

SUCCESS WITH MATHS AHEAD



Class 4

Bangladesh edition

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Large Numbers

1

Learning Objectives

You will be able to:

- read and write numbers with 5 or more digits and state their sequence.
- write numbers with 5 or more digits in the expanded form, and state the place value of each digit.
- compare numbers with 5 or more digits and say which is greater.
- write numbers in the Indian and International Place Value Systems.
- round off numbers to the nearest 10, 100 and 1000.
- read and write Roman numbers up to 1000.



Warm Up



• Recall — 4 digit numbers

Recall how we extended numbers from 1 to 9999.

1 more than 9 is 10 or $9 + 1 = 10$

1 more than 99 is 100 or $99 + 1 = 100$

1 more than 999 is 1000 or $999 + 1 = 1000$

Recall Exercise

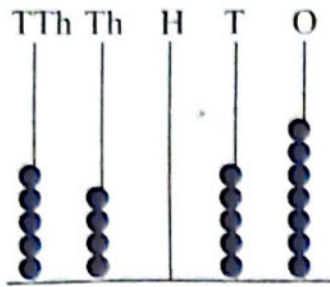
- A. Write the number name for the numeral. 1) 8694 2) 6980 3) 9017 4) 5001
- B. Write the numeral for the number name.
- | | |
|-----------------------------|--|
| 1) Six thousand ninety | 3) Eight thousand two |
| 2) Seven thousand forty-two | 4) Eight thousand five hundred forty-one |
- C. Write the numbers.
- | | |
|----------------------------|--|
| 1) Smallest 4-digit number | 3) Smallest 4-digit number using the digits 0, 3, 4, 1 |
| 2) Greatest 4-digit number | 4) Greatest number using the digits 0, 3, 4, 1 |
- D. Write the number in the short way.
- | | | | |
|--------------------------|--------------------|---------------------------|--------------------|
| 1) $6000 + 300 + 90 + 5$ | 2) $9000 + 60 + 6$ | 3) $2000 + 100 + 10 + 10$ | 4) $5000 + 60 + 3$ |
|--------------------------|--------------------|---------------------------|--------------------|
- E. Write in the expanded form. 1) 3402 2) 4957 3) 8003 4) 5010





Maths Lab Activity 1

On the abacus the number 54,057 is shown as:



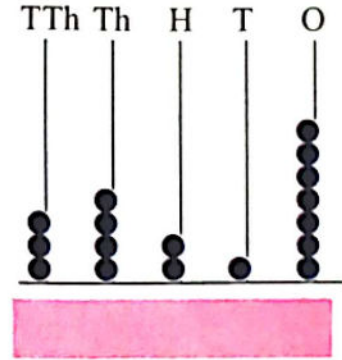
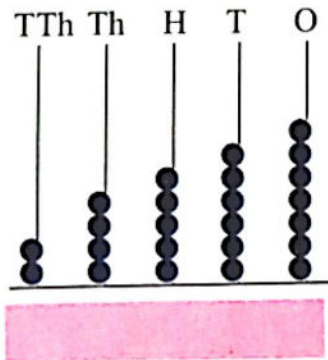
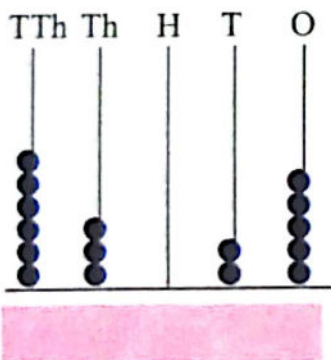
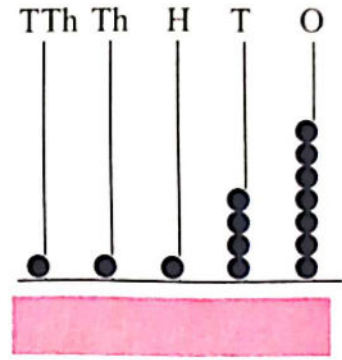
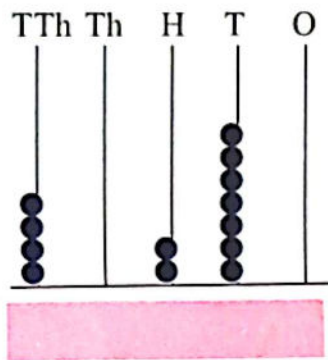
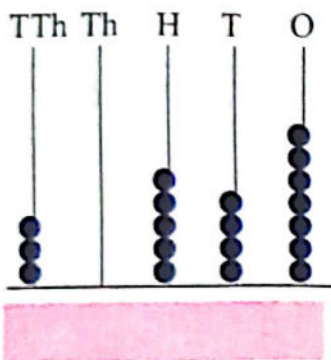
Represent the following on an abacus:

30,480 76,543 80,708 99,999

For the teacher: Let the children use an abacus to represent the numbers in Exercise 1.1 A and B.

