Addition

Check What I Know 🐠

1. Add (without regrouping).

a)
```
   3 4 2
 + 2 3 7
```

b)
```
   1 3 7
 + 6 0 2
```

c)
```
   2 0 3
   2 3 4
 + 1 5 1
```

2. Add (regrouping of ones).

a)
```
   4 2 6
 + 1 3 7
```

b)
```
   5 0 7
 + 3 1 8
```

c)
```
   3 3 3
 + 2 4 8
```

3. Add (regrouping of tens and ones).

a)
```
   6 3 8
 + 2 7 4
```

b)
```
   2 9 8
 + 3 4 7
```

c)
```
   5 8 6
   1 9 8
 + 1 7 6
```

4. Will you add or subtract to get the answer? Solve the problems where you have to add.

a) 265 people attended a music show on Saturday. 331 people attended it on Sunday. How many people in all attended the show? Add / Subtract

b) Minto read two books during the holidays. One book had 236 pages. The other book had 164 pages. How many pages did he read in all? Add / Subtract

c) There were 567 people on a train. 234 people got down at a station. How many people are there on the train now? Add / Subtract
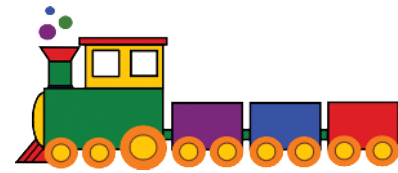
d) Children counted flowers in their school garden. There were 254 roses and 436 lilies. How many flowers were there in all? Add / Subtract

Addition of 4-digit numbers without regrouping

Example: Add 3325 and 2231.

Adding 4-digit numbers is just like adding 3-digit numbers.
Arrange the numbers one below the other as shown and add.

Always start from the ones.

Step 1: Add the ones.

Step 2: Add the tens.

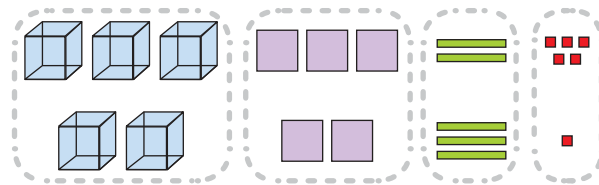Step 3: Add the hundreds.

Step 4: Add the thousands.

```
  Th H T O
     3 3 2 5
   + 2 2 3 1
   ─────────
     5 5 5 6
```

EXERCISE 1: Add.

a)
```
   2 4 6 3
 + 1 3 2 4
```

b)
```
   4 0 6 5
 + 2 8 3 1
```

c)
```
   7 0 1 1
 + 1 0 7 8
```

d)
```
   5 0 2 6
 + 4 4 5 3
```

e)
```
   4 2 0 8
 + 3 6 5 1
```

f)
```
   6 0 0 3
 + 2 0 6 5
```

g)
```
   2 1 4 5
 + 7 8 5 4
```

h)
```
   2 1 1 2
 + 6 0 1 6
```

i) In a school library there are 3425 story books and 2304 subject books. How many books are there in the library?

j) Aarti has two stamp albums. One album has 2306 stamps. The other album has 3143 stamps. How many stamps does Aarti have in all?

Adding 3-digit numbers with regrouping

When you add 3-digit numbers, sometimes you get a 4-digit answer.

Example: Add 643 and 576.

Step 1: Add the ones.

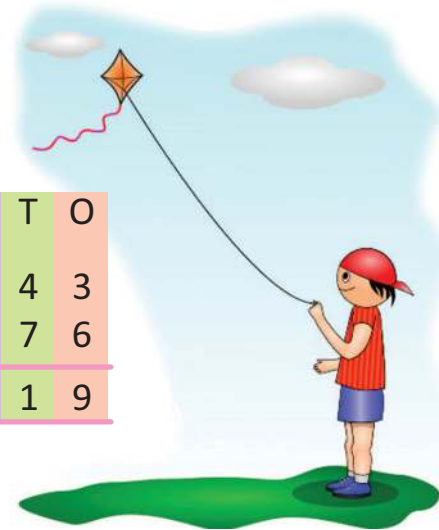$3 + 6 = 9$

Step 2: Add the tens and regroup.

$4 + 7 = 11$

11 tens = 1 hundred + 1 ten

Step 3: Add the hundreds and regroup.

