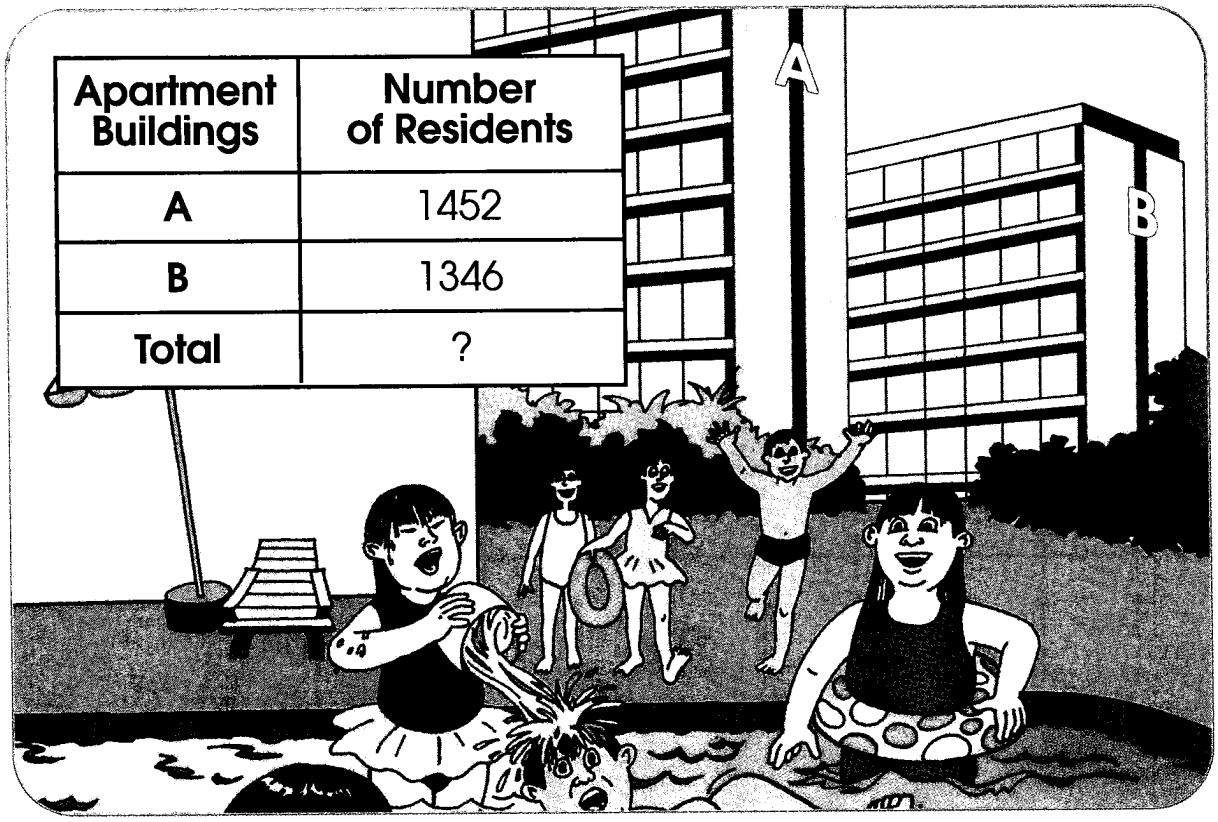
b) 1110, 1210, _____, 1410, _____, 1610.

c) 4037, _____, 2037, _____, 37.

d) 9340, 9240, _____, _____, 8940.

CHAPTER 2

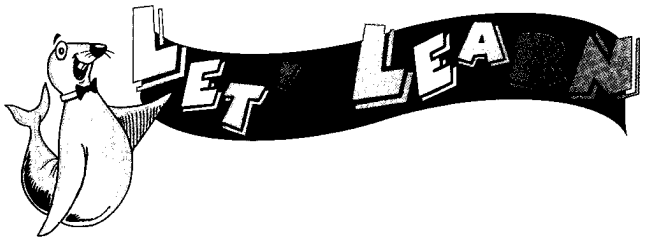
ADDITION AND SUBTRACTION WITHIN 10 000



Apartment Buildings	Number of Residents
A	1452
B	1346
Total	?

Sunshine Housing Estate has two apartment buildings A and B. The table shows the number of residents in each apartment building.

Do we add or subtract to find the total number of residents in Sunshine Housing Estate?



Adding Ones, Tens, Hundreds and Thousands

How do we add two 4-digit numbers like 1452 and 1346?

1452 + 1346 =

Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100 100 100 100	10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1

We can show this addition using number discs.

Working:

$$\begin{array}{r} 1\,4\,5\,2 \\ +\ 1\,3\,4\,6 \\ \hline \mathbf{2\,7\,9\,8} \end{array}$$

Add the ones, the tens, the hundreds and then the thousands!

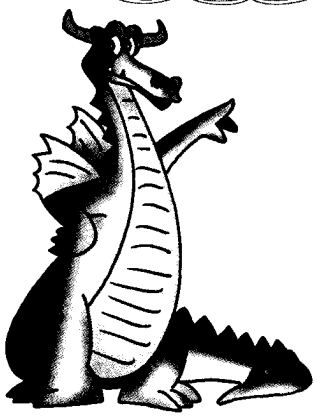
Therefore there are 2798 residents in Sunshine Housing Estate.

1245 + 1585 =

Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100 100 100 100 100	10 10 10 10 10 10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1
2	8	3	0

This addition involves renaming!

We add the ones first, then the tens, followed by the hundreds and finally the thousands.



When we add 5 ones to 5 ones, we get 10 ones. 10 ones are renamed as 1 ten.

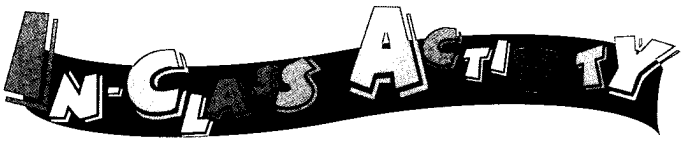
When 4 tens are added to 8 tens, we get 12 tens. We add the 1 ten to this 12 tens to get 13 tens. We rename 13 tens as 1 hundred and 3 tens.

Working:

$$\begin{array}{r} {\scriptstyle 1}\ 1\ {\scriptstyle 1}\ 5 \\ 1\ 2\ 4\ 5 \\ +\ 1\ 5\ 8\ 5 \\ \hline \mathbf{2\ 8\ 3\ 0} \end{array}$$

Add 2 hundreds to 5 hundreds to get 7 hundreds. Also add the 1 hundred to this 7 hundreds.

Therefore the answer is 2830.



Mary was given 3 sums to complete. She did the sums as follows:

a)
$$\begin{array}{r} 1538 \\ +\ 342 \\ \hline 1880 \end{array}$$

b)
$$\begin{array}{r} 2374 \\ +1442 \\ \hline 3716 \end{array}$$

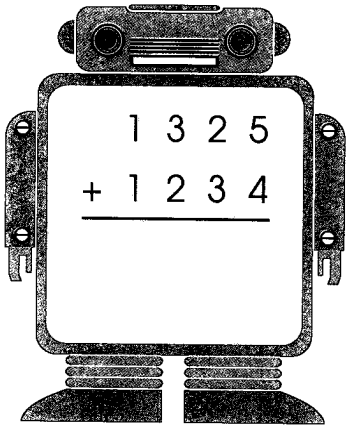
c)
$$\begin{array}{r} 5909 \\ +2815 \\ \hline 7724 \end{array}$$

Did she do the sums correctly? Discuss.

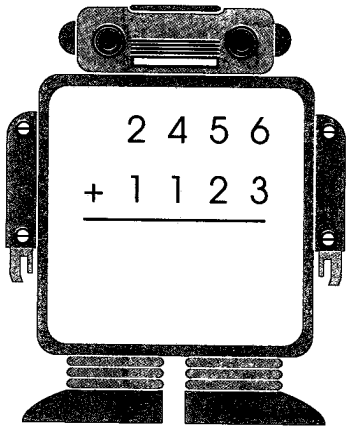
Let's Try

1. Add without renaming.

a)

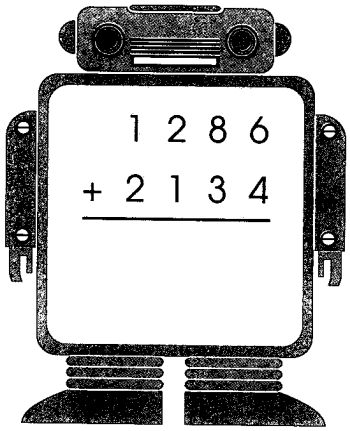


b)

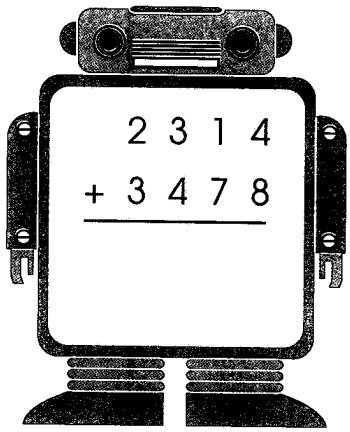


2. Add with renaming.

a)



b)



Practice 2A

1. There is a mistake in each of the sums below. Can you spot it? Can you do it correctly?

a)

$$\begin{array}{r} 1235 \\ +\ 333 \\ \hline 4565 \end{array}$$

b)

$$\begin{array}{r} 2066 \\ +\ 1554 \\ \hline 3520 \end{array}$$

c)

$$\begin{array}{r} 2742 \\ +\ 8073 \\ \hline 107115 \end{array}$$

2. Fill in the boxes.

a) 976 + 24 =

b) 1476 + 1112 =

c) 2066 + 1123 =

d) 1276 + 5214 =

3. Add the following. Show your working neatly in the boxes given.

a) 3342 + 11 = _____

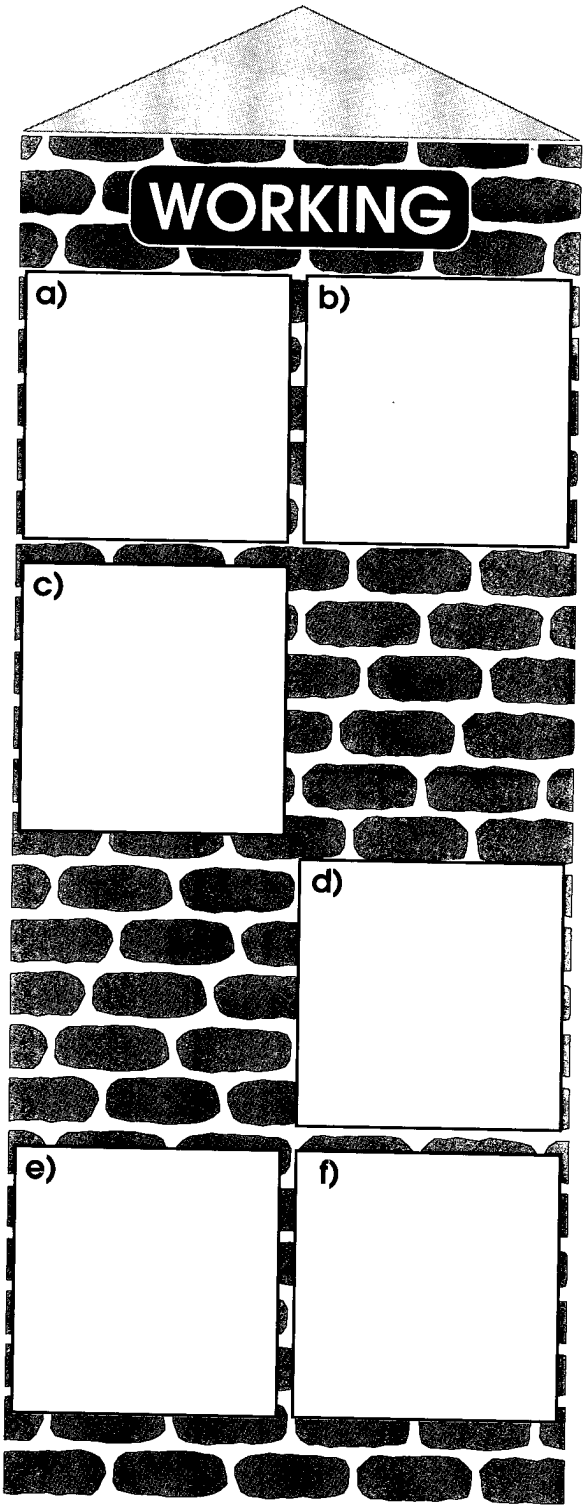
b) 1234 + 211 = _____

c) 7345 + 1214 = _____

d) 5115 + 3269 = _____

e) 6257 + 1356 = _____

f) 8134 + 1678 = _____



Subtracting Ones, Tens, Hundreds and Thousands

2345 - 1211 =

Thousands	Hundreds	Tens	Ones
1000 ~~1000~~	100 100 ~~100~~	10 10 10 ~~10~~	1 1 1 1 ~~1~~

Working:

$$\begin{array}{r} 2345 \\ -\ 1211 \\ \hline \mathbf{1134} \end{array}$$

Subtract the ones, the tens, the hundreds and finally the thousands!

The answer is 1134.

2550 - 1245 =

Thousands	Hundreds	Tens	Ones
1000 ~~1000~~	100 100 100 ~~100~~ ~~100~~	~~10~~ ~~10~~ ~~10~~ ~~10~~ 10	1 1 1 1 1 ~~1~~ 1 ~~1~~ ~~1~~ ~~1~~

This subtraction involves renaming!

We subtract the ones, then the tens, followed by the hundreds and finally the thousands.

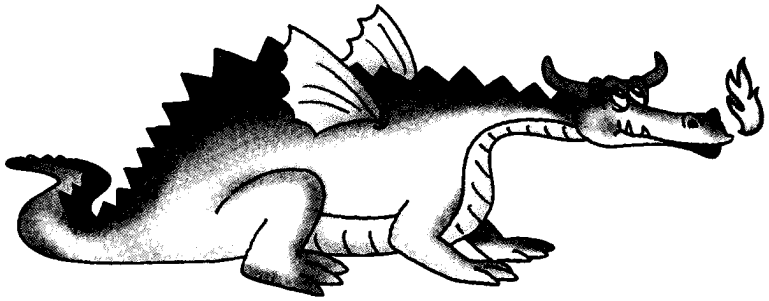
Working:

$$\begin{array}{r} 2\,5\,\overset{4}{\not{5}}\,\overset{1}{0} \\ -\ 1\,2\,4\,5 \\ \hline \mathbf{1\,3\,0\,5} \end{array}$$

There are not enough ones to subtract the 5 ones. We rename 5 tens to 4 tens and 10 ones. 5 ones subtracted from 10 ones is 5 ones.

IN-CLASS ACTIVITY

Get into groups of 4. Write down the year that most of the group members were born in (e.g. 1994). Write 3 different subtractions that will give this year as the answer.



Let's Try

1. Work out the following subtractions.

a)

$$\begin{array}{r} 8375 \\ -\ \ 35 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 3486 \\ -\ \ 362 \\ \hline \end{array}$$

c)

$$\begin{array}{r} 5473 \\ -\ 2339 \\ \hline \end{array}$$

d)

$$\begin{array}{r} 9111 \\ -\ 4468 \\ \hline \end{array}$$

2. Write the missing number showing your working clearly.

a) 1000 - 200 = _____

$$\begin{array}{r} {}^{0}\cancel{1}\,{}^{1}0\,0\,0 \\ -\quad 2\,0\,0 \\ \hline 8\,0\,0 \end{array}$$

b) 2000 - 1850 = _____

$$\begin{array}{r} {}^{1}\cancel{2}\,{}^{9}\cancel{0}\,{}^{1}0\,0 \\ -\ 1\,8\,5\,0 \\ \hline \end{array}$$

c) 3000 - 1604 = _____

$$\begin{array}{r} 3\,0\,0\,0 \\ -\ 1\,6\,0\,4 \\ \hline \end{array}$$

Practice 2B

1. Subtract the following .

a) 1988 - 8 = _____

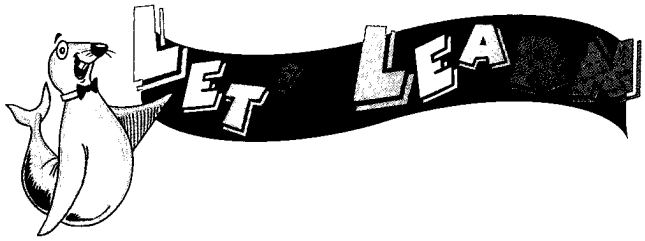
b) 2675 - 17 = _____

c) 4086 - 124 = _____

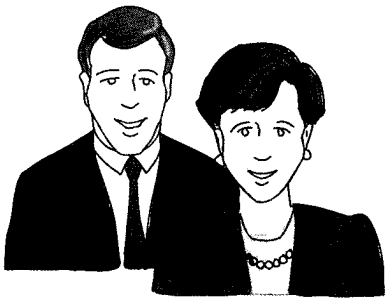
d) 5763 - 2341 = _____

e) 9277 - 3499 = _____

f) 4000 - 2178 = _____



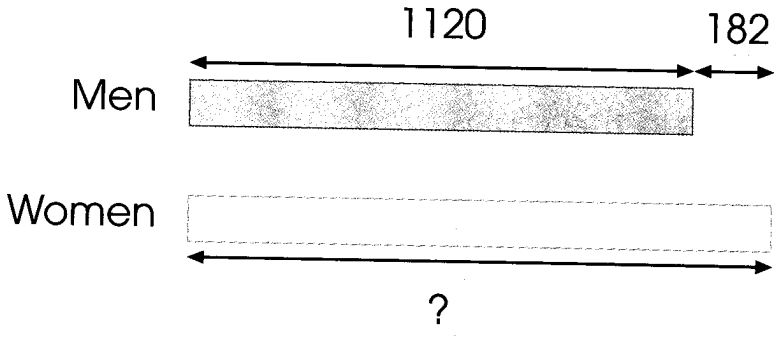
Word Problems



Example 1

There were 1120 men at a concert.
There were 182 more women than men.