Exercise 1.1

A. Read the number shown on the abacus and write it in the space provided.



B. Represent the following 5-digit numbers on an abacus and write their number names.

1) 36,015

2) 10,001

3) 90,090

4) 32,543

5) 90,909

C. Write the numeral for the number name.

1) Forty-five thousand six hundred nineteen

2) Ninety-nine thousand five hundred sixty

3) Thirty-five thousand nine hundred ninety-nine

Exercise 1.8

A. Write the following numbers in the International Place-Value Chart and their number names.

- | | | | | |
|------------|-------------|-------------|-------------|---------------|
| 1) 832432 | 2) 903619 | 3) 569432 | 4) 7210492 | 5) 6234310 |
| 6) 6867834 | 7) 56003200 | 8) 48321002 | 9) 58541123 | 10) 646312414 |

- B. 1) How many thousands make a lakh? _____.
- 2) How many tens make a lakh? _____.
- 3) How many lakhs make a crore? _____.
- 4) How many lakhs make a million? _____.
- 5) How many millions make a crore? _____.
- 6) How many hundreds make a lakh? _____.

C. Write the following numbers.

- | | |
|-------------------------------|------------------------------|
| 1) One less than thousand | 4) One less than one million |
| 2) One less than ten thousand | 5) One less than ten lakh |
| 3) One less than one lakh | 6) One less than one crore |

D. a) How many thousands are there in

- | | | |
|-----------|-----------|----------------|
| 1) 34,009 | 2) 48,567 | 3) 3,49,467 |
| 4) 62,153 | 5) 98,157 | 6) 7,01,32,020 |

b) How many lakhs are there in

- | | | |
|--------------|--------------|-------------|
| 1) 56,78,934 | 2) 9,50,982 | 3) 4,83,296 |
| 4) 31,52,109 | 5) 82,46,152 | |

c) How many ten thousands are there in

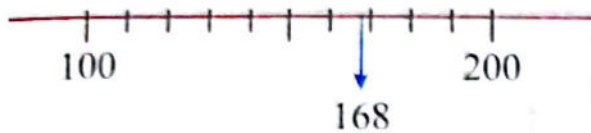
- | | | |
|-------------|-------------|----------------|
| 1) 1,36,395 | 2) 7,632 | 3) 15,639 |
| 4) 21,222 | 5) 1,01,101 | 6) 5,64,34,440 |

• Rounding numbers

You may have seen or heard announcers on TV or headlines in newspapers, saying that 90,000 people watched the cricket match today. This does not mean that the number of people was exactly 90,000. It may have been 87,532 or 92,146. Therefore 90,000 is an approximate estimated figure. Let us learn a little more about approximation.

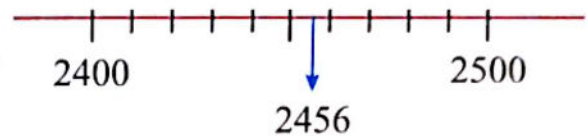
Rounding to the nearest hundred

Consider 168 on the following number line.

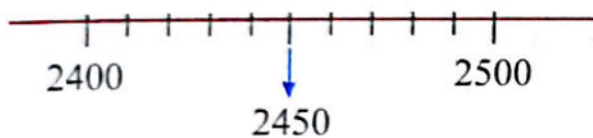


168 lies between 100 and 200. It is nearer to 200 than to 100. So we round it off to 200.

2456 lies between 2400 and 2500. It is nearer to 2500 than to 2400. Thus we round it to 2500 which is the nearest hundred.

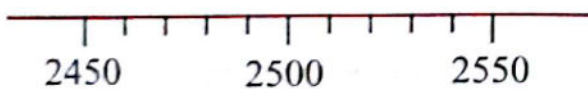


2450 lies between 2400 and 2500. It lies midway between 2400 and 2500. In this case we round it to 2500.



What do we observe here?

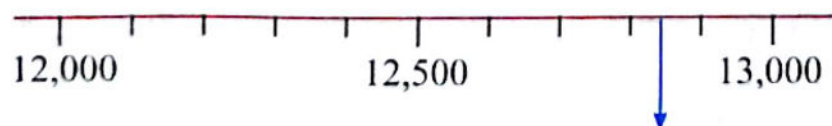
- When we round a number to the nearest hundred, we round it to the multiple of hundred nearest to the number.
- A number which is midway is always rounded up.



Thus we see that all numbers from 2450 to 2499 and from 2501 to 2549 are rounded to 2500.

Rounding to the nearest thousand

Consider 12,850



12,500 lies midway between 12,000 and 13,000. 12,500 will get rounded to 13,000. Thus all numbers between 12,500 to 12,999 and 13,001 to 13,499 will be rounded to _____

Therefore 12,850 will get rounded to _____

Exercise 2.4

A. Estimate each sum to the nearest ten. Compare with the actual sums.

1) $\begin{array}{r} 73 \\ + 48 \