$1 + 6 + 5 = 12$

12 hundreds = 1 thousand + 2 hundreds

Th	H	T	O
	1		
	6	4	3
+	5	7	6
1	2	1	9

EXERCISE 2: Add.

a)
```
   3 4 9
 + 8 3 8
```

b)
```
   4 4 4
 + 8 6 4
```

c)
```
   5 3 6
 + 6 0 7
```

d)
```
   6 6 0
 + 9 6 0
```

e)
```
   4 5 6
 + 6 5 4
```

f)
```
   8 8 8
 + 2 2 2
```

g)
```
   3 8 6
 + 8 3 9
```

h)
```
   4 9 1
 + 9 0 9
```
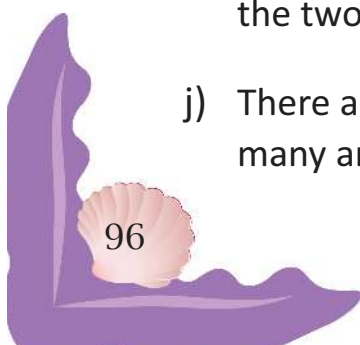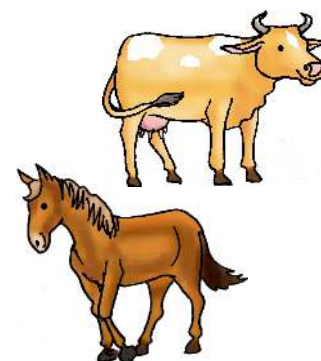
i) 559 children bought books from a school bookshop on the first day. 463 children bought books on the second day. How many children bought books in the two days?

j) There are 663 horses and 527 cows in a farm. How many animals are there in the farm?

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Adding 4-digit numbers with regrouping

(Refer Maths Lab Activity on page 104.)

Example: Add 2808 and 4267.

Step 1: Add the ones: 8 + 7 = 15

15 ones = 1 ten + 5 ones

Step 2: Add the tens: 1 + 0 + 6 = 7

Step 3: Add the hundreds: 8 + 2 = 10

10 hundreds = 1 thousand + 0 hundreds

Step 4: Add the thousands: 1 + 2 + 4 = 7

Th	H	T	O
	1		1
2	8	0	8
+ 4	2	6	7
7	0	7	5

EXERCISE 3: Add.

a)
```
  1 3 2 3
+ 4 9 6 8
```

b)
```
  2 0 8 9
+ 3 4 1 1
```

c)
```
  3 4 1 5
+ 3 8 7 9
```

d)
```
  8 4 3 6
+ 1 0 8 6
```

e)
```
  7 3 9 9
+ 1 0 2 2
```

f)
```
  6 7 0 2
+ 1 4 3 9
```

g)
```
  6 3 0 3
+ 1 8 0 7
```

h)
```
  5 1 8 4
+ 4 3 6 5
```

i) 2559 people visited the Trade Fair in Delhi on Saturday. 3405 people visited on Sunday. How many people visited the Trade Fair in the two days?

j) In a train there are 1570 first-class seats and 2550 second-class seats. How many people can sit in the train?

EXERCISE 4: Add.

a)
```
  2 1 4 3
+ 1 5 4 1
+ 2 0 1 4
```

b)
```
  1 2 1 3
+ 3 4 4 0
+ 3 1 0 1
```

c)
```
  7 0 4 3
+   1 3 2
+   2 2 3
```

d)
```
  7 1 5 4
+ 1 7 2 0
+   1 2 6
```

e)
```
    9 3 2
+ 1 4 7 5
+ 3 8 3 6
```

f)
```
  2 3 4 6
+ 1 1 0 8
+ 6 4 5 3
```

g)
```
  3 4 3 2
+ 2 9 8 0
+   2 3 1
```

h)
```
  3 6 0 0
+   9 9 4
+ 2 2 2 2
```

Properties of addition

1. Order property

Numbers can be added in any order. Their sum remains the same.

3043 men and 2652 women add up to 5695 people.

2652 women and 3043 men also add up to 5695 people.

```
  3 0 4 3        and          2 6 5 2
+ 2 6 5 2                    + 3 0 4 3
─────────                    ─────────
  5 6 9 5                      5 6 9 5
```
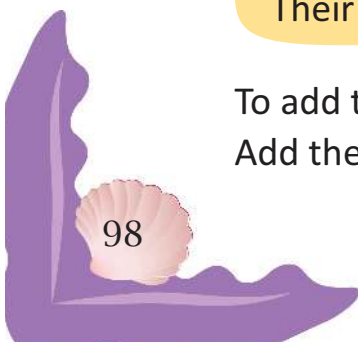
3043 + 2652 = 2652 + 3043

2. Grouping property

Three or more numbers can be grouped and added.
Their sum remains the same.

To add three numbers, group any two numbers and add.
Add the sum to the third number.