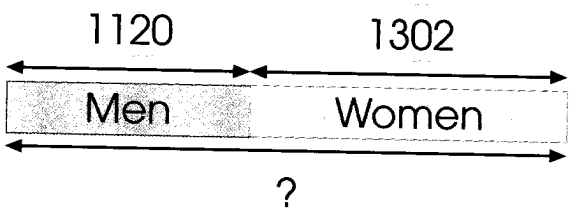
a) How many women were there?



$$1120 + 182 = 1302$$

There were 1302 women.

b) How many men and women were there altogether?



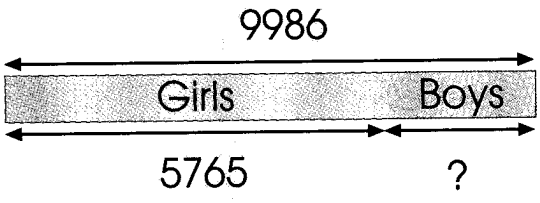
$$1120 + 1302 = 2422$$

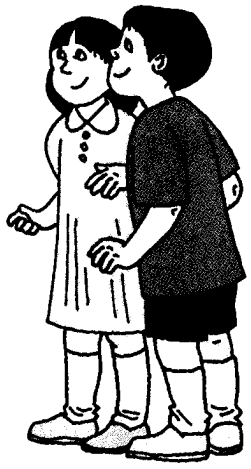
There were 2422 men and women altogether.

Example 2

There are 9986 boys and girls in the Children's Charity Club. 5765 of them are girls.

a) How many boys are there in the club?

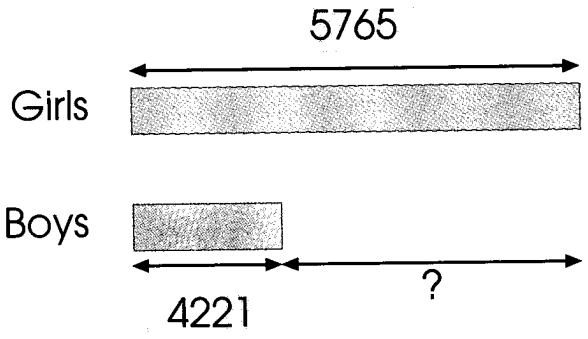




$9986 - 5765 = 4221$

There are 4221 boys in the club.

b) How many more girls than boys are there in the club?



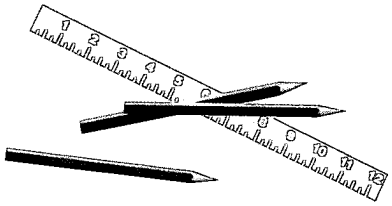
$5765 - 4221 = 1544$

There are 1544 more girls than boys in the club.

In-Class Activity

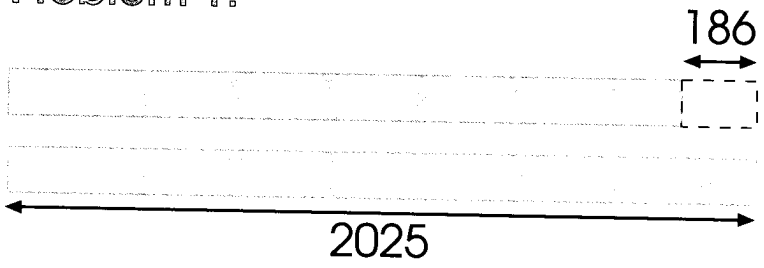
Creating your own problem sums

Materials needed: ruler, pencils.

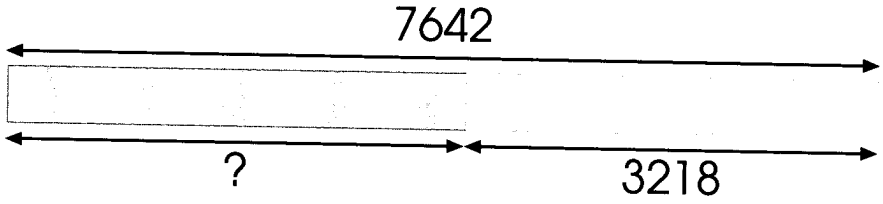


Using the models given below, think of a word problem for each of them.

Problem 1:



Problem 2:



Let's Try

Draw the models to represent the word problems. Use the models to find the answers.

1. There are 1234 students in a school. 575 are boys. How many girls are there in the school?

2. There are 299 lesser ducks than chickens in a farm. How many chickens are there if there are 1111 ducks?

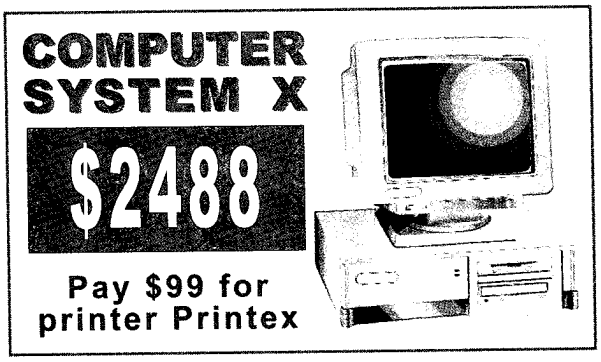
3. 1065 people attended a concert. There were 367 lesser children than adults. How many children attended the concert?

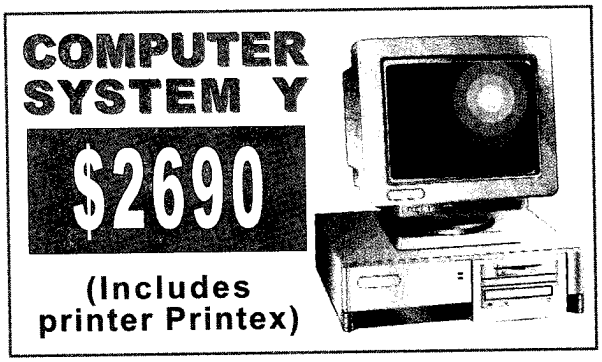
Practice 2C

Draw models to represent the word problems. Use the models to find the answers.

1. Fatimah made 2500 buns to sell in her bakery. At the end of the day, there were 16 buns left. How many buns were sold?

2. Ravi saw an advertisement on the sale of computers:

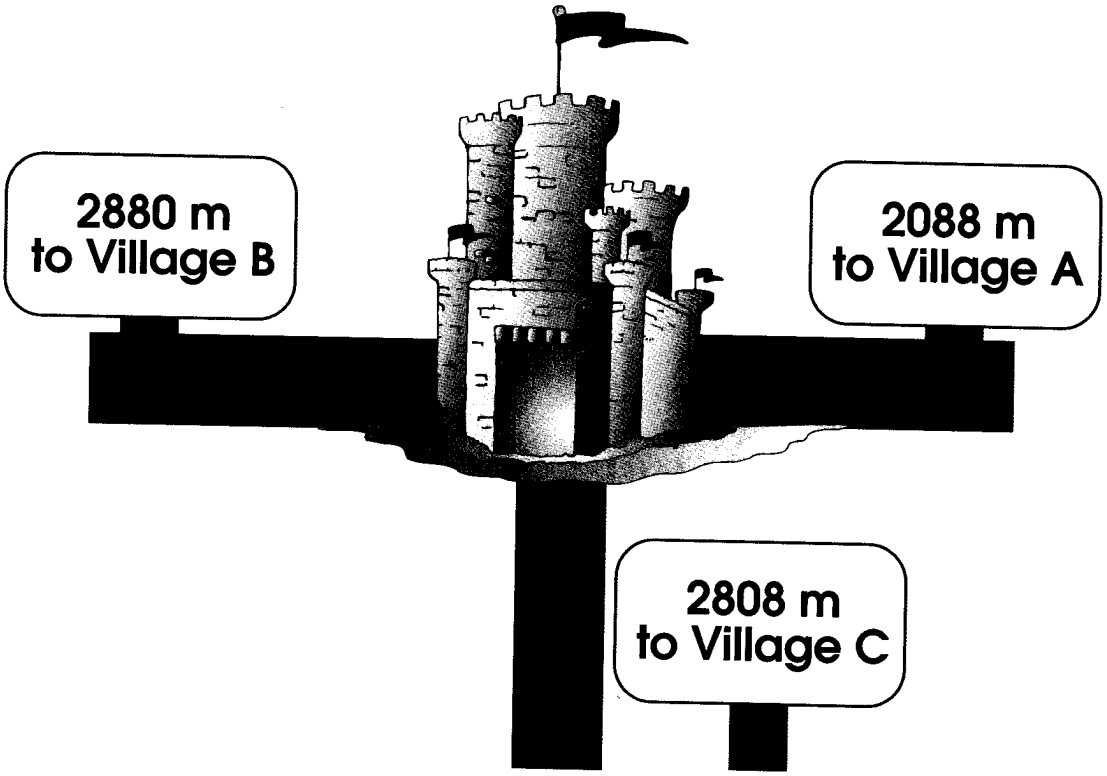




a) Which system costs lesser?

b) How much lesser does it cost?

3. Look at the signboards. They show the distances of villages A, B and C from the castle.

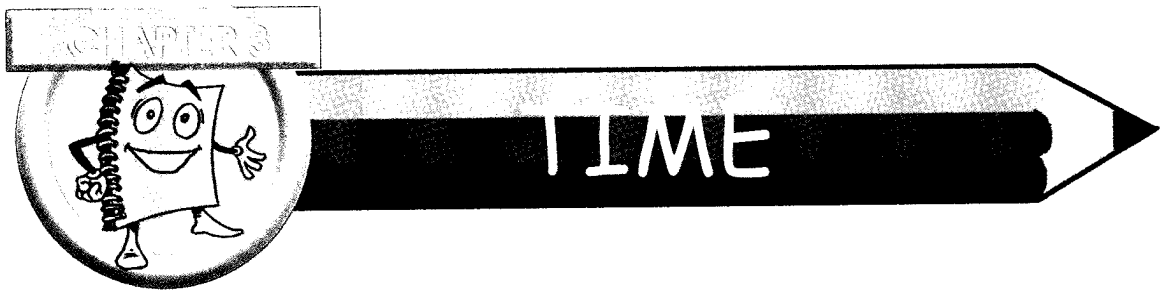


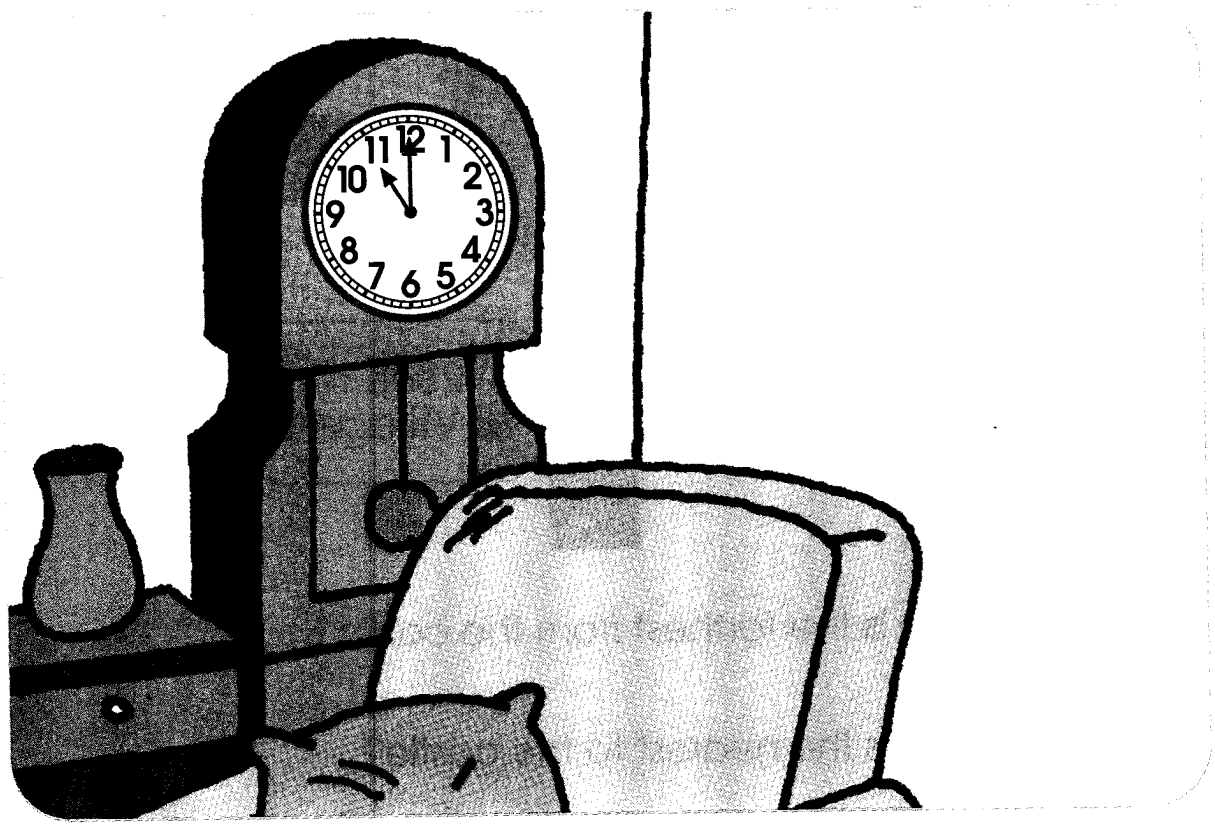
a) Which village is the farthest from the castle?

b) Which village is the nearest to the castle?

c) Draw a model to show the difference between the longest and shortest route.

d) What is the difference in distance between the farthest village and the nearest village from the castle?

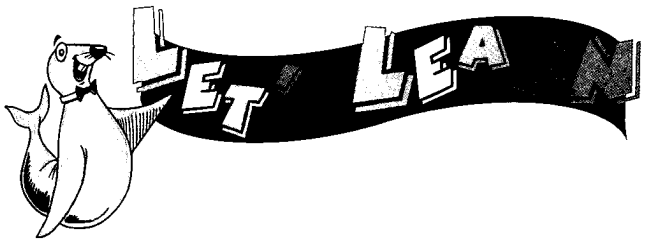




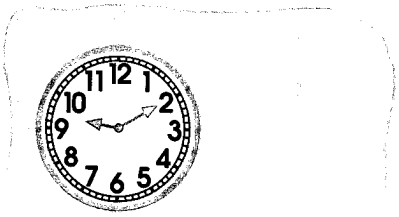
DO YOU KNOW?

What time is it now?

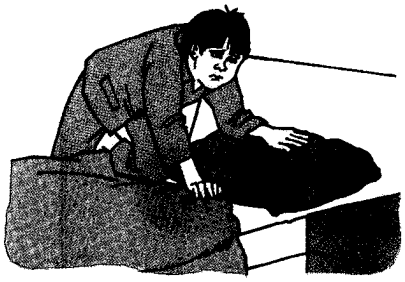
What are the different ways of telling the time?
List as many ways as you can think of.



Hours and Minutes



Peter goes to bed at 9.10 p.m. or 10 minutes past 9.



He wakes up at 6.45 a.m. or 15 minutes to 7.

We can also say that he wakes up at **quarter to seven**.

Ali wakes up at 6.30 a.m. or **30 minutes past 6 o'clock**.
We can say this time as **half past 6**.

IN-CLASS ACTIVITY

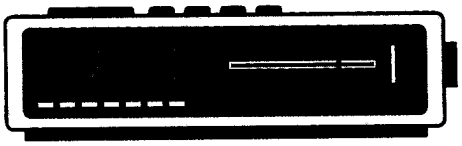
Work in pairs. Look at your school time-table.

Tell your partner the different times of the week when the maths lessons start. Use 'to' or 'past' to tell the time.

