

01

Anisha and Bharath have the same number of sweets. If Anisha eats 12 sweets every day and Bharath eats 3, Bharath will have 45 left when Anisha has finished all his sweets. How many sweets does Bharath have at first ?



Difference between the number of sweets eaten per day = $12 - 3 = 9$

Number of days Anisha takes to finish his sweets = $45 \div 9 = 5$ days

Number of sweets Bharath had at first = $(5 \times 3) + 45 = 60$

Bharath had 60 sweets at first

02

Rakesh has between 20 and 40 oranges. He can pack the oranges equally into bags of 4 or 6. If he packs the oranges into bags of 9, he will have 6 oranges left over.

- How many oranges does Rakesh have ?
- What is the least number of oranges he must buy in order for him to pack the oranges into bags of 4, 6 and 9 without any left over ?



Multiples of 4 : ..., 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, ...

Multiples of 6 : ..., 24, 30, 36, 42, 48, 54, 60, ...

Multiples of 9 : ..., 18, 27, 36, 45, 54, ...

(Multiples of 9) + 6 : ..., 24, 33, 42, 51, 60, ...

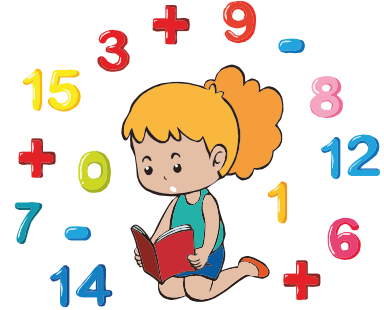
a) Rakesh has 24 oranges

b) $36 - 24 = 12$

Rakesh needs to buy at least 12 more oranges

03

Ashwini is thinking of a 5-digit number. The digit in its tens place is 1 more than the digit in the thousands place. The digit in the hundreds place is half the digit in the thousands place. The digit in the ones place is the smallest digit whereas the digit in the ten thousands place is the greatest digit. If the digit in the tens place is 9, what is the 5-digit number Ashwini is thinking of?



Work backwards and logically. The digit in the tens place is 9.

The digit in its tens place is 1 more than the digit in the thousands place.

Therefore, the digit in the thousands place is $9 - 1 = 8$

The digit in the hundreds place is half the digit in the thousands place.

Therefore, the digit in the hundreds place is $8 \div 2 = 4$.

The digit in the ones place is the smallest digit. The digit 0 is the smallest digit.

The digit in the ten thousands place is the greatest digit. The digit 9 is the greatest digit

Ten thousands	Thousands	Hundreds	Tens	Ones
9	8	4	9	0

The 5-digit number Ashiwini is thinking of is 98490

04

The table below shows the population in four different towns. Parts of the numbers are covered by an ink spill. The population in each town is a 4-digit number. The sum of the population in Town A and Town B takes the greatest possible value. The population in Town D is 913 more than the population in Town C. What is the total population of the four towns? Round off your answer to the nearest thousand.

Town	Population
A	1 ██████
B	3 ██████
C	██████
D	3780



From the visible parts of the table :

Population of Town A = 1???

Population of Town B = 3???

Greatest possible sum of the populations of Town A & B
= $1999 + 3999 = 5998$

Population of Town D = 3780

Population of Town C = $3780 - 913 = 2867$

Total population = $5998 + 2867 + 3780$
= $12645 \approx 13000$

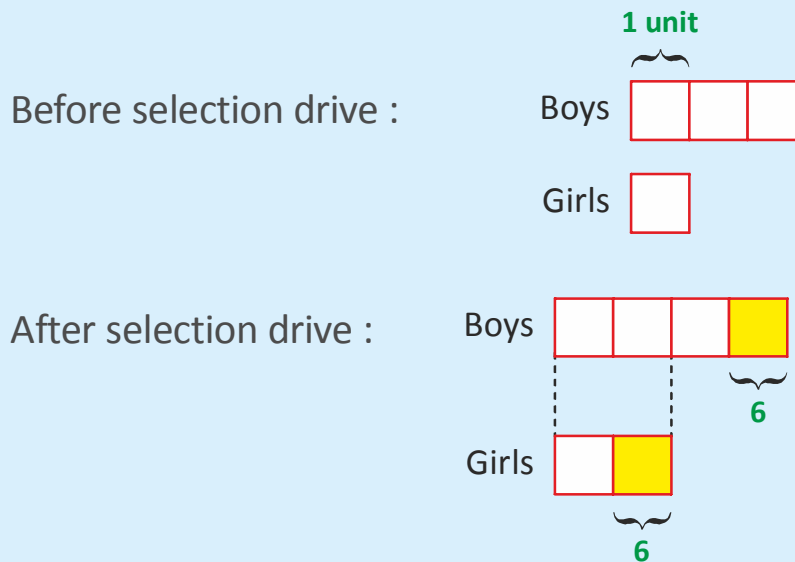
The total population of the four towns is 13000,
rounded off to the nearest thousand

05

There were three times as many boys as girls in a school basketball team. During a selection drive, 6 boys and 6 girls joined the team. As a result, the number of boys became twice the number of girls.












- How many boys were there at first ?
- What was the total number of children in the basketball team after the selection drive ?



- 1 unit = 6 children
3 units $\rightarrow 3 \times 6 = 18$ children
There were 18 boys at first
- Total number of units after the selection drive = 6
6 units $\rightarrow 6 \times 6 = 36$ children
The total number of children in the basketball team after the selection drive was 36

06

Mr Phani created a puzzle for his pupils to solve as shown below. The different shapes represent a different value. The numbers outside the box represent the total value for each row and column.

			50
			?
			110
80	70	110	

- (a) What is the missing value?
(b) Find the value of each shape.

$$\text{a) } 2 \text{ } \star + 3 \text{ } \bullet + 1 \text{ } \blacktriangle = 80 + 70 = 150$$

$$2 \text{ } \star + 3 \text{ } \bullet + 1 \text{ } \blacktriangle = 50 + ?$$

$$\Rightarrow 150 = 50 + ?$$

$$? = 100$$

The missing value is 100

$$\text{b) } 2 \text{ } \star + 1 \text{ } \bullet = 50$$

$$1 \text{ } \star + 2 \text{ } \bullet = 70$$

$$2 \text{ } \star + 4 \text{ } \bullet = 2 \times 70 = 140$$

$$3 \text{ } \bullet = 140 - 50 = 90$$

$$\bullet = 90 \div 3 = 30$$

$$\star = 70 - 2 \times 30 = 10$$

$$\star + \bullet + \blacktriangle = 80$$

$$\blacktriangle = 80 - 30 - 10 = 40$$

$$\bullet \text{ is } 30, \star \text{ is } 10 \text{ and } \blacktriangle \text{ is } 40$$