(1000 + 2000) + 5000 = 3000 + 5000 = 8000

1000 + (2000 + 5000) = 1000 + 7000 = 8000

Rapid check

1. Add (4000 + 3000) + 2000.

$$
\begin{array}{r}
4\,0\,0\,0 \\
+\ 3\,0\,0\,0 \\
\hline
7\,0\,0\,0 \\
\hline
\end{array}
\quad\longrightarrow\quad
\begin{array}{r}
7\,0\,0\,0 \\
+\ 2\,0\,0\,0 \\
\hline
\end{array}
$$

2. Add 4000 + (3000 + 2000).

$$
\begin{array}{r}
3\,0\,0\,0 \\
+\ 2\,0\,0\,0 \\
\hline
\end{array}
\qquad
\begin{array}{r}
4\,0\,0\,0 \\
+ \\
\hline
\end{array}
$$

3. Zero property

When 0 is added to a number, or when a number is added to 0, the sum is the number itself.

2432 cows added to 0 cows gives 2432 cows.

0 horses added to 3659 horses gives 3659 horses.

$$
\begin{array}{r}
2\,4\,3\,2 \\
+0 \\
\hline
2\,4\,3\,2 \\
\hline
\end{array}
\qquad
\begin{array}{r}
0 \\
+\,3\,6\,5\,9 \\
\hline
3\,6\,5\,9 \\
\hline
\end{array}
$$

Rapid check

Add.

$$
\begin{array}{r}
8\,6\,3\,9 \\
+0 \\
\hline
 \\
\hline
\end{array}
\qquad
\begin{array}{r}
0 \\
+\,8\,6\,3\,9 \\
\hline
 \\
\hline
\end{array}
$$

EXERCISE 5

Use the properties of addition to add.

a) 4603 + 2112 = _____ + 4603

b) 8080 + _____ = 1010 + 8080

c) 3118 + 260 + 1212 = 1212 + 3118 + _____

d) 0 + 116 = 116 + _____

e) 8181 + 0 = _____

f) 0 + 2090 = _____

g) 3489 + 1 = _____

h) 2600 + 1 = _____

i) _____ + 2067 = 2067

j) _____ + 4119 = 4120
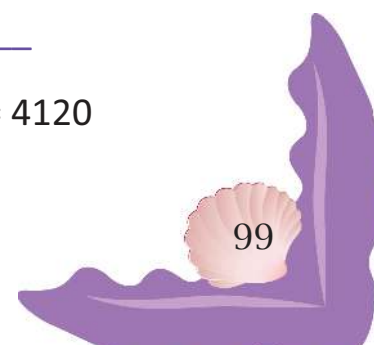
Mixed Bag

(Concept, skill, application and thinking based)

1. Choose the correct answer.
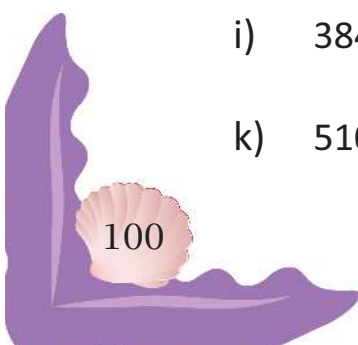
a) If 1256 + 2456 is 3712, 2456 + 1256 is:

   i. < 3712   ii. > 3712   iii. = 3712   iv. none of these

b) If 2406 + 3128 + 1096 = 6630, which of the following is true?

   i. (2406 + 3128) + 1096 = 6630   ii. 2406 + (3128 + 1096) = 6630

   iii. (2406 + 1096) + 3128 = 6630   iv. All of these are true

c) 100 more than 4506 is:

   i. 4507   ii. 4516   iii. 5506   iv. none of these

d) The sum of the smallest 4-digit number and the largest 3-digit number is:

   i. 1000   ii. 9999   iii. 1099   iv. 1999

2. Work these out in your notebook. Write the sum.

a) 325 + 780 =   b) 654 + 456 =

c) 505 + 595 =   d) 2043 + 5033 =

e) 3333 + 2135 =   f) 63 + 1015 =

g) 4850 + 3250 =   h) 4207 + 3489 =

i) 3848 + 5909 =   j) 6980 + 2289 =

k) 5107 + 98 =   l) 6378 + 967 =

3. Find the sum.

a)
```
    4 5 6
+ 1 3 4 3
+ 5 1 0 0
```

b)
```
  6 3 0 0
+     4 0 0
+ 1 6 7 5
```

c)
```
  5 0 1 3
+ 4 2 0 7
+     8 6 2
```

d)
```
  6 4 2 1
+ 1 3 6 4
+ 1 2 1 4
```

e)
```
    1 4 4
+ 1 3 9 9
+ 1 6 6 0
```

f)
```
    3 3 3
+ 2 4 6 0
+     2 2 2
```

g)
```
        4 9
+ 1 1 0 5
+ 2 9 0 0
```

h)
```
  1 2 1 3
+ 2 6 7 8
+ 4 4 3 2
```

i) 333 + 2460 + 22 =

j) 2347 + 123 + 29 =

4. Applying addition (story sums)

a) Jim has 2084 stamps. His sister Simi has 5018 stamps. How many stamps do they have altogether?