Let's Try

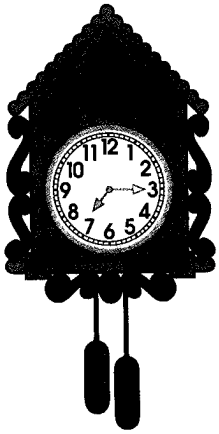
1. What time is it? Fill in the blanks.

a)



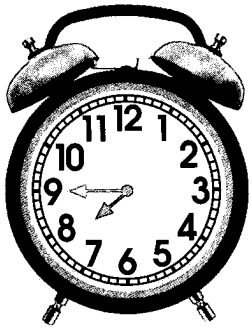
_____ min past 9

b)



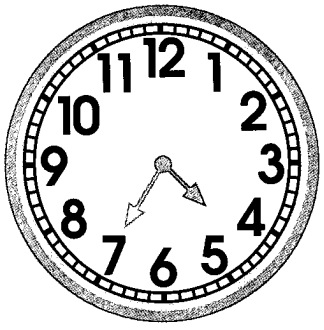
_____ min past 7

c)



15 min to _____

d)

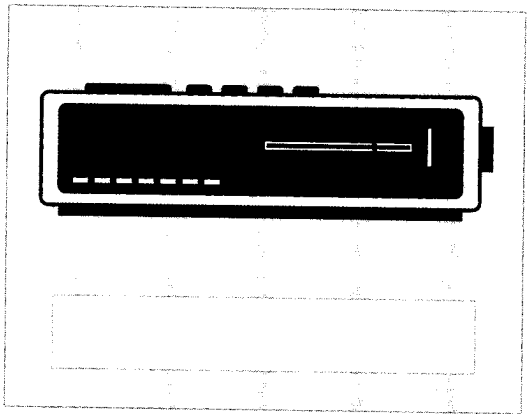


_____min to 5

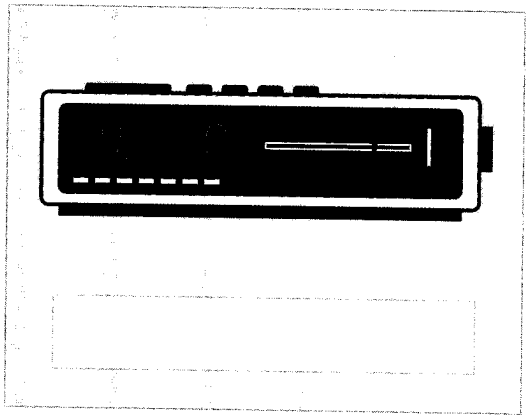
Practice 3A

1. Write the time shown using 'to' or 'past'.

a)



b)



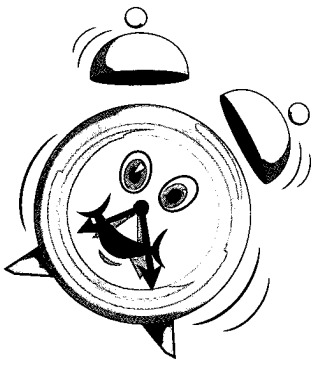
2. Fill in the blanks.

a) Peter goes to the library at 2.25 p.m.
2.25 is the same as _____ min past 2.

b) Father comes home from work at 6.20 p.m.
6.20 is the same as _____ min _____ 6.

c) Father goes to bed at 11.45 p.m.
11.45 is the same as _____ min or quarter to _____.

d) Mak does his homework at 7.50 p.m.
7.50 is the same as _____ min _____ 8.



Other Units of Time

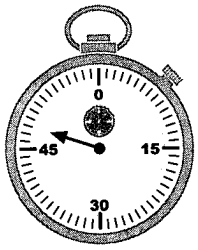
We learnt that hour (h) and minute (min) are units of time.

The **second** or **s** is also a unit of time.

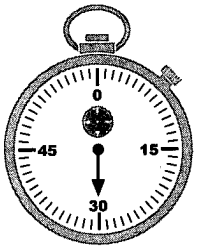
Remember:
1 h = 60 min

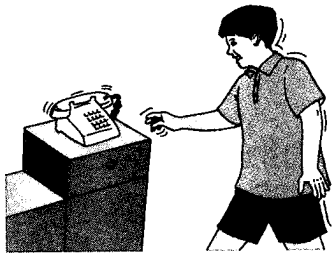
1 min = 60 s

The stopwatch shows the time a runner clocked.
How many seconds did the runner take?



John spent 30 seconds or 30 s walking towards the phone.



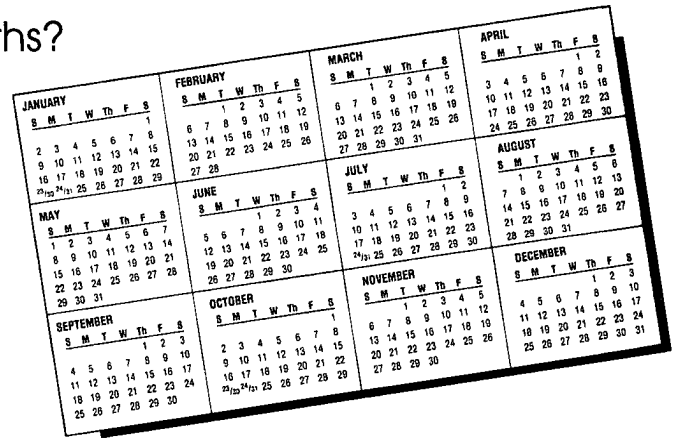


We also measure time in terms of **years**, **months**, **weeks** and **days**.

There are 12 months in 1 year.

Can you name the 12 months?

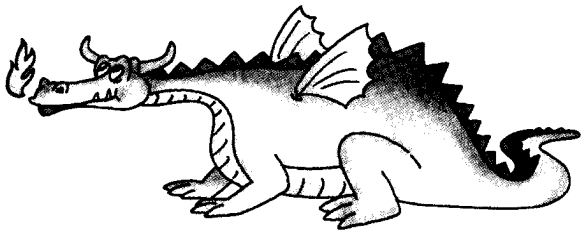
January, February, March, April...



In-Class Activity

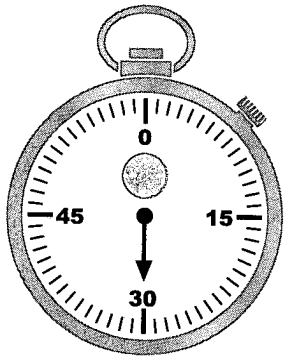
Get into groups. Discuss how long the following events usually take.

1. Brushing your teeth in the morning.
2. Getting a university degree.
3. Walking from one end of the classroom to the other.
4. Blinking your eyes twice.

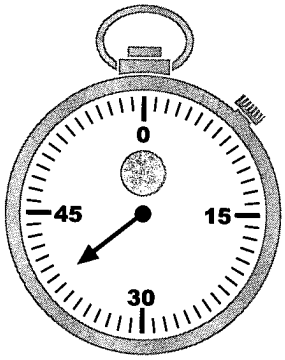


Let's Try

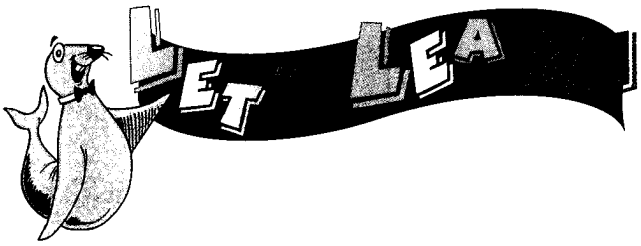
Look at the stopwatches and fill in the blanks.

a) 

The phone rang for _____ s.

b) 

Andy took _____ s to swim in the 50 m race.



Conversion between Units of Time

Jane used the phone for 2 minutes. How many seconds are there in 2 minutes?

$$1 \text{ min} = 60 \text{ s}$$
$$2 \text{ min} = 60 \text{ s} + 60 \text{ s}$$
$$= 120 \text{ s}$$

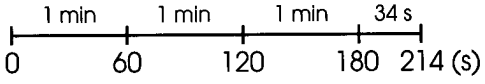
There are 120 seconds in 2 minutes.
Jane used the phone for 120 s.

Rani took 4 min 35 s to walk from her house to the grocery store. How many seconds did she take?

$$4 \text{ min} = 60 \text{ s} + 60 \text{ s} + 60 \text{ s} + 60 \text{ s}$$
$$4 \text{ min } 35 \text{ s} = 60 \text{ s} + 60 \text{ s} + 60 \text{ s} + 60 \text{ s} + 35 \text{ s}$$
$$= 240 \text{ s} + 35 \text{ s}$$
$$= 275 \text{ s}$$

She took 275 s.

Minghua timed his climb up a building. It took him 214 s to reach the top. How many minutes and seconds did he take?



$$214 \text{ s} = 1 \text{ min} + 1 \text{ min} + 1 \text{ min} + 34 \text{ s}$$
$$= 3 \text{ min } 34 \text{ s}$$

He took 3 min 34 s.

A movie went on for 2 h 15 min. How long was the movie in minutes?

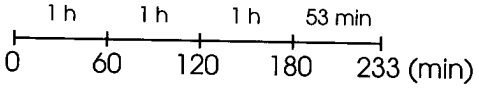
$2\text{ h} = 60\text{ min} + 60\text{ min}$
$= 120\text{ min}$

$2\text{ h }15\text{ min} = 120\text{ min} + 15\text{ min}$
$= 135\text{ min}$

Remember:
1 h = 60 min

The movie was 135 min long.

What is 233 minutes in hours?

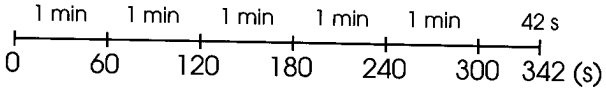


$233\text{ min} = 1\text{ h} + 1\text{ h} + 1\text{ h} + 53\text{ min}$
$= 3\text{ h }53\text{ min}$

233 minutes is 3 h 53 min.

Let's Try

1. It took Sarah 342 s to reach the bus-stop from her office. How many minutes and seconds did she take?



2. Kelvin has been working at the airport for the past 80 months. How long has he been working there in years and months?

80 months = 12 + __ + __ + __ + __ + __ + 8

He has been working there for __ years __ months.

3. Ahmed's chick is 2 weeks old. How many days is that?

Remember:
1 week = 7 days

4. Andy's kitten is 25 days old. How many weeks and days is that?

Practice 3B

1. Fill in the boxes.

a) 4 weeks 6 days = day(s)

b) 17 days = week(s) day(s)

c) 3 min 20 s = min

d) 300 s = min s

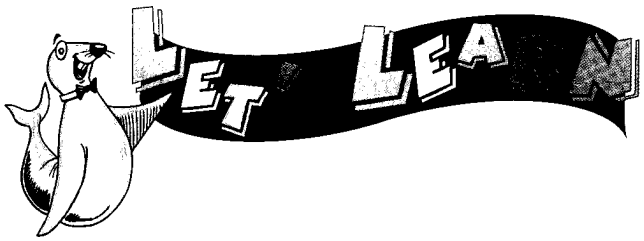
e) 2 years 1 month = month(s)

f) 35 months = year(s) month(s)

g) 8 weeks = day(s)

h) 16 days = week(s) day(s)

2. Minghua took 200 s to jog round the track.
John took 2 min 55 s to jog round the same track.
Who took a shorter time?



Addition and Subtraction of Time

Addition

Joyce spent 1h 20 min at the market on Monday and 1 h 55 min on Friday. How much time did she spend altogether at the market on both days?

1 h 20 min $\xrightarrow{+\ 1\ h}$ 2 h 20 min $\xrightarrow{+\ 55\ min}$ 2 h 75 min

2 h 75 min = 3 h 15 min

75 min = 60 min + 15 min
= 1 h + 15 min

She spent 3 h 15 min altogether at the market on both days.

A concert started at 7.30 p.m. It ended 3 h 45 min later. At what time did the concert end?

7.30 p.m. is 7 h 30 min after 12 p.m. in the afternoon.

7.30 a.m. $\xrightarrow{+\ 3\ h}$ 10.30 a.m. $\xrightarrow{+\ 45\ min}$ 11.15 a.m.

30 min + 45 min = 75 min
= 1 h 15 min
10 h + 1 h 15 min
= 11 h 15 min

The concert ended at 11.15 a.m.

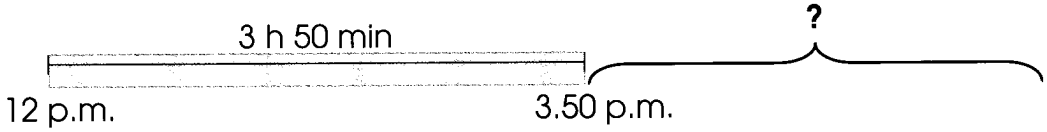
Subtraction

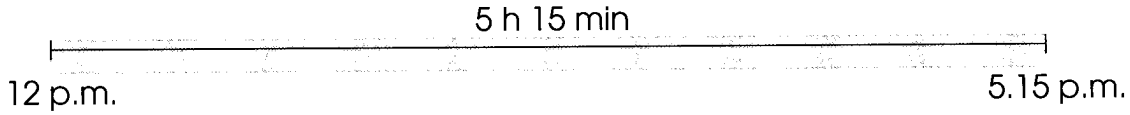
Mary started studying at 10.30 a.m. Her brother started studying 1 h 30 min before her. At what time did her brother start studying?

10.30 a.m. --(- 1 h)--> 9.30 a.m. --(- 30 min)--> 9 a.m.

Her brother started studying at 9 a.m.

Mei Ling started doing her homework at 3.50 p.m. She finished the homework at 5.15 p.m. How long did she take to finish the homework?

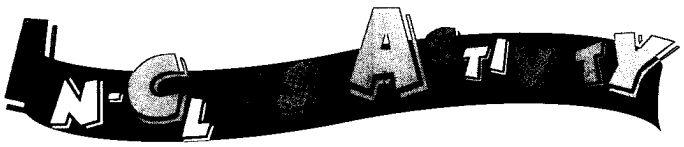




3.50 p.m. --(+10 min)--> 4 p.m. --(+1 h)--> 5 p.m. --(+15 min)--> 5.15 p.m.

1 h + 10 min + 15 min = 1 h 25 min

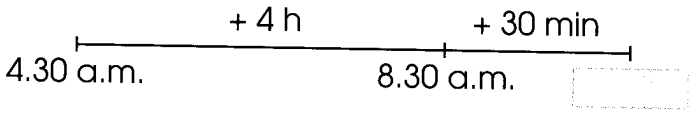
She took 1 h 25 min to finish her homework.

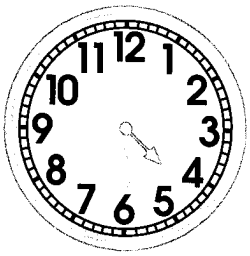


Work in pairs. Write down the time each of you woke up this morning. What time did you reach school? How many hours and minutes did you spend getting ready and reaching school? Write this time in minutes. Who spent more time?

Let's Try

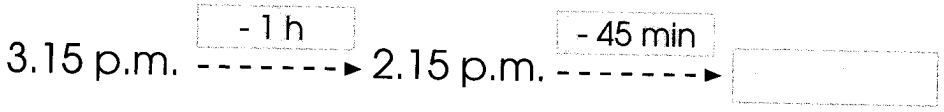
1. Maria reaches her office at 4.30 a.m to start her work. Ana starts her work 4 h 30 min after Maria does. At what time does Ana start her work?



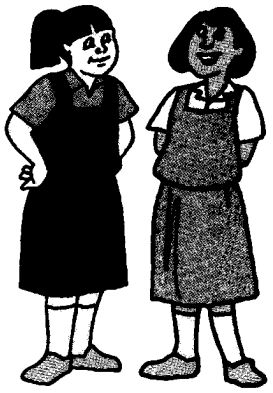


Ana starts her work at _____ a.m.

2. Susan finished her homework at 3.15 p.m. Siti finished her homework 1 h 45 min before Susan did. At what time did Siti finish her homework?



Siti finished her homework at _____ p.m.

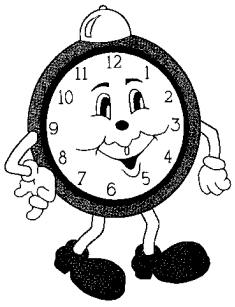


3. Siti read the newspaper from 6.20 a.m. till 7.35 a.m. How much time did she spend reading the newspaper?

4. Peter started surfing the internet at 11.30 a.m. and stopped at 2.20 p.m. How much time did he spend surfing the internet?

Practice 3C

1. Fill in the blanks.



a) 1 h 30 min + 1 h 45 min = _____ h _____ min

b) 2 h 10 min - 55 min = _____ h _____ min

c) 3 h 15 min + 6 h 50 min = _____ h _____ min

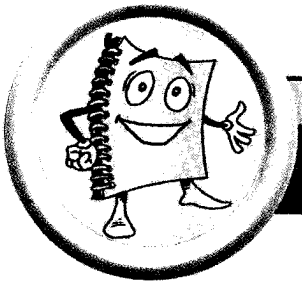
d) 7 h 20 min - 2 h 40 min = _____ h _____ min

2. Hassan watched TV from 7.40 p.m. till 9.10 p.m. How much time did he spend watching TV?

3. Jane took 3 h 5 min to finish revising for her Maths test. Devi took 45 min less than Jane. How long did Devi take to revise for the Maths test?

