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Bigger numbers

It is cricket time and the children of class 5 were busy discussing the events of yesterday's match between India and Sri Lanka. The class teacher was aware about children's cricket fever and came well prepared into the classroom and started asking them about their favourite bowlers.



Teacher then made the following table on the board-

Name of the bowler	Country	Wickets taken in international matches till September 2012
Muralidharan	Sri Lanka	1347
Sharne Warne	Australia	1001
Anil Kumble	India	956
Kapil Dev	India	687
Walsh	West Indies	519

Teacher then started asking children questions based on the numbers written on the board.

- Who has taken the highest number of wickets? _____
- How many more wickets has Kumble taken than Kapil Dev? _____
- How many more wickets has Kapil Dev taken than Walsh? _____

Teacher: Now, do not calculate the exact number of wickets but estimate and tell me about how many more wickets has Muralidharan taken than Walsh?

Rehana explained : Teacher, Walsh has taken about 500 wickets and Muralidharan has taken about 1300, so Muralidharan has taken about 800 wickets more.

Teacher: Good!

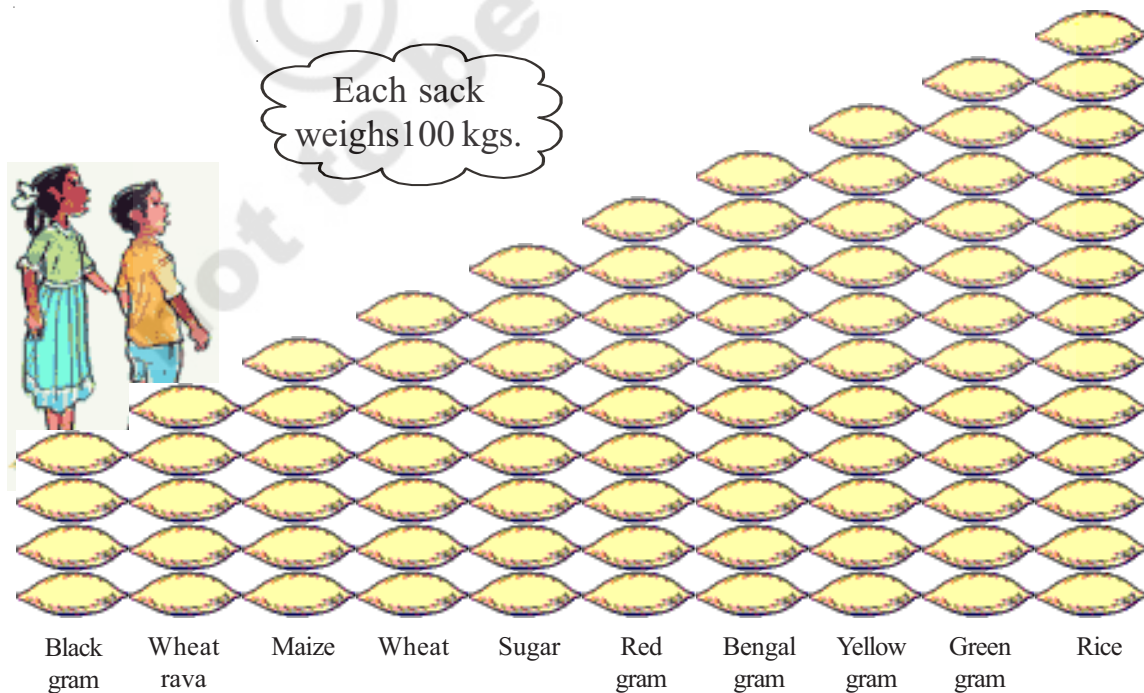
Now, you estimate and answer the following questions for the teacher.

- (a) About how many more wickets has Muralidharan taken than Kapil Dev? _____
- (b) About how many more wickets has Muralidharan taken than Kumble? _____
- (c) About how many more wickets has Muralidharan taken than Warne? _____



Raghavendra's wholesale shop

Raghavendra is a wholesale merchant. He has stocked the grains and pulses he sells to various grocery shops like this-



Now answer the following questions.