b) There are 5262 girls and 2416 boys in a college. Find the total number of students in the college.

c) A florist had 3006 flowers. He bought an equal number more. How many flowers does he have now?

d) Anil spent ₹ 6243 on Monday and ₹ 246 on Tuesday. How much money did he spend altogether?

e) A television set costs ₹ 5400 and a sofa set costs ₹ 803. What is the total cost for both?

f) There are 1343 books in English, 2481 books in Hindi and 3444 books in other languages in a library. How many books does the library have?

g) What is 245 more than 5600?

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Mental Maths

In the previous class you learnt a simple method for carrying out certain types of additions mentally.

To add 9, add 10 and then subtract 1. To find 149 + 9:

First add 10: 149 + 10 = 159   Then subtract 1: 159 − 1 = 158

To add 8, add 10 and then subtract 2. To find 2137 + 8:

First add 10: 2137 + 10 = 2147   Then subtract 2: 2147 − 2 = 2145

Let us extend this further.

To add 19, first add 20, then subtract 1. To find 158 + 19:

First add 20: 158 + 20 = 178   Then subtract 1: 178 − 1 = 177

To add 18, first add 20, then subtract 2. To find 2147 + 18:

First add 20: 2147 + 20 = 2167   Then subtract 2: 2167 − 2 = 2165

1. Work out the following mentally.

a) 149 + 9 = _____   b) 362 + 9 = _____   c) 205 + 8 = _____

d) 1617 + 9 = _____   e) 2833 + 8 = _____   f) 1238 + 7 = _____
                                                        (how will you do this?)

g) 218 + 19 = _____   h) 317 + 19 = _____   i) 256 + 18 = _____

j) 612 + 18 = _____   k) 1166 + 19 = _____   l) 1117 + 17 = _____
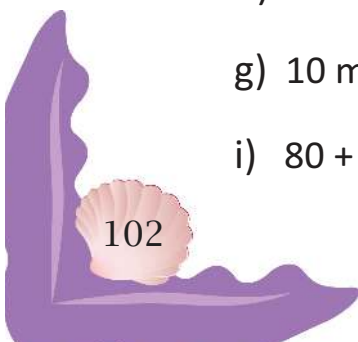
2. Work these out mentally.

a) 82 + 8 = _____   b) 400 + 300 = _____   c) 5000 + 40 = _____

d) 48 + 12 = _____   e) 1400 + 600 = _____   f) 53 + 47 = _____

g) 10 more than 991 = _____   h) 609 + 10 = _____

i) 80 + 30 = _____   j) 299 + 100 = _____

Hots

1. There are 2006 mango trees, 3194 apple trees and 2413 banana trees in an orchard. How many mango and banana trees are there altogether?

   (Hint: This sum has some additional information which you will not need to find the answer. What is the additional information?)

2. The double of 2447 is 2 × 2447. Can you find the double of 2447 by addition?

Problem Solving

FA

Given that PAGE = 1798, what addition sum is represented by:

EGG + EGG = PAGE (*Hint* : What do E and G stand for?)

Fun Activity

FA

A story sum for 24 + 33 = 57 can be:

There are 24 boys and 33 girls in Class 3A. How many children study in Class 3A?

Frame your own story sums for the following additions.

1. 150 + 200 = _____

2. 323 + 456 = _____

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Maths Lab Activity

Objective: To add 2345 and 3418 using cubes (thousands), sheets (hundreds), strips (tens) and slips (ones)

Material required: Cubes, sheets, strips and slips

Method:

Step 1: Ask students to make the two numbers using cubes, sheets, strips and slips and place them one below the other.

Step 2: Ask them to put the ones together and count them. Since there are more than 10 ones, let them join 10 ones to make a ten and carry it to the tens side.

Step 3: Ask them to put the tens together and count them. Emphasise that the carried over 10 should also be added.
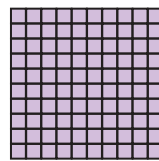
Step 4: Ask them to put the hundreds together and count them.

Step 5: Ask them to put the thousands together and count them.

Step 6: Now ask them how many thousands, hundreds, tens and ones they have, and record the sum.
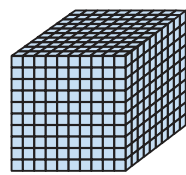
Cube	Sheet	Strip	Slip

Project

Note down the number of pages in each of your Class 3 textbooks. Add all of them to get the total number of textbook pages you have to read in a year.