4. Minghua started cycling round the park at 7.20 a.m. Rani started cycling 1 h 55 min later than Minghua. At what time did Rani start cycling?

Workbook Exercise 4



REVISION 1

Exercise 1

1. Write in the numbers.

a) One thousand and fifty.

b) Four thousand one hundred and forty.

c) Nine thousand and fifty.

2. Fill in the blanks.

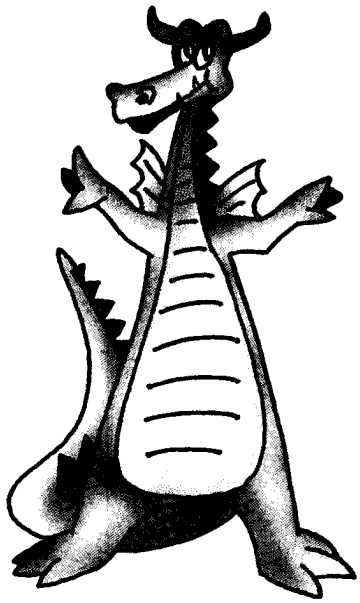
a) 919 = 900 + + 9

b) 2095 = 2000 + 90 +

c) 3714 = + 700 + 10 + 4

d) 9424 = 9000 + 400 + + 4

e) 6630 = 6000 + + 30



3. Circle the larger number.

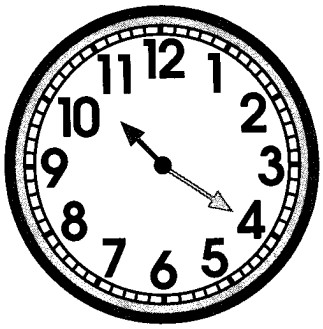
a) 2334, 2343

b) 5101, 5011

c) 8787, 7887

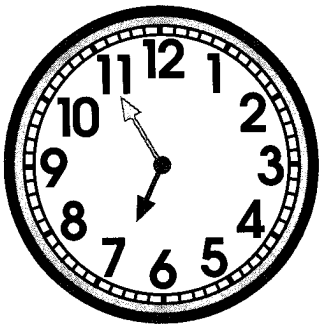
4. Fill in the blanks.

a)



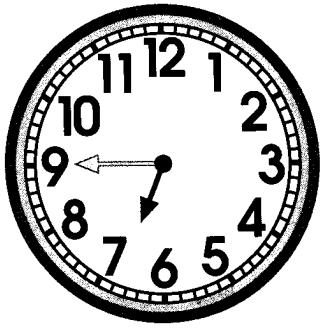
_____ min past 10

b)



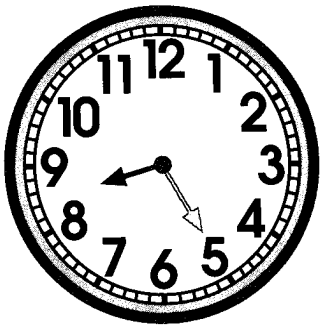
_____ min to 7

c)



_____ min to 7

d)



_____ min past 8

5. Fill in the boxes.

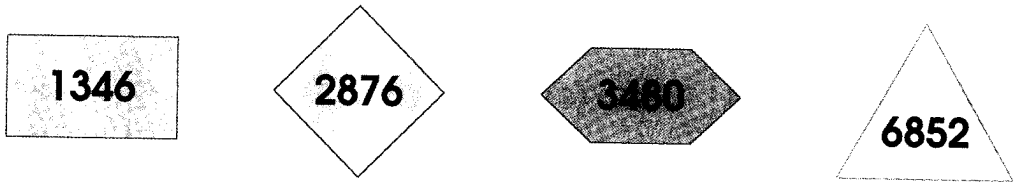
a) What number is 1 more than 999?

b) What number is 10 less than 5433?

c) What number is 100 more than 7122?

Exercise 2

1. Look at the numbers shown below carefully and answer the questions that follow.



a) In which number does the digit 7 stand for '70'?

b) In which two numbers does the digit 6 stand for '6'?

c) In which number does the digit 2 stand for '2000'?

d) In which two numbers does the digit 8 stand for '800'?

e) Which is the largest number of them all?

2. Fill in the missing numbers.

a) 1275 + 12 =

b) 1654 + 121 =

c) 2067 + 132 =

d) 3876 - 276 =

e) 2000 - 100 =

f) 3000 - 250 =

3. Fill in the blanks.

a) 32 months = _____ year(s) _____ month(s)

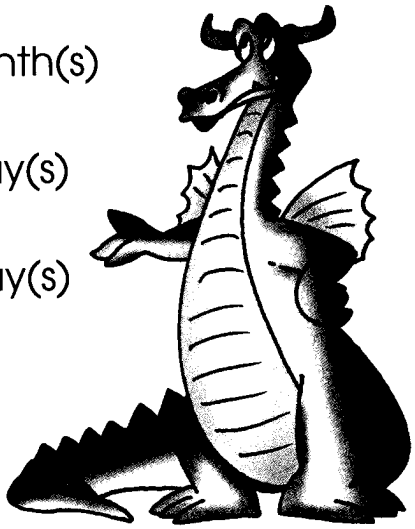
b) 15 months = _____ year(s) _____ month(s)

c) 12 days = _____ week(s) _____ day(s)

d) 24 days = _____ week(s) _____ day(s)

e) 65 min = _____ h _____ min

f) 120 s = _____ min _____ s



4. Circle the smaller number.

a)	998	989	**b)**	5841	5814
c)	4755	4577	**d)**	6366	6636

5. Fill in the blanks.

a) 3 h 30 min → (+ 4 h) _____ h _____ min → (+ 40 min) _____ h _____ min

b) 2 h 15 min → (+ 50 min) _____ h _____ min

c) 1 h 38 min → (+ 2 h) _____ h _____ min → (+ 12 min) _____ h _____ min

Exercise 3

1. Maria opens her tailoring shop at 11.30 a.m. every morning. Her shop is open for 9 h 30 min every day. What time does she close her shop?

2. Jane volunteers once a week at the local Charity Club. She starts at 7.15 p.m. and finishes at 9.30 p.m. How much time does she spend volunteering every week?

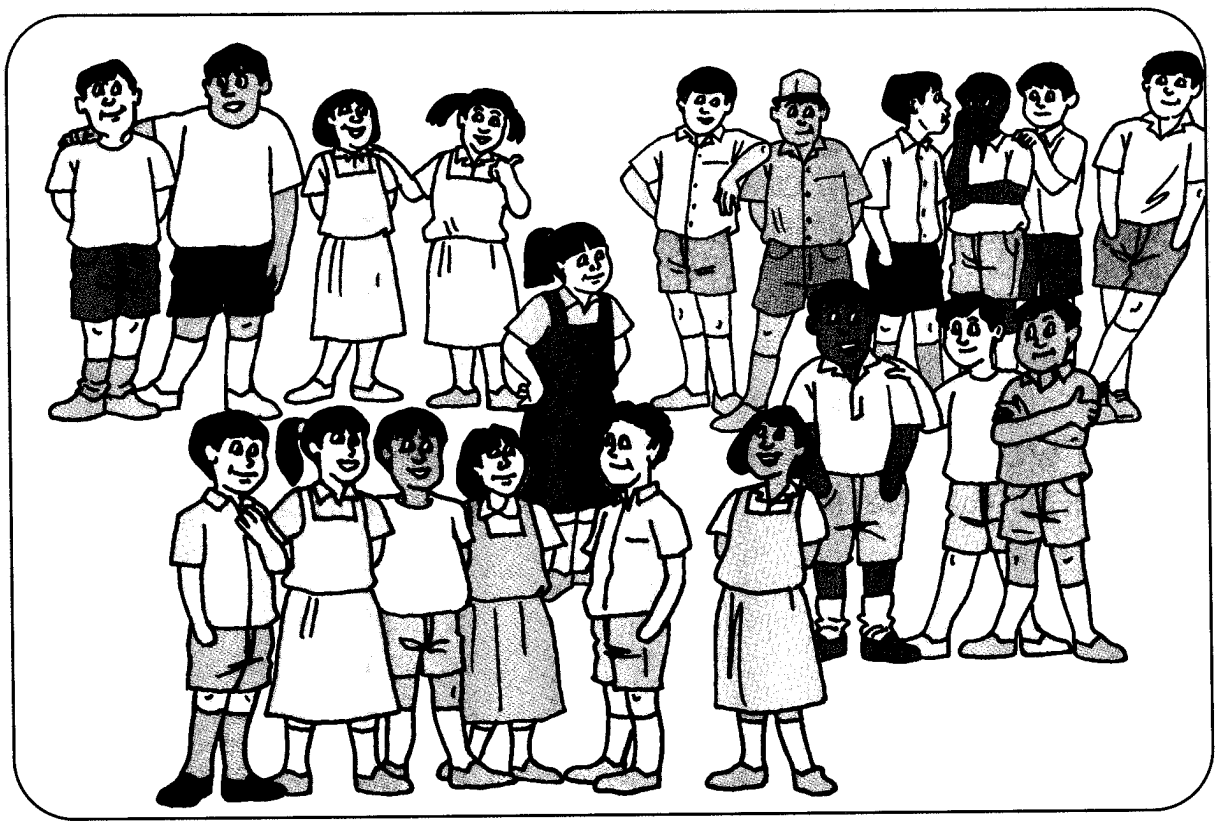
3. At a walkathon, Ahmed started walking at 7.20 a.m. and completed the race at 9.35 a.m. How much time did he take?

4. There were 8250 spectators at a tennis match. 6872 were men and the rest were women. How many women were there?

5. There were 1280 books on 2 shelves. 450 books were on the first shelf. How many books were there on the second shelf?

CHAPTER 4

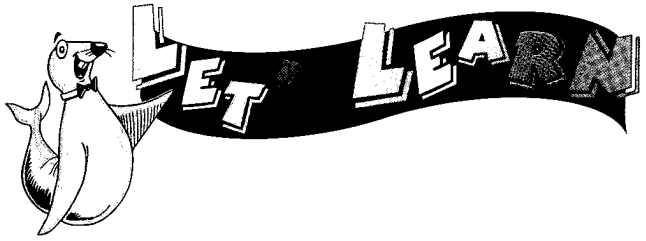
MULTIPLICATION & DIVISION I



DO YOU KNOW?

How many children are there altogether?

Group the children into groups of exactly 3 each.
How many children do not belong to any group?



Revising Multiplication

Previously we learnt the multiplication and division tables of 2, 3, 4, 5 and 10!

Do you remember multiplication-tables?

X	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Do you notice any pattern in the table?

Let's Try

Identify the multiplication pattern and fill in the blanks.

a) 2, 4, 6, 8, ___, ___, ___, ___, ___, ___.

b) 3, 6, 9, 12, ___, ___, ___, ___, ___, ___.

c) 4, ___, 12, ___, ___, 24, ___, ___, 36, ___.

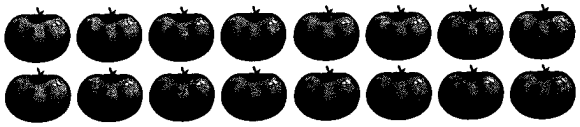
d) ___, ___, 15, 20, 25, ___, ___, ___, 45, ___.

e) ___, 20, ___, 40, ___, ___, 70, ___, 90, ___.

Multiplying Ones, Tens and Hundreds

What is 8 multiplied by 2?

$8 \times 2 = 16$



We can also write this as,

$$\begin{array}{r} 8 \\ \times\ 2 \\ \hline 16 \end{array}$$

8 ones multiplied by 2 gives **16 ones**.

The answer is 16.
We can say that the **product** of 8 and 2 is 16.

Find the product of 21 and 4.

21 x 4 =

We can write this as,

$$\begin{array}{r} 21 \\ \times\ 4 \\ \hline 4 \end{array} \Rightarrow \begin{array}{r} 21 \\ \times\ 4 \\ \hline 84 \end{array}$$

The answer is 84.

10 10	1
10 10	1
10 10	1
10 10	1

First we multiply the 1 **one** by 4 to get 4 ones.

Then we multiply the 2 **tens** by 4 to get 8 tens.

What is the product of 232 and 3?

232 x 3 =

We can write this as,

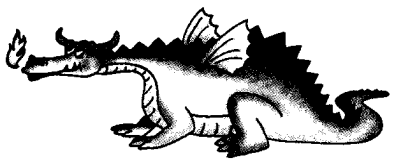
$$\begin{array}{r} 232 \\ \times\ 3 \\ \hline 6 \end{array} \Rightarrow \begin{array}{r} 232 \\ \times\ 3 \\ \hline 96 \end{array} \Rightarrow \begin{array}{r} 232 \\ \times\ 3 \\ \hline 696 \end{array}$$

100 100	10 10 10	1 1
100 100	10 10 10	1 1
100 100	10 10 10	1 1

First we multiply the 2 **ones** by 3 to get 6 ones.

Then we multiply the 3 **tens** by 3 to get 9 tens.

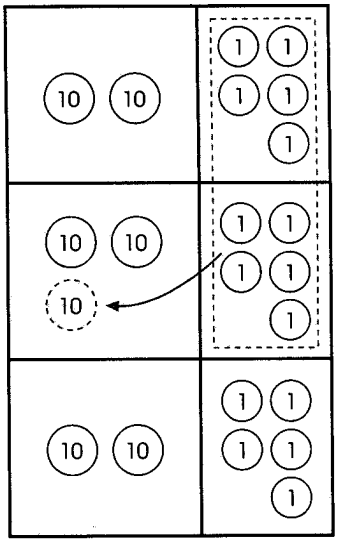
Finally we multiply the 2 **hundreds** by 3 to get 6 hundreds.



The product is 696.

More Multiplication

25 x 3 = [ ]



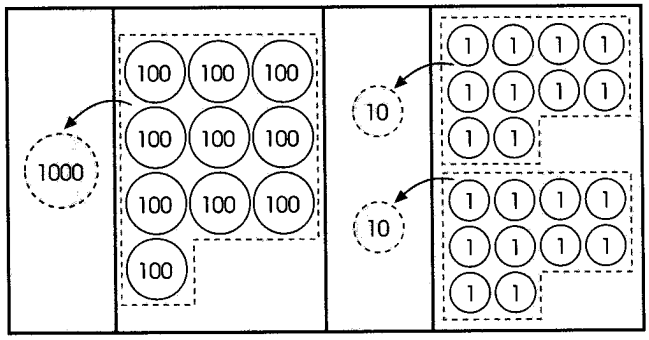
$$\begin{array}{r} {}^{1}2\,5 \\ \times\ 3 \\ \hline 7\,5 \end{array}$$

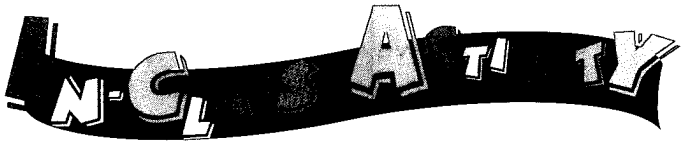
First we multiply 5 **ones** by 3 to get 15 ones. 15 ones can be renamed to 1 ten and 5 ones.

Then we multiply 2 **tens** by 3 to get 6 tens. Finally, we add the 1 ten to the 6 tens to get 7 tens.

204 x 5 = [ ]

$$\begin{array}{r} 2\,{}^{2}0\,4 \\ \times\ 5 \\ \hline 1\,0\,2\,0 \end{array}$$





Work in pairs. Use base-ten materials to solve the following multiplications:

35 x 5 257 x 5

Explain how you got the answer to your partner.

Let's Try

Solve the following.

a) $\begin{array}{r} 6 \\ \times\ 4 \\ \hline \end{array}$

b) $\begin{array}{r} 60 \\ \times\ 4 \\ \hline \end{array}$

c) $\begin{array}{r} 600 \\ \times\ 4 \\ \hline \end{array}$

d) $\begin{array}{r} 23 \\ \times\ 5 \\ \hline \end{array}$

e) $\begin{array}{r} 200 \\ \times\ 4 \\ \hline \end{array}$

f) $\begin{array}{r} 421 \\ \times\ 2 \\ \hline \end{array}$

g) $\begin{array}{r} 55 \\ \times\ 3 \\ \hline \end{array}$

h) $\begin{array}{r} 194 \\ \times\ 5 \\ \hline \end{array}$

i) $\begin{array}{r} 805 \\ \times\ 4 \\ \hline \end{array}$

Practice 4A

Fill in the blanks.

a) 5 x 6 =

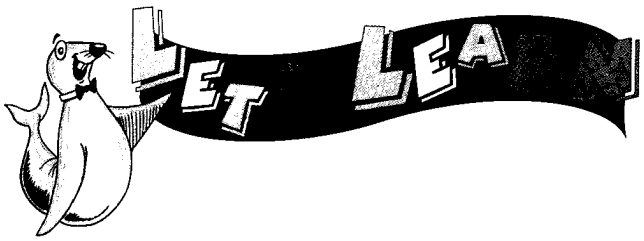
b) 6 x 25 =

c) 4 x 58 =

d) 3 x 203 =

e) 5 x 390 =

f) 10 x 52 =



Quotient and Remainder of Division

David and John share 9 chocolate bars equally. How many chocolate bars does each of them get? How many chocolate bars are left over?