- (a) How many sugar bags are there in the shop? How many kg of sugar is there in the shop?
- (b) How many kgs of Bengal gram is there in the shop?
- (c) The weight of which pair of items is less than 1000 kgs?
- (d) The weight of which pair of items is equal to 1000 kgs?
- (e) Which items are more than 1000 kgs in weight?
- (f) What is the weight of wheat, maize and rice taken together?
- (g) Make more questions of your choice on the picture given in the previous page.

The 100 Number Table

We had used this beads mala with 100 beads in class 4.



Now, let us use the 100 number table.

Carefully study this number table .

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

- (a) How many numbers are there in each row?
- (b) What is the difference between any 2 consecutive numbers in any row?
- (c) What is the difference between any 2 consecutive numbers in any column?

Now, carefully look at the darkened window with 54 at its centre.

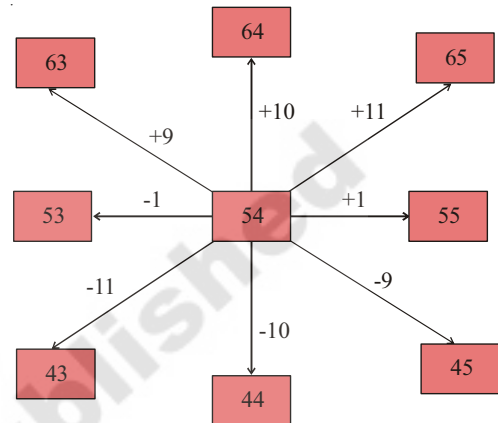
What is the relationship that 54 has with all the numbers surrounding it. Let us find out.

54 is one more than 53 and one less than 55.

54 is 10 more than 44 and 10 less than 64.

54 is 11 more than 43 and 11 less than 65.

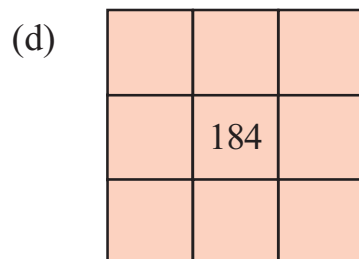
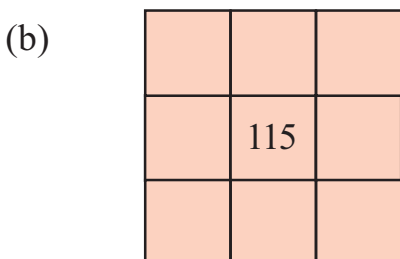
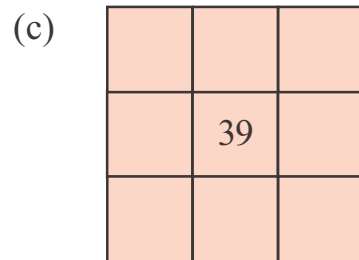
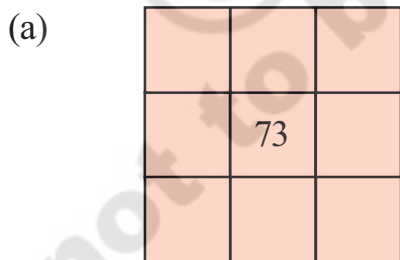
54 is 9 more than 45 and 9 less than 63.



- (d) Now choose any other window from the number chart, and see whether the relationships are the same.

Do This

Now fill up the following windows based on the above relationships.



Comparing bigger numbers

Chandu and Sindhu are making numbers with digits 0-9 again.



Chandu : How do you know that your number is bigger than mine?

Sindhu : Let me show you.

She writes in her notebook.

$$\begin{aligned}3671 &= 3 \text{ thousands} + 6 \text{ hundreds} + 7 \text{ tens} + 1 \text{ one} \\ &= 3000 + 600 + 70 + 1\end{aligned}$$

$$\begin{aligned}3167 &= 3 \text{ thousands} + 1 \text{ hundred} + 6 \text{ tens} + 7 \text{ ones} \\ &= 3000 + 100 + 60 + 7\end{aligned}$$

There are 3 thousands in both 3671 and 3167. However, there are 6 hundreds in 3671 and 1 hundred in 3167.

So, 3671 is more than 3167.