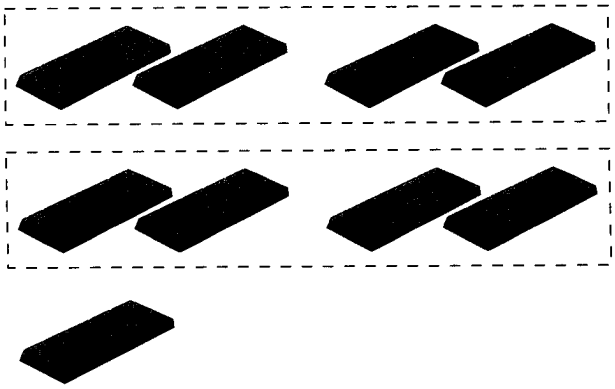
$9 \div 2 = 4$ remainder 1

or $= 4$ R1

$$\begin{array}{r} 4 \\ 2\overline{)9} \\ -8 \\ \hline 1 \end{array}$$

4 → **Quotient**

1 → **Remainder**



Each of them gets 4 chocolate bars and 1 chocolate bar is left over.

We say: When 9 is divided by 2, the **quotient** is 4
and the **remainder** is 1.

Ravi has 23 stamps. He pastes them equally onto 4 pages. How many stamps are there on each page? How many stamps are left over?

$4 \times 4 = 16$
$4 \times 5 = 20$
$4 \times 6 = 24$

$23 \div 4 = 5$ R 3

$$\begin{array}{r} 5 \text{ R } 3 \\ 4\overline{)23} \\ -20 \\ \hline 3 \end{array}$$

Both "20" and "24" are close to "23". But "20" is the smaller number closest to "23". 4 multiplied by 5 gives "20".

There are 5 stamps on each page and 3 stamps left over.

We say: When 23 is divided by 4, the **quotient** is 5
and the **remainder** is 3.

Let's Try

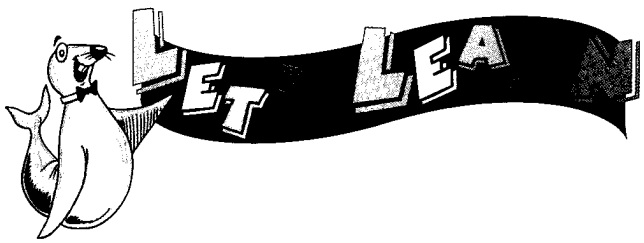
1. Answer the following questions.

a) What number can be multiplied by 7 to give a number closest to "37"?

b) What is the quotient and remainder when 37 is divided by 7?

2. Find the quotient and remainder in each of the following.

a) $4\overline{)9}$ **b)** $5\overline{)17}$ **c)** $5\overline{)49}$



Dividing Hundreds, Tens and Ones

Divide 79 by 2.

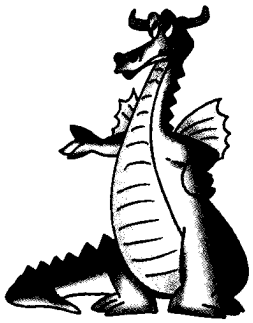
7 tens ÷ 2 = ?
7 tens ÷ 2 = 3 R1

2 x 2 = 4
2 x 3 = 6
2 x 4 = 8

Both "8" and "6" are close to "7". But "6" is less than "7". We choose the smaller number!

$$\begin{array}{r} 3 \\ 2\overline{)79} \\ -6 \\ \hline 1 \end{array}$$ ← **1 ten is the remainder**

1 ten = 10 ones



9 ones + 10 ones = 19 ones

19 ones ÷ 2 = ?
19 ones ÷ 2 = 9 R1

2 x 8 = 16
2 x 9 = 18
2 x 10 = 20

"18" is the smaller number closest to "19"!

$$\begin{array}{r} 39 \\ 2\overline{)79} \\ -6 \\ \hline 19 \\ -18 \\ \hline 1 \end{array}$$

When 79 is divided by 2, the quotient is _____ and the remainder is _____ .

Divide 127 by 3.

12 tens ÷ 3 = 4

$$\begin{array}{r} 4 \\ 3\overline{)127} \\ -12 \\ \hline 0 \end{array}$$

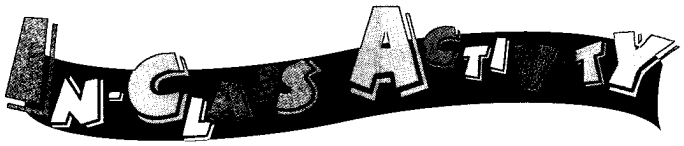
3 x 4 = 12

7 ones ÷ 3 = 2 R1

$$\begin{array}{r} 42 \\ 3\overline{)127} \\ -12 \\ \hline 7 \\ -6 \\ \hline 1 \end{array}$$

3 x 2 = 6

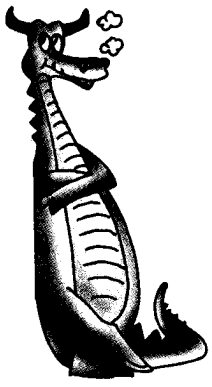
When 127 is divided by 3, the quotient is _____ and the remainder is _____ .



Quotient & Remainder

Bring 24 beans or counters. Can you arrange them in groups of 2, 3, 4, 5 or 10 without any remainder?

I can arrange them in 6 groups of 4,



I can arrange them in 2 groups of 10,

and 1 group of four,  .

Groups of _____ and _____ do not have any remainders.

Let's Try

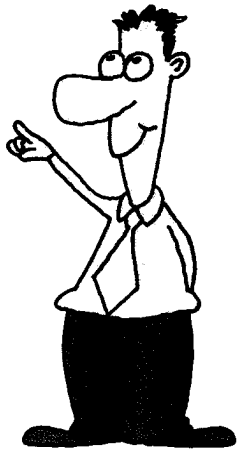
Divide the following.

a) $2\overline{)57}$

b) $4\overline{)92}$

c) $5\overline{)77}$

d) $3\overline{)642}$



Practice 4B

Write the quotient and remainder in the given boxes.

a) $9 \div 2 =$

b) $128 \div 3 =$

c) $11 \div 3 =$

d) $143 \div 2 =$

e) $40 \div 5 =$

f) $163 \div 4 =$

g) $38 \div 6 =$

h) $182 \div 9 =$

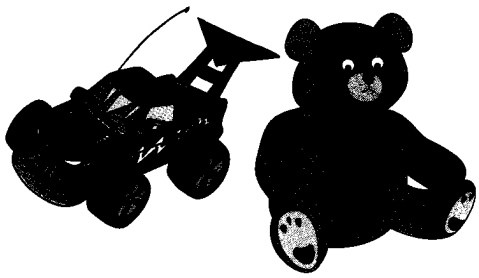
i) $27 \div 4 =$

j) $207 \div 4 =$

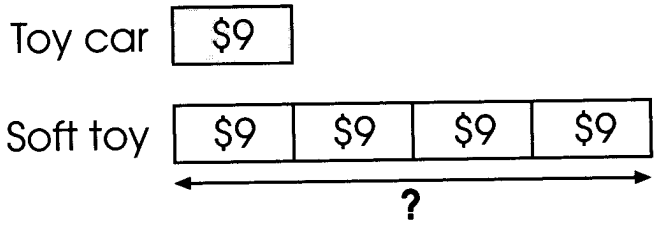
Word Problems

A toy car costs $9. A soft toy costs 4 times as much as the toy car.

a) What is the cost of the soft toy?

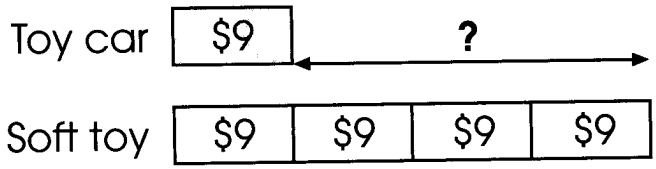


$9 x 4 = $36



The cost of the soft toy is $36.

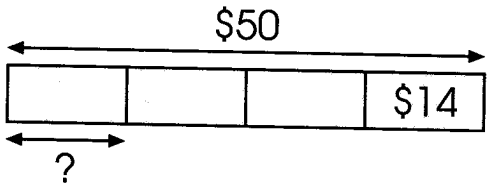
b) How much more does the soft toy cost than the toy car?

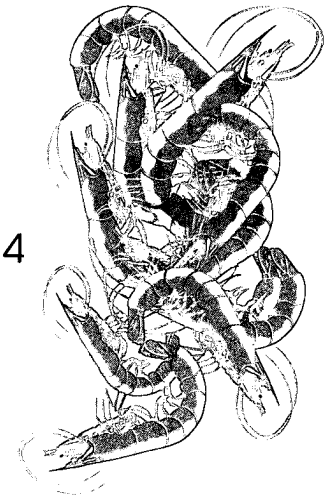


1 unit = $9
3 units = $9 x 3
= $27

The soft toy costs $27 more than the toy car.

Maria had $50. After paying for 3 kg of shrimp, she had $14 left. How much did 1 kg of shrimp cost?



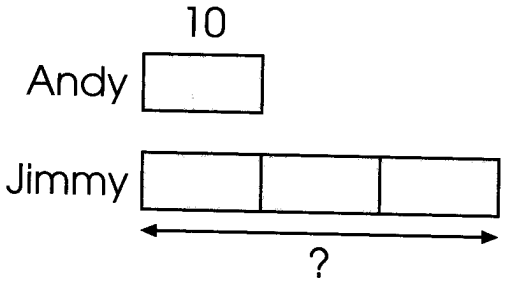


Amount of money spent on shrimp = $50 - $14
= $36

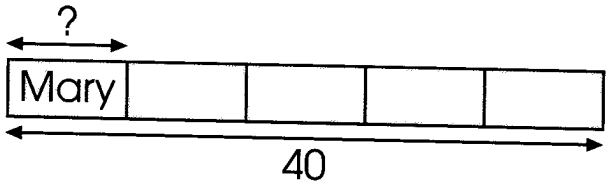
3 kg of shrimp cost = $36
1 kg of shrimp cost = $36 ÷ 3
= $12
1 kg of shrimp cost $12.

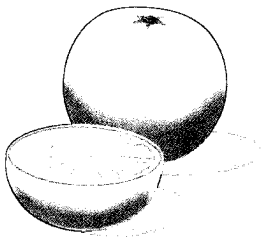
Let's Try

1. Andy had 10 marbles. Jimmy had 3 times as many as Andy. How many marbles did Jimmy have? How many marbles did the two children have altogether?



2. Mary bought 40 oranges from the supermarket. She shared them equally with 4 other children. How many oranges did each of them get?



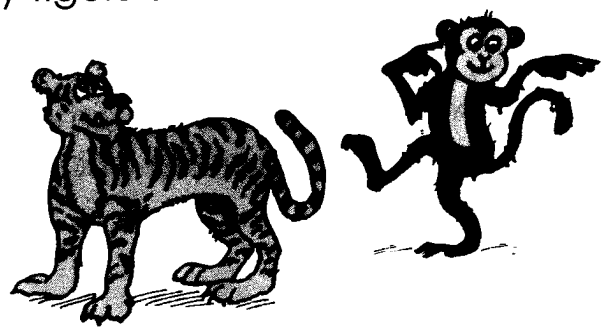


Practice 4C

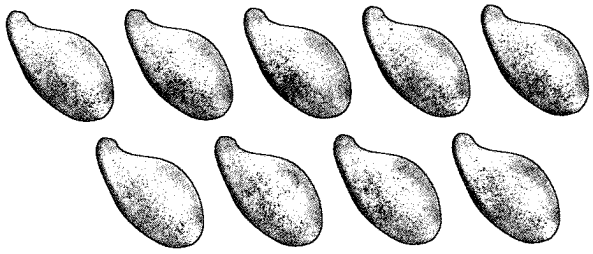
Draw the model diagram for each problem and then work out the answers.

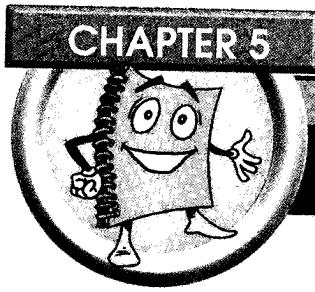
1. Kelvin had 7 story books. His sister had 3 times as many story books as him. How many story books did his sister have?

2. There are 35 monkeys in a zoo. There are 5 times as many monkeys as tigers. How many tigers are there?

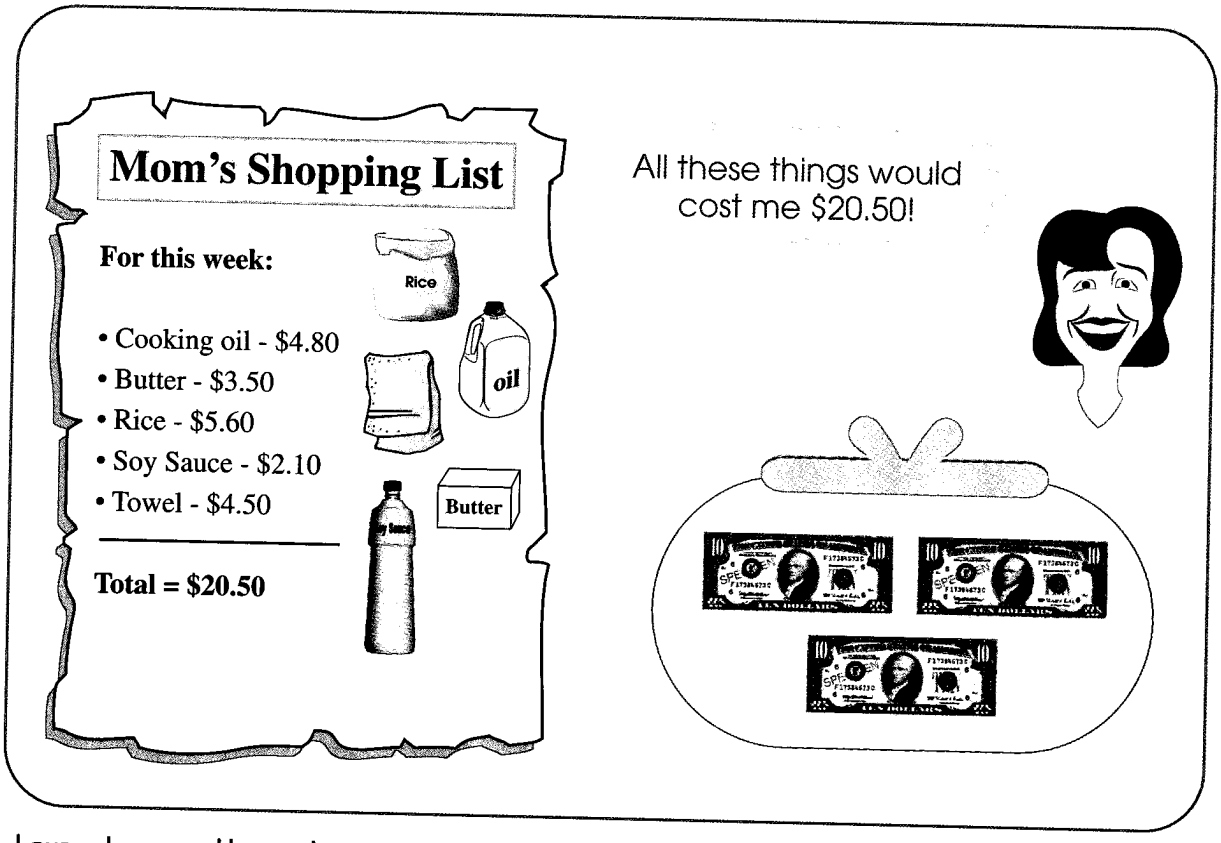


3. Joyce bought 9 mangoes. She bought twice as many kiwi fruits as mangoes. How many more kiwi fruits than mangoes did she buy?





MONEY



Jane's mother has drawn up a shopping list for this week.

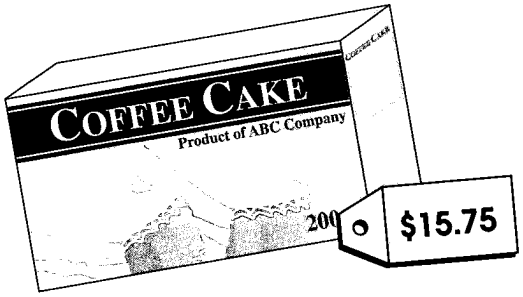
How much money does Jane's mother have in her bag?

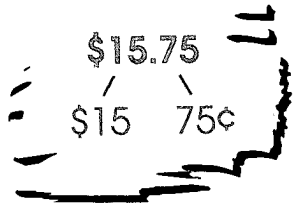
Can she buy all the things she needs on her list?