Now, you make all the four digit numbers that are possible with the digits 3, 6, 7, 1.
Hint : 24 such numbers are possible

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- (a) Which is the largest number?
- (b) Which is the smallest number?

Do This

1. (a) Complete the table as shown below-

3666 =	three thousand six hundred and sixty six
=	3 thousand + 6 hundred + 6 ten + 6 ones
=	3000 + 600 + 60 + 6
3579 =	_____
=	_____
=	_____
3584 =	_____
=	_____
=	_____
3967 =	_____
=	_____
=	_____
3200 =	_____
=	_____
=	_____

(b) Which is the largest number and which is the smallest number?

2. Write the greatest and smallest four digit numbers that can be made from the following digits.

Digits	Largest	Smallest
5, 1, 0, 9	_____	_____
2, 5, 1, 4	_____	_____
7, 3, 6, 8	_____	_____
9, 2, 7, 3	_____	_____

3. Encircle the place value of the underlined digit in the number.

(a) $8\underline{9}99 = 900, 90, 9000, 9$

(b) $707\underline{4} = 4, 40, 400, 4000$

(c) $63\underline{6}3 = 600, 6000, 60, 6$

(d) $\underline{1}273 = 1, 1000, 100, 10$

(e) $\underline{9}291 = 9000, 90, 9, 900$

The highest mountains

The heights of the bigger mountains in the world are given below.

Name of the mountain	Height	Country
Kanchanjunga	8586 m	India/Nepal
K-2	8611 m	Pakistan
Mt Everest	8848 m	Nepal/Tibet
Makal	8485 m	Nepal/Tibet
Lhotse	8516 m	Nepal

- (a) Write the names of mountains in the order of their heights from highest to lowest.

Name of mountain	Height

- (b) Which is the highest mountain in the world? Is the height about 8000 m or 9000 m?

Addition and subtraction of bigger numbers

Children are doing bigger additions and subtractions in class today.

Jyothi teacher put this problem on the board-

$$2987 + 3451 = ?$$

John did it like this

$$\begin{array}{r}
 1 \\
 2987 \\
 + 3451 \\
 \hline
 6438
 \end{array}$$

Karuna did it like this-

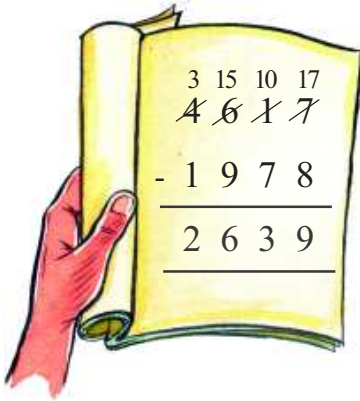
$$\begin{array}{r}
 2987 \\
 + 3451 \\
 \hline
 6338
 \end{array}$$

- (a) Who has done the problem incorrectly? Discuss the reason for the mistake with your friends.

The teacher then wrote another problem on the board.

$$4617 - 1978 = ?$$

Pooja did it like this-



Vamshi did it like this-



- (b) Who has done the problem incorrectly? Discuss the reason for the mistake with your friends.

Buying things for the house

Sridhar needs the following things for his house. So he goes to the market and finds the cost of each item.

Fan	-	₹ 1175
Bed	-	₹ 2950
Cupboard	-	₹ 4080
Cycle	-	₹ 3690
Gas stove	-	₹ 1200

- (a) How much do the bed and cupboard cost together?
- (b) If Sridhar goes to the market with ₹ 10,000, can he buy all the things mentioned above? Estimate without adding the costs of all the items.
- (c) Make more word problems of addition and subtraction based on the above information.

Population of some villages in Karimnagar district

The population of some villages in Sircilla Mandal of Karimnagar district as per 2001 census are given below.

Village	Male	Female	Total population
Cheerlavancha	2595	2682	
Thadur	3135	3191	
Peddur	1372	1349	
Sarampalle	1027	971	

Source: 2001 census

Answer the following-

- (a) Find out the total population of each village and complete the table given above.
- (b) In which villages is the female population less than the male population? By how much?
- (c) About how many men are there in all the villages? Encircle the nearest of the following.
7000 8000 9000
- (d) About how many women are there in all the villages? Encircle the nearest of the following.
7000 8000 9000
- (e) About how much is the total population of the four villages? Encircle the nearest of the following.
14000 16000 18000

Do This

1. You must get 999

(a) $235 + 341 + \underline{\hspace{2cm}} = 999$

(b) $630 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 999$

(c) $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 999$

(d) $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 999$

2. Identify the rule and fill the blanks.

(a) $25 + 75 = 100$

$100 - 25 = \underline{\hspace{2cm}}$

(c) $48 + 58 = 106$

$106 - \underline{\hspace{1cm}} = 48$

(e) $150 + 325 = 475$

$475 - 150 = \underline{\hspace{2cm}}$

(g) $567 + 115 = 682$

$682 - 115 = \underline{\hspace{2cm}}$

(i) $6247 + 2984 = 9231$

$\underline{\hspace{2cm}} - 6247 = 2984$

(b) $60 + 40 = 100$

$100 - \underline{\hspace{1cm}} = 60$

(d) $36 + 89 = \underline{\hspace{2cm}}$

$125 - 36 = \underline{\hspace{2cm}}$

(f) $267 + 625 = 892$

$892 - \underline{\hspace{1cm}} = 267$

(h) $1235 + 4111 = 5346$

$5346 - \underline{\hspace{1cm}} = 4111$

(j) $6250 + 2500 = 8750$

$8750 - 2500 = \underline{\hspace{2cm}}$

3. Identify the rule and fill the blanks.

(a) $39 + 42 = 42 + \underline{\hspace{2cm}}$

(b) $121 + 99 = 99 + \underline{\hspace{2cm}}$

(c) $536 + 677 = \underline{\hspace{2cm}} + 536$

(d) $1010 + 69 = \underline{\hspace{2cm}} + 1010$

(e) $\underline{\hspace{2cm}} + 1747 = 1747 + 3829$

(f) $9017 + \underline{\hspace{2cm}} = 1150 + 9017$

Do not find the exact answer. Just estimate!

Choose an answer closest to the correct answer.

1. Shambhu went to the market and spent ₹ 128 on food items and ₹ 413 on clothes. About how much money did Shambhu spend in the market?

400

500

600

2. Ganga goes to the market with ₹ 372 and spends ₹ 193. About how much money does she have in her purse now?

200

100

300

3. Krishna has ₹ 321 in his purse. His mother gives him ₹ 618 more. About how much money does Krishna have in his purse now?

900 1200 800

4. There are 1482 men and 1683 women in Rachapally village according to the 2011 census. About how much is the population of the village?

3000 4000 5000

5. There are 842 pages in a book. Anthony has read 421 pages. About how many pages does he still has to read?

500 300 400

6. There are 417 coconut trees in one grove and 386 in the other. About how many trees are there in all in the two groves?

700 900 800

7. About how much is 904 more than 418?

500 600 400

Try This

1. Tick the most appropriate answer to these problems given below.

Hint : What is the largest possible answer in each case?

What is the smallest possible answer in each case?

(a)
$$\begin{array}{r} 6 \square \\ + 7 \square \\ \hline \end{array}$$

(i) 200
(ii) 100
(iii) 140

(b)
$$\begin{array}{r} 2 \square \\ + 7 \square \\ \hline \hline \end{array}$$

(i) 55
(ii) 99
(iii) 198

$$\begin{array}{r}
 \text{(c)} \quad 1 \quad \square \quad \square \\
 + \quad \quad 9 \quad \square \\
 \hline
 \hline
 \end{array}$$

- (i) 3 1 2
- (ii) 1 5 0
- (iii) 2 4 1

$$\begin{array}{r}
 \text{(d)} \quad 2 \quad \square \quad \square \\
 + \quad \quad 6 \quad \square \\
 \hline
 \hline
 \end{array}$$

- (i) 1 9 7
- (ii) 3 9 4
- (iii) 3 6 0

$$\begin{array}{r}
 \text{(e)} \quad \quad 9 \quad \square \\
 - \quad 5 \quad \square \\
 \hline
 \hline
 \end{array}$$