Revising Dollars and Cents

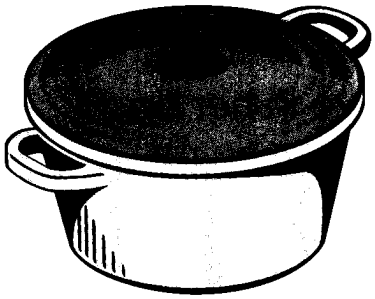
The dot (•) separates the dollars from the cents.

100¢ = $1





The cake costs fifteen dollars and seventy-five cents.



The rice cooker costs forty-five dollars and fifty cents.

45 dollars 50 cents can be written as $45.50.

Let's Try

1. Complete the following.

a) **$2.10**

$ 10¢

b) **$10.05**

$ ¢

c) **$6.15**

$ ¢

2. How much money is there in the box?

_____ dollars _____ cents.

We write this as $_____.

Practice 5A

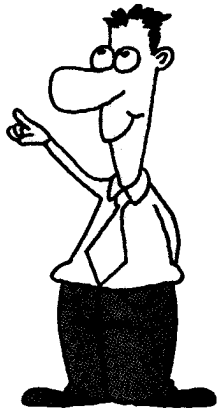
Write in dollars and cents.

a) 70¢ : _____ dollars _____ cents

b) $25.30 : _____ dollars _____ cents

c) $11.05 : _____ dollars _____ cents

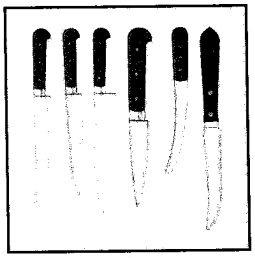
d) 860¢ : _____ dollars _____ cents

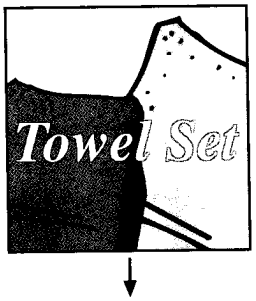


Workbook Exercise 1

Adding Money

Maria bought 2 items from the departmental store.
Here is how much she paid.





+

We add \$25.20 and \$10.25

Method 1:

\$25.20 → + \$10 → \$35.20 → + 25¢ → \$35.45

Method 2:

$$\begin{array}{r} \$25.20 \\ +\ \$10.25 \\ \hline \$35.45 \end{array}$$

Maria paid \$35.45 altogether.

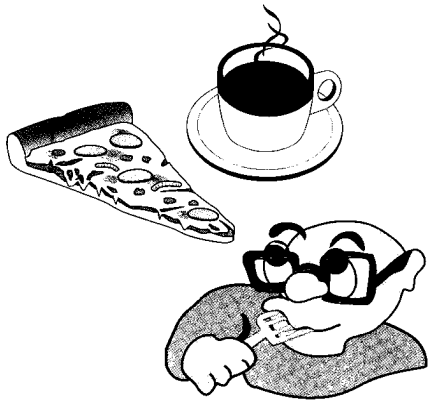
Let's Try

1. Thomas had a meal at the cafe. Look at his bill. How much did he spend in all?

Coffee Corner

Coffee: $ 2.75

Pizza: $ 18.90



Method 1:

$2.75 → (+ $18) → $20.75 → (+ 90¢) → $ _____

$20.75
/ \
$20 75¢

75¢ + 90¢ = 165¢ = $1.65

$_____ + $1.65 = $_____

Method 2:

$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ \ \ } \\ \$\ 2.75 \\ +\ \$18.90 \\ \hline \$21.65 \end{array}$$

2. Do the following additions.

a)

$$\begin{array}{r} \$15.60 \\ +\ \$\ 4.20 \\ \hline \end{array}$$

b)

$$\begin{array}{r} \$25.40 \\ +\ \$\ 5.70 \\ \hline \end{array}$$

c)

$$\begin{array}{r} \$35.60 \\ +\ \$16.45 \\ \hline \end{array}$$

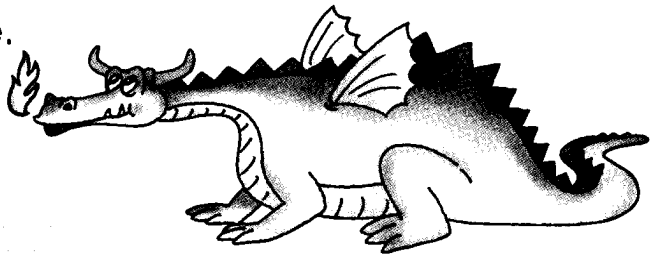
Practice 5B

1. Add and fill in the boxes.

a) \$12.75 → + \$5 → \$____ → + 25¢ → \$____

b) \$25.90 → + \$6 → \$____ → + 80¢ → \$____

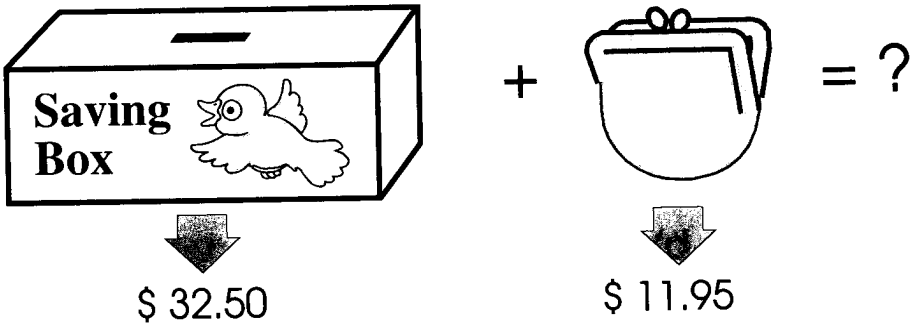
2. Add to find the total value.

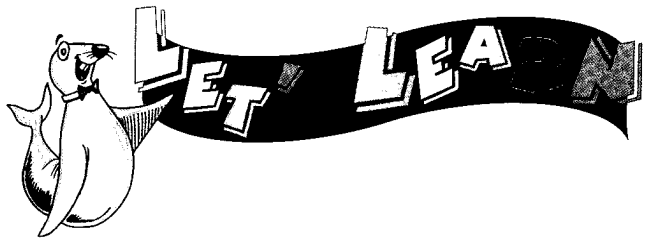


a) \$1.50 + 40¢ =

b) \$12.20 + 75¢ =

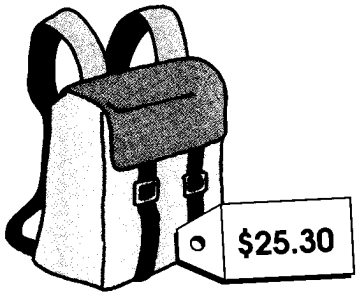
3. Rachel counted the money in her savings box and in her purse. Add to find out how much money she has altogether.

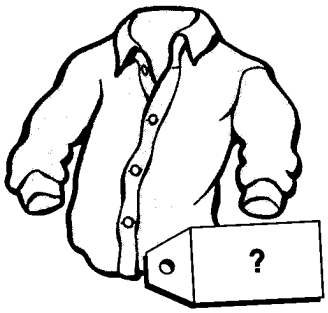




Subtracting Money

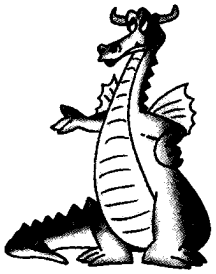
Mary bought these 2 items - a bag and a blouse. The total cost was $40.50.





How much did the blouse cost?

We subtract $25.30 from $40.50.



Method 1:

$40.50 → (- $25) → $15.50 → (- 30¢) → $15.20

Method 2:

$$\begin{array}{r} {}^{3}\not{4}\,{}^{1}0.50 \\ -\ \$25.30 \\ \hline \$15.20 \end{array}$$

The blouse cost $15.20.

In-Class Activity

Work in pairs. Each of you think of one item and decide how much it costs (the price must be reasonable). Write this secretly on a piece of paper. Show the pieces of paper to each other. Whose item is more expensive? How much more expensive? What is the total cost of the two items?

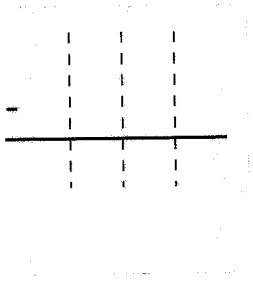
Let's Try

Jane bought a badminton racket at a sale.

How much cheaper is the badminton racket at the sale? Use both methods to find the answer.

Method 1: $33.40 − $____ − $____

Method 2:



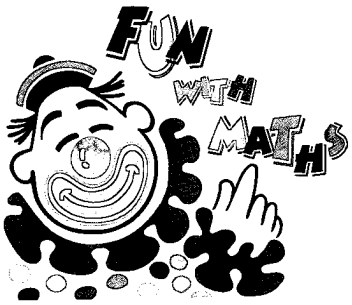
The badminton racket is $_____ cheaper.

Practice 5C

1. Write the change you would receive if you gave the cashier $50 for each item.

2. Andy bought two shirts. One shirt cost $33.50 and the other 27.99. If he gave the cashier a hundred dollar note, how much change did he receive?

3. Rani bought a purse for $53.90. She gave the sales assistant a hundred dollar note. The sales assistant gave her $37.10 as change. Did Rani receive the right change? If not, what should the correct change be?



My Weekly Expenses

Do you know how much you spend every week?

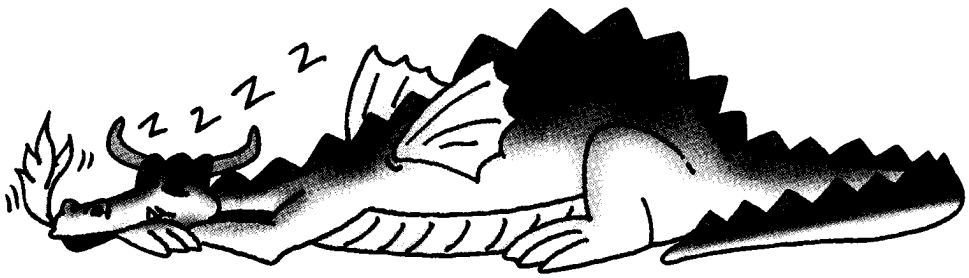
Keep a record of your expenses this week.

For example:

Mon

Food for lunch : 50¢
Drink for lunch : 30¢
Pencil : 20¢
Total : $1.00

Make a record like this for all days of the week.



CHAPTER 6

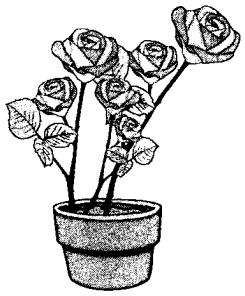
MULTIPLICATION & DIVISION II

DO YOU KNOW?

What is the total number of roses in Ahmed's house?

Write a multiplication statement to show this.

Multiplying and Dividing by 6



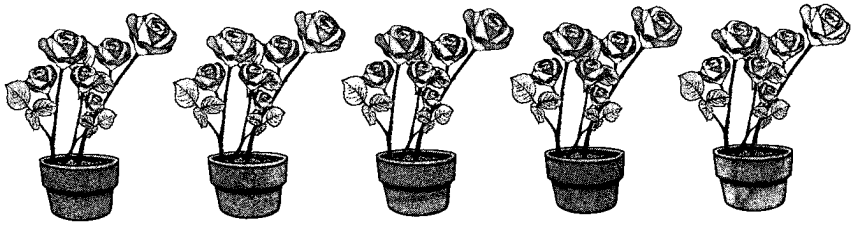
This pot has 6 roses.

How many roses are there altogether in 5 such pots?

6 + 6 + 6 + 6 + 6

or, 5 x 6 = 30

or, 6 x 5 = 30



There are 30 roses altogether.

Complete the multiplication table of 6:

1 x 6 = ___	6 x 6 = 36
2 x 6 = 12	7 x 6 = ___
3 x 6 = ___	8 x 6 = 48
4 x 6 = ___	9 x 6 = ___
5 x 6 = 30	10 x 6 = 60

Rani has 15 stickers on each page of her album. If her album has 6 pages in all, how many stickers are there altogether?

$15 \times 6 = 90$

We can write this as:

$$\begin{array}{r} {}^{3}1\,5 \\ \times\ 6 \\ \hline 9\,0 \end{array}$$

Rani has 90 stickers altogether.

Ravi read 6 story books. If there are 115 pages in one story book, how many pages did he read altogether?

$115 \times 6 = 690$

$$\begin{array}{r} {}^{3}1\,{}^{1}1\,5 \\ \times\ \ \ 6 \\ \hline 6\,9\,0 \end{array}$$

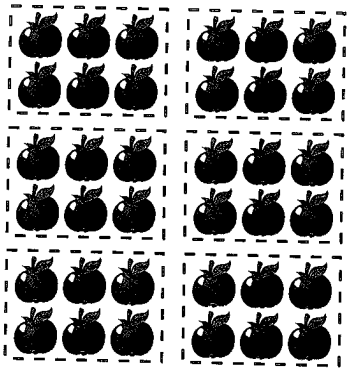
Ravi read 690 pages altogether.

Division

Sarah and her 5 friends shared 36 apples equally. How many apples did each person get?

$36 \div 6 = 6$

$$\begin{array}{r} 6 \\ 6\,\overline{)\,3\,6} \\ -\,3\,6 \\ \hline 0 \end{array}$$



$6 \times 6 = 36$

Each person got 6 apples.

Joyce made 100 cup cakes. She packed them into 6 boxes and put the same number of cup cakes in each box. How many cup cakes were there in each box? How many were left over?

$100 \div 6 = 16$ R 4

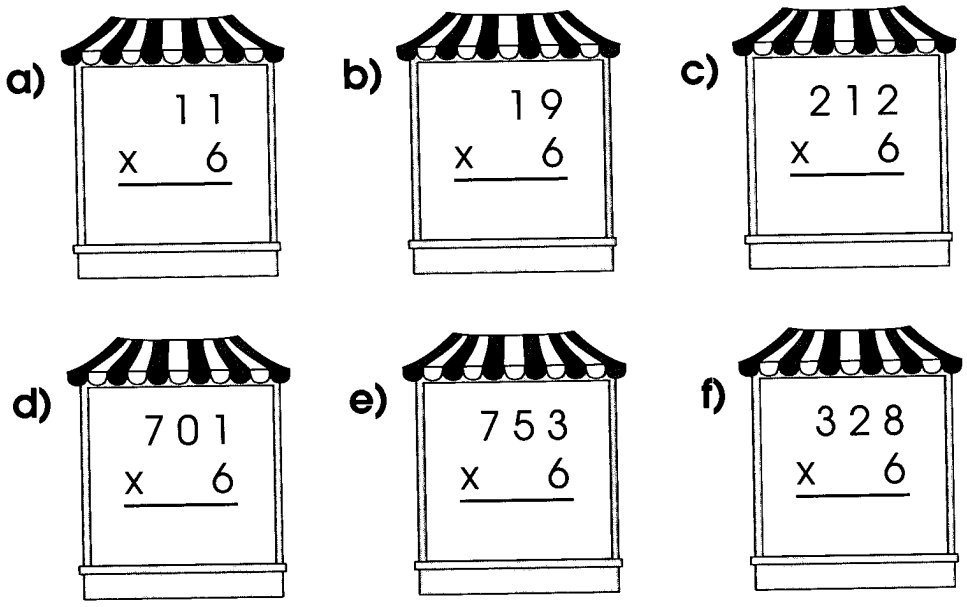
$$\begin{array}{r} 1 \\ 6\overline{)100} \\ -\ 6 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 16 \rightarrow \textbf{quotient} \\ 6\overline{)100} \\ -\ 6 \\ \hline 40 \\ -\ 36 \\ \hline 4 \rightarrow \textbf{remainder} \end{array}$$

There were 16 cup cakes in each box and 4 cup cakes were left over.

Let's Try

1. Complete the following multiplications.



2. Find the quotient and remainder for each of the following.

a) $6\overline{)27}$ b) $6\overline{)49}$ c) $6\overline{)90}$

d) $6\overline{)115}$ e) $6\overline{)239}$ f) $6\overline{)518}$

Practice 6A

1. Multiply the following.

a) 8 x 6 **b)** 12 x 6 **c)** 22 x 6

d) 48 x 6 **e)** 125 x 6 **f)** 266 x 6

2. Divide the following.

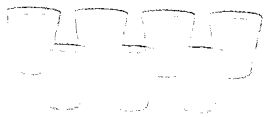
a) 66 ÷ 6 **b)** 72 ÷ 6 **c)** 114 ÷ 6

d) 418 ÷ 6 **e)** 585 ÷ 6 **f)** 806 ÷ 6

Workbook Exercise 1

Multiplying & Dividing by 7

There are seven cups on each tray.



How many cups are there altogether on 3 trays?

3 x 7 = 21

or, 7 x 3 = 21

There are 21 cups altogether.