- (i) 2 8
- (ii) 4 6
- (iii) 8 7

$$\begin{array}{r}
 \text{(f)} \quad 3 \quad \square \quad \square \\
 - \quad \quad 7 \quad \square \\
 \hline
 \hline
 \end{array}$$

- (i) 8 4
- (ii) 3 5 0
- (iii) 3 2 1

2. Put the appropriate signs.

Example : $584 = 486 \quad (+) \quad 421 \quad (-) \quad 323$

(a) $584 = 205 \quad (\quad) \quad 201 \quad (\quad) \quad 580$

(b) $584 = 266 \quad (\quad) \quad 124 \quad (\quad) \quad 194$

(c) $584 = 1000 \quad (\quad) \quad 350 \quad (\quad) \quad 66$

Exercise

1. The table given below provides information about the number of international cricket matches that have been played by various countries till September 2012.

Country	No. of matches played
Australia	744
India	926
England	464
Pakistan	370
South Africa	369
West Indies	486

- (a) Which country played the highest number of matches? How many?
- (b) How many more matches has Australia played than West Indies?
- (c) If India has lost 267 matches and 330 matches have ended as draw, then how many matches has India won?
- (d) Estimate, about how many more matches has India played than West Indies?
- (e) Estimate, about how many more matches has India played than Pakistan?
- (f) Make more word problems of addition and subtraction on the information given in the table.
2. The table given below shows the runs scored by Indian cricketers in test cricket during their life time.

Saurav Ganguly	7212
Azharuddin	6215
Kapil Dev	5248
VVS Laxman	8628
Ravi Shastri	6014

Now answer the following-

- (a) Who has scored the highest runs? How many runs did he score?
- (b) How many more runs has Laxman scored than Ravi Shastri?
- (c) About how many more runs has Saurav Ganguly scored than Azharuddin? Encircle to the nearest of the following.

500 1000 1500

- (d) About how many runs has Laxman scored more than Kapil Dev? Encircle to the nearest of the following.

2000 4000 6000

- (e) Show the runs made by the cricketers on the number line given below-



- 3. Jyothi's school is 560 meters from her house. One day she left home and walked 215 meters. Then she realized that she had forgotten her pencil box and maths book. She went back home, collected the things she had forgotten and went back to school. How many meters did Jyothi walk on that day for going to school altogether?
- 4. The ticket collections of a bus stand from Monday to Friday are ₹ 2350, ₹ 1335, ₹ 1750, ₹ 2250 and ₹ 1900. What is the total ticket collection in these 5 days?
- 5. Sridhar earns ₹ 9250 per month and his wife earns ₹ 7650 per month. If they spend ₹ 12725 per month, how much do they save?
- 6. I am a three-digit number. The digit in the units place is 1, the digit in the tens place is 4 and the digit in the hundreds place is 6. Who am I?
- 7. I am a three-digit number. The digit in the units place is 7 and hundreds place is 2. The digit in the tens place is 4 times the digit in the hundreds place. Who am I?
- 8. What is the difference between the largest three-digit number and the largest two-digit number?
- 9. What is the difference between the smallest three-digit number and the largest two-digit number?

10. Write all the three digit numbers with the same digit in the units and hundreds place and 0 in the tens place.
11. Write all the three-digit numbers where the digit in the hundreds place is 3 times in the digit the units place and the digit in the tens place is 2 times the digit in the ones place.
12. I am four-digit number. 6 is in the thousands place, 7 is in the hundreds place, 8 is the tens place and 9 is in the ones place. Who am I?
13. I am four-digit number. The digit in thousands place is largest single digit. The digit in the ones places is smallest single digit. 5 is in both, the tens and hundred place. Who am I?
14. Write all the four digit numbers where the digit in the thousands place is 4 times the digit in the units place, the digit in the hundreds place is 3 times the digit in the ones place and the digit in the tens place is 2 times the digit in the ones place.
15. In the number 5678, what is the difference between the place values of 5 and 7?
16. Subtract the smallest three digit number from the largest four digit number.
17. What should be added to 3600 to make it equal to 7450?
18. What should be subtracted from 2380 to get 1200?