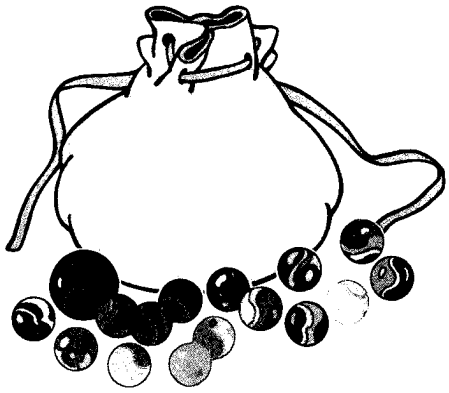
Complete the multiplication table of 7.

1 x 7 = 7	6 x 7 = 42
2 x 7 = 14	7 x 7 = ___
3 x 7 = ___	8 x 7 = 56
4 x 7 = ___	9 x 7 = ___
5 x 7 = 35	10 x 7 = 70

There are 7 marbles in each packet. How many marbles are there in 28 packets?

28 x 7 = 196

$$\begin{array}{r} {}^{5}28 \\ \times \quad 7 \\ \hline 196 \end{array}$$

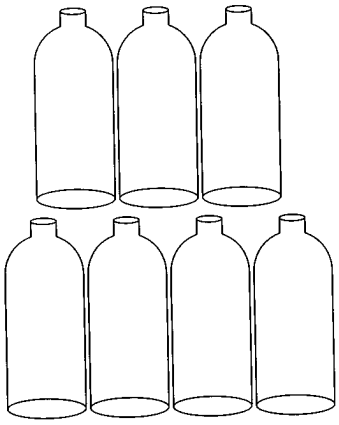


There are 196 marbles altogether.

Susan has 7 bottles. There are 119 beads in each bottle. How many beads are there altogether?

119 x 7 = 833

$$\begin{array}{r} {}^{1}{}^{6}119 \\ \times \quad 7 \\ \hline 833 \end{array}$$

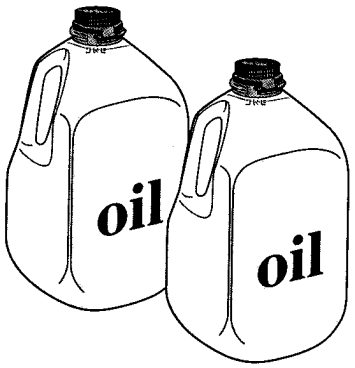


There are 833 beads altogether.

300 liters of oil is poured equally into 7 tins.
a) How many liters of oil are there in each tin?
b) How many liters of oil are left?

$300 \div 7 = 42 \text{ R } 6$

$$\begin{array}{r} 42\text{ R }6 \\ 7\overline{)300} \\ -28 \\ \hline 20 \\ -14 \\ \hline 6 \end{array}$$



a) There are 42 liters of oil in each tin.
b) 6 liters of oil are left.

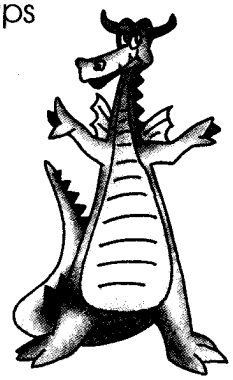
Let's Try

1. Joyce baked 245 muffins for a party. She put 7 muffins on each paper plate. How many paper plates did she use?

$245 \div 7 =$ ☐

$$\begin{array}{r} 7\overline{)245} \\ -21 \\ \hline \\ - \\ \hline \end{array}$$

How many groups of 7?



She used _____ paper plates.

2. Complete the following multiplications and divisions.

a) $\begin{array}{r} 31 \\ \times\ 7 \\ \hline \end{array}$

b) $\begin{array}{r} 131 \\ \times\ 7 \\ \hline \end{array}$

c) $\begin{array}{r} 277 \\ \times\ 7 \\ \hline \end{array}$

d) $7\overline{)64}$

e) $7\overline{)179}$

f) $7\overline{)870}$

Practice 6B

1. Multiply the following.

a) 19 x 7 = ____

b) 33 x 7 = ____

c) 115 x 7 = ____

d) 401 x 7 = ____

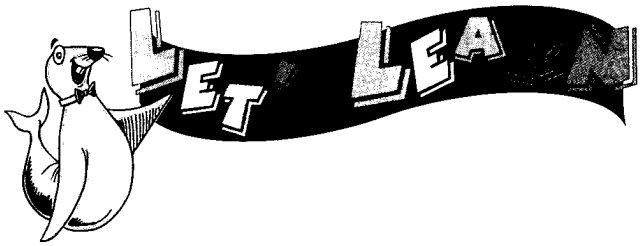
2. Find the quotient and remainder in each of the following.

a) $7\overline{)20}$

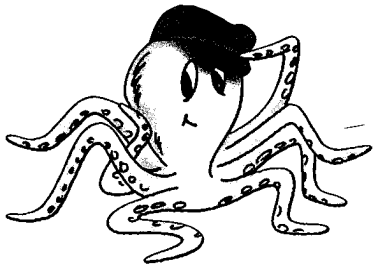
b) $7\overline{)65}$

c) $7\overline{)120}$

d) $7\overline{)345}$

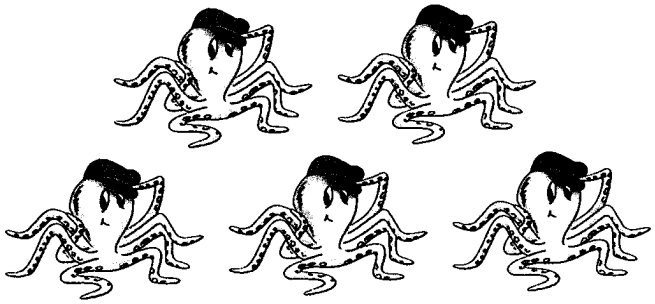


Multiplying & Dividing by 8



There are 8 tentacles on an octopus.

How many tentacles are there on 5 octopuses in all?



5 x 8 = 40

or, 8 x 5 = 40

There are 40 tentacles in all.

Complete the following table:

1 x 8 = 8	6 x 8 = ___
2 x 8 = ___	7 x 8 = 56
3 x 8 = 24	8 x 8 = ___
4 x 8 = ___	9 x 8 = 72
5 x 8 = 40	10 x 8 = ___

Sunnydale Estate has 8 apartment buildings. There are 216 apartments in each building. How many apartments are there altogether?

216 x 8 =

$$\begin{array}{r} {}^{4}2\,1\,6 \\ \times \quad 8 \\ \hline 1\,7\,2\,8 \end{array}$$

There are _____ apartments altogether.

Division

Mr. Smith, the baker, made 350 cakes. He packed them equally into 8 packets.

a) How many cakes are there in each packet?
b) How many cakes are left over?

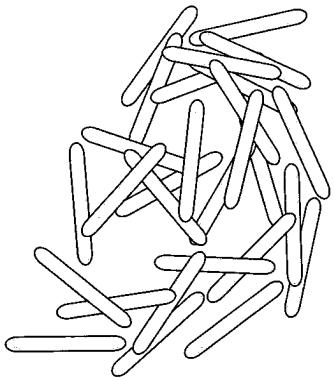
350 ÷ 8 = R

$$\begin{array}{r} 43\text{ R }6 \\ 8\,\overline{)\,350} \\ -\,32 \\ \hline 30 \\ -\,24 \\ \hline 6 \end{array}$$

a) There are 43 cakes in each packet.
b) There are 6 cakes left over.

IN-CLASS ACTIVITY

Work in groups. Each group brings 64 ice-cream sticks.
First divide the sticks into groups of 6, then 7 and finally 8.
How many groups and leftovers do you get each time?



Let's Try

1. Complete the following. Show your working clearly.

a)

b)

c)

d)

Practice 6C

1. Fill in the blanks.

a) 4 x = 32

b) 8 x = 48

c) 128 ÷ 8 =

d) 288 ÷ 8 =

e) 71 x 8 =

f) 216 ÷ 8 =

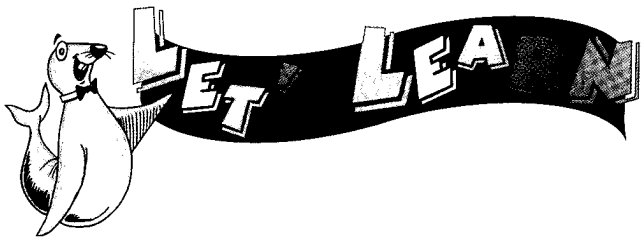
g) 12 x 8 =

h) ÷ 8 = 48

2. There are 8 classes in Grade 3. Each class has 39 students. How many students are there in Grade 3?

3. Joyce gave a box of cookies each to 8 children. If each box of cookies has 18 cookies, how many cookies did she give to the children in all?

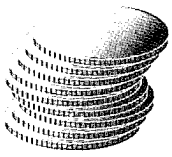
Workbook Exercise 3



Multiplying & Dividing by 9

Multiplication

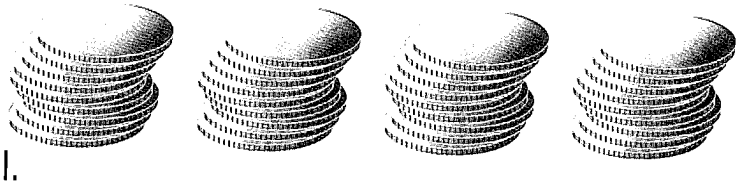
There are 9 coins in a stack of coins.



How many coins are there in all in 4 such stacks?

$4 \times 9 = 36$

or, $9 \times 4 = 36$



There are 36 coins in all.

Build the 9 times table:

1 x 9 = ___	6 x 9 = ___
2 x 9 = ___	7 x 9 = ___
3 x 9 = ___	8 x 9 = ___
4 x 9 = ___	9 x 9 = ___
5 x 9 = ___	10 x 9 = ___

A factory has 9 machines. Each machine produces 113 bottles of tomato ketchup in a day. How many bottles of tomato ketchup are produced altogether in a day?

113 x 9 =

$$\begin{array}{r} {}^{1}1{}^{2}1\,3 \\ \times \quad 9 \\ \hline 1\,0\,1\,7 \end{array}$$

_____ bottles of tomato ketchup are produced altogether.

Division

There were 250 students in the Volunteer Club. The students were divided equally into 9 groups. The remaining students were put into the last group.

a) How many students were there in each of the 9 groups?

b) How many students were there in the last group?

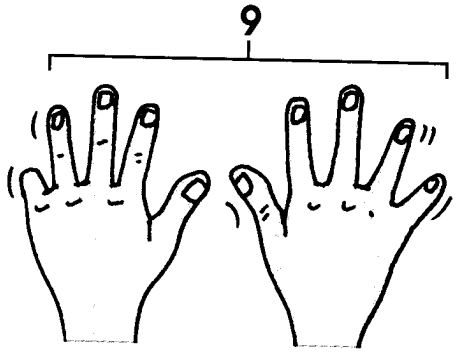
250 ÷ 9 =

$$\begin{array}{r} 2\,7\,\text{R}\,7 \\ 9\overline{)\,2\,5\,0} \\ -\,1\,8 \\ \hline \quad 7\,0 \\ -\quad 6\,3 \\ \hline \quad\quad 7 \end{array}$$

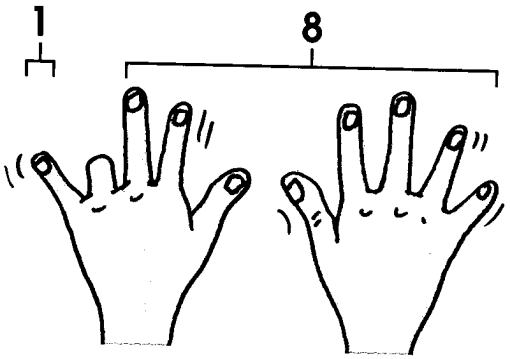
There were 27 students in each of the 9 groups and 7 students in the last group.

IN-CLASS ACTIVITY

Express the 9 times table using your hands as shown:
Example:



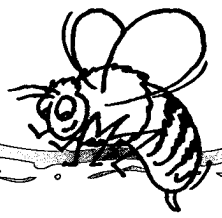
1 x 9 = 9



2 x 9 = 18

Let's Try

1. Fill in the blanks.



a) 15 x 9 = _____

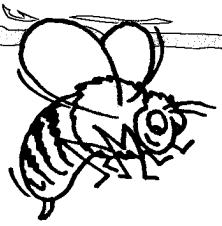
b) 9 x _____ = 63

c) 23 x 9 = _____

d) 27 ÷ 9 = _____

e) _____ ÷ 9 = 22

f) 279 ÷ 9 = _____



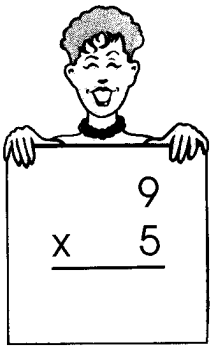
2. Maria divided 524 by 9 and got the answer 56 R 5. Is this correct? Why or why not?

3. The concert hall has 9 chairs per row. If 128 students filled as many rows as possible, how many rows were completely filled? How many more students were needed to fill the next row?

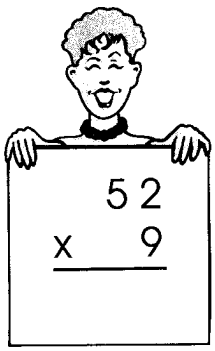
Practice 6D

1. Solve the following.

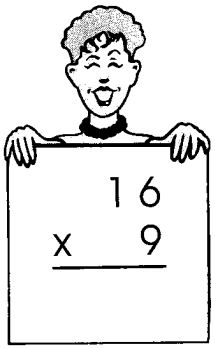
a)



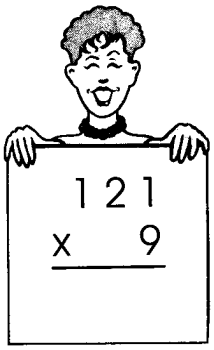
b)



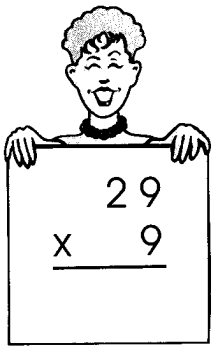
c)



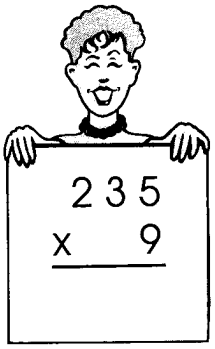
d)



e)



f)



2. Find the quotient and remainder in each of the following.

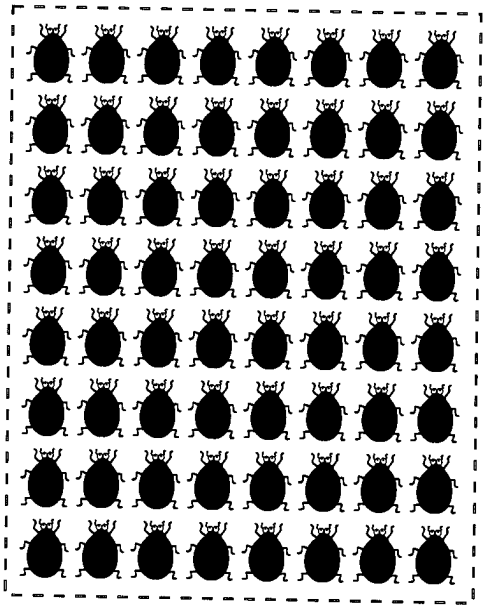
a) $9\overline{)190}$ **b)** $9\overline{)255}$ **c)** $9\overline{)346}$

d) $9\overline{)413}$ **e)** $9\overline{)690}$ **f)** $9\overline{)917}$

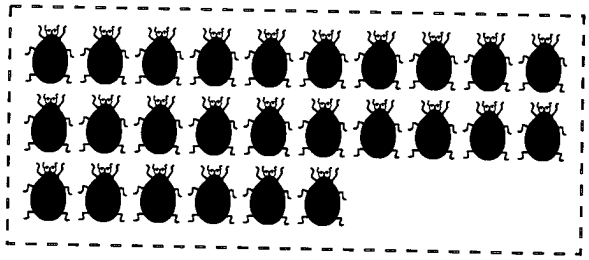
Workbook Exercise 4

CHAPTER 7

MENTAL CALCULATIONS



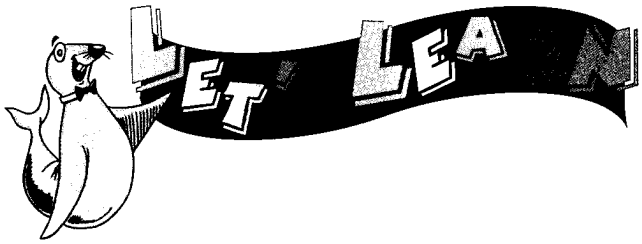
64



26

What is the total number of beetles?

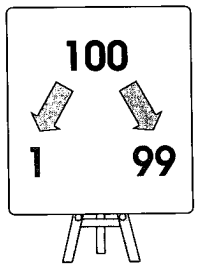
How many more red beetles are there than green beetles?



Mental Addition & Subtraction

Addition

Add 28 and 99.



Method 1:

$28 + 99$
$= 27 + 1 + 99$
$= 27 + 100$
$= \mathbf{127}$

Look at "99".

We can add "1" to "99" to make "100".

Method 2:

$28 + 99$
$= 28 + 100 - 1$
$= 128 - 1$
$= \mathbf{127}$

$100 - 1 = 99$

What is a quicker way to add 56 and 38?

Method 1:

$56 + 38$
$= 56 + 40 - 2$
$= 96 - 2$
$= \mathbf{94}$

38 = 40 - 2

Method 2:

$56 + 38$
$= 56 + 30 + 8$
$= 86 + 8$
$= 86 + 4 + 4$
$= 90 + 4$
$= \mathbf{94}$

38 = 30 + 8

8 = 4 + 4

Which method do you prefer? Can you think of other ways?

Let's Try

Do each of the additions below using as many methods of mental calculations as you can.

a) $8 + 9 =$

b) $11 + 19 =$

c) $24 + 99 =$

d) $81 + 25 =$

Subtraction

Subtract 31 from 50.

Method 1:

50 - 31 = **19**

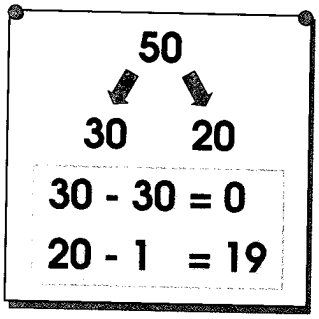
31 = 30 + 1

50 - 30 = 20

20 - 1 = 19

Method 2:

50 - 31 = **19**



Take away 86 from 100.

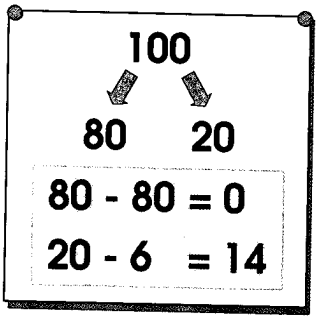
Method 1:

100 - 86
= 100 - 80 - 6
= 20 - 6
= **14**

86 = 80 + 6

Method 2:

100 - 86 = **14**

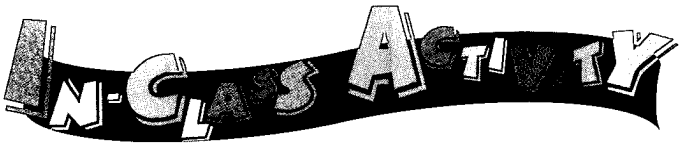


Let's Try

Do each of the subtractions below using as many different methods of mental calculations as you can.

a) 100 - 47 =

b) 88 - 45 =



Mary and Lily used 2 different methods to solve the following sum: **80 - 19**

Mary	Lily
19 = 10 + 9	19 + 1 = 20
80 - 10 = 70	80 - 20 = 60
70 - 9 = 61	60 + 1 = 61

Which method do you prefer? Why? Can you think of another way to subtract the sum mentally?

Practice 7A

1. Add the following.

a) 38 + 19 =

b) 55 + 99 =

c) 67 + 31 =

d) 78 + 44 =

2. Fill in the missing number.

a) 30 - 12 =

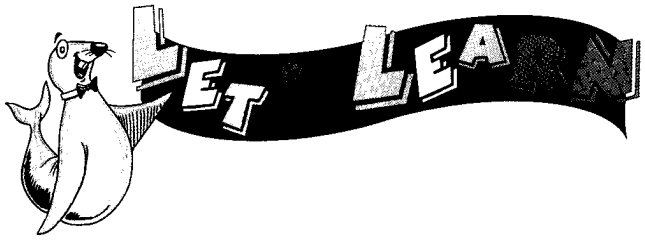
b) 50 - 26 =

c) 98 - 23 =

d) 70 - 19 =

3. Tom had 50 marbles and his brother had 29 **fewer** marbles than him. How many marbles did his brother have?

4. Maria made 90 cherry cookies and 37 pineapple cookies **fewer** than the cherry cookies. How many pineapple cookies did she make?



Mental Multiplication and Division

Multiplication

Multiply 20 by 6.

We 'split' the 2 tens into 2 x 10.

20 x 6
= 2 x 10 x 6
= 2 x 6 x 10
= 12 x 10
= 120

2 tens x 6
= _____ tens

First we multiply 2 by 6 to get 12. Finally we multiply 12 by 10 to get 120.

Find the value of 500 x 7.

500 x 7
= 5 x 100 x 7
= 5 x 7 x 100
= 35 x 100
= 3500

5 hundreds x 7
= _____ hundreds

Let's Try

Fill in the boxes.

a) 5 tens x 6 =

b) 60 x 7 =

c) 8 x 3 hundreds =

d) 4 x 600 =

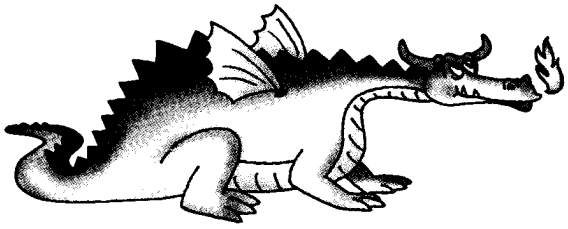
Division

What is the value of 60 ÷ 6?

60 ÷ 6 = 10

60 ÷ 6 is the same as, 6 tens ÷ 6.

6 tens ÷ 6 = 1 ten
= 10



Find the value of 500 ÷ 5.

500 ÷ 5 = ☐

500 ÷ 5 is the same as,
5 hundreds ÷ 5.

5 hundreds ÷ 5 = 1 hundred

Mei Ling bought 300 meters of cloth. She cut it equally into 5 pieces. What is the length of each piece of cloth?

$300 \div 5 = 60$

300 = 30 tens

30 tens ÷ 5 = 6 tens

= 60

Each piece of cloth is 60 m in length.

Let's Try

Fill in the blanks.

a) $20 \div 2 =$ ☐ ⇨

20 = 2 tens

2 tens ÷ 2 = ___ tens

= ___

b) $900 \div 3 =$ ☐ ⇨

900 = ___ hundreds

___ hundreds ÷ 3

= ___ hundreds

= ___

c) $400 \div 2 =$ ☐ ⇨

___ = ___ _____

___ _____ ÷ 2

= ___ _____

= ___

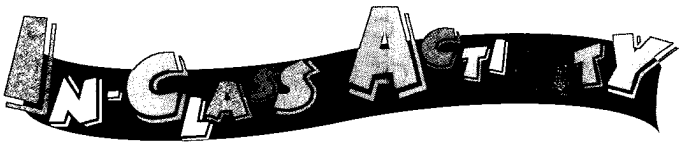
d) $160 \div 8 =$ ☐ ⇨

___ = ___ _____

___ _____ ÷ 8

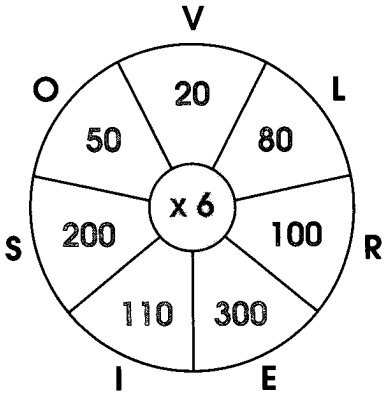
= ___ _____

= ___



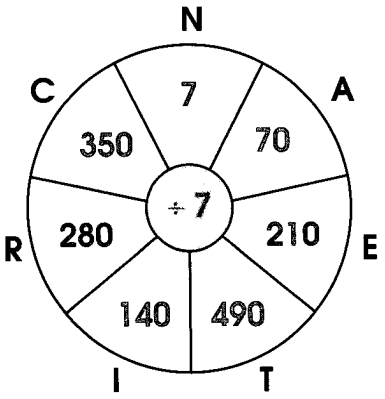
Work in pairs. Match the alphabet to the answer to crack the secret code. The pair that cracks the code the fastest is the winner.

Multiply each number in the outer wheel by 6.



480 **300** **120** **1800**

Divide each number in the outer wheel by 7.



50 **40** **10** **1** **30**

Practice 7B

1. Multiply the following.

a) 60 x 4 = ____ **b)** 90 x 5 = ____

c) 20 x 6 = ____ **d)** 50 x 7 = ____

e) 250 x 4 = ____ **f)** 120 x 8 = ____

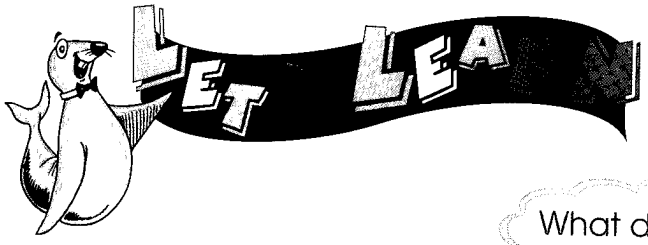
2. Find the quotient for each of the following.

a) $40 \div 5$ **b)** $300 \div 4$ **c)** $450 \div 5$

d) $400 \div 8$ **e)** $240 \div 6$ **f)** $270 \div 9$

3. Ahmed has 990 seeds. He puts them equally into 9 beds of soil. How many seeds are there in each bed?

4. The school library bookcase has 5 shelves. The librarian puts 120 books on each shelf. How many books are there altogether?



Even and Odd Numbers

What do they have in common?

Look at these numbers.

These numbers can be divided by 2!

4 **6** **8** **10**

We say that these numbers are **even numbers**.

Now look at these numbers.

These numbers CANNOT be divided by 2!

1 **3** **5** **7** **9**

We say that these numbers are **odd numbers**.

Is 200 an even or an odd number?

We can use mental calculations to quickly find out the answer!

200 = 2 hundreds

2 hundreds ÷ 2 = 1 hundred

200 can be divided by 2 therefore 200 is an even number.

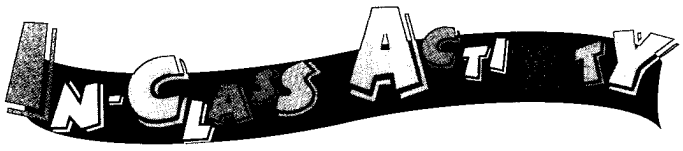
Is 303 an even or an odd number?

303 = 3 hundreds + 3 ones

In even numbers, the number in the ones place can always be divided by 2.

3 ones CANNOT be divided by 2!

Therefore, 303 is an odd number.



Circle the numbers that are even.

23	46	53	102	113
199	202	327	449	558
890	101	204	327	607

Do you know a way to do this quickly?

Let's Try

Which of the following numbers can be divided by 2? Put a tick next to the number.

a) 26 **b)** 33 **c)** 90

d) 907 **e)** 102 **f)** 213

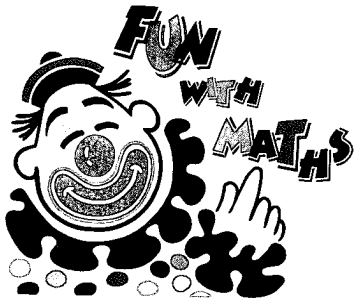
Practice 7C

Write the letters 'E' for even number or 'O' for odd number for each of the following.

a) 12: **b)** 111: **c)** 158:

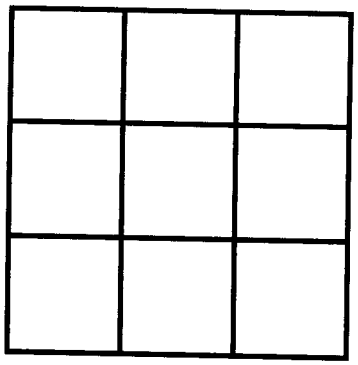
d) 393: **e)** 586: **f)** 109:

Workbook Exercise 3

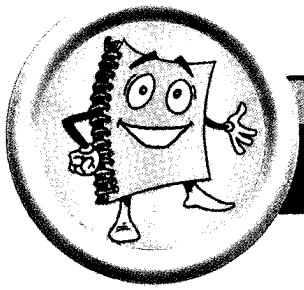


3 x 3 Magic Square

Complete the magic square.



The Magic Square below is made up of 9 squares. Fill the squares with numbers from 1 to 9. Each number can be used only once. The sum of numbers in any row, column or its diagonal must be 15.



REVISION 2

Exercise 1

1. Write the amount of money shown in the space provided.

a)

$ _____ or _____ dollars _____ cents

b)

$ _____ or _____ dollars _____ cents

2. Calculate mentally. Do these sums as fast as you can.

a) 25 + 26 = _____ **b)** 53 + 67 = _____

c) 98 - 19 = _____ **d)** 90 - 65 = _____

e) 50 x 8 = _____ **f)** 400 x 9 = _____

g) 60 ÷ 3 = _____ **h)** 240 ÷ 6 = _____

3. Fill in the following boxes.

a) $5.60 → + $5 → $ _____ → + 80¢ → $ _____

b) $11.20 → - $4 → $ _____ → - 75¢ → $ _____

4. Write 'E' for even numbers and 'O' for odd.

a) 15 →

b) 92 →

c) 700 →

d) 101 →

Exercise 2

1. Complete the following.

a) $\begin{array}{r} 14 \\ \times\ 3 \\ \hline \end{array}$ **b)** $\begin{array}{r} 121 \\ \times\ 2 \\ \hline \end{array}$ **c)** $\begin{array}{r} 25 \\ \times\ 4 \\ \hline \end{array}$ **d)** $\begin{array}{r} 202 \\ \times\ 5 \\ \hline \end{array}$

e) $9\overline{)26}$ **f)** $9\overline{)313}$ **g)** $9\overline{)79}$ **h)** $9\overline{)449}$

2. Fill in the boxes.

a) $1.50 + $2.50 = ____

b) $3.75 + $4.90 = ____

c) $10.99 + $1.20 = ____

d) $22.39 - $6.20 = ____

e) $10.15 - $1.99 = ____

f) $20.20 - $4.48 = ____

3. Fill in the missing numbers.

a) 3 x 7 = ____

b) 6 x 6 = ____

c) 6 x ____ = 18

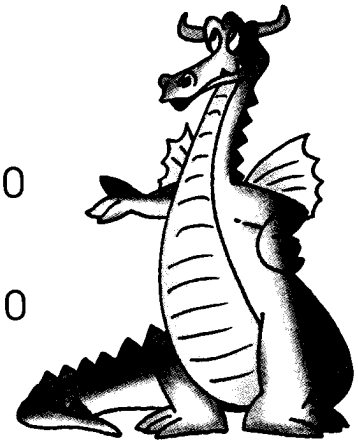
d) 8 x 6 = ____

e) ____ ÷ 5 = 8

f) ____ ÷ 7 = 10

g) 9 x 9 = ____

h) ____ ÷ 10 = 10

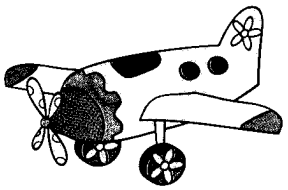


4. Complete the grid.

	56	**80**	**64**
+ 60			
- 27	29		
x 10			640
÷ 8			

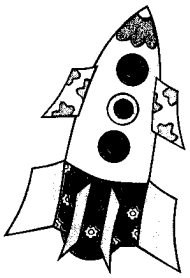
Exercise 3

1. Look at the items that are on sale and answer the questions that follow.

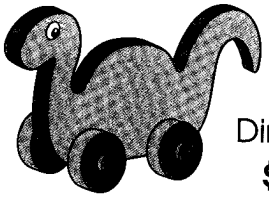


Aeroplane
$15.95

Dollhouse
$30.90



Rocket
$25.50



Dinosaur
$9.90

Doll
$10.90

a) Which item costs less than $10?

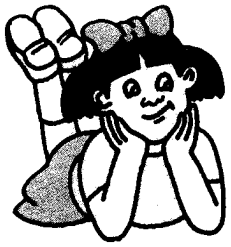
b) How much would the doll and the dollhouse cost?

c) Maria has only $50. She needs to buy 3 gifts. What gifts can she buy?

d) Mr. Smith bought the toy aeroplane and the dinosaur. How much did he pay altogether?

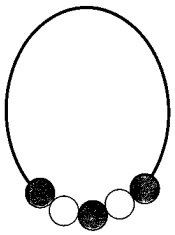
e) Mr. Jones bought the rocket and the doll for his children. He gave the cashier a fifty-dollar note. How much change did he get?

2. Mary spent $5.65 on a book, $4.50 on a burger meal and had $1.85 left. How much money did she have at first?



3. Mr. Lim sold a cooking pot for $26.55 and a ladle for $5.50. The buyer gave Mr. Lim a $50 note. How much change did Mr. Lim have to give the buyer?

4. Siti made a number of necklaces for sale. She used a total of 60 red beads and 40 white beads. If each necklace had 5 beads, how many necklaces did she made?



5. Rani bought 6 boxes of soda cans and her sister bought 2 boxes. If there are 24 soda cans in each box, how many soda cans did Rani and her sister buy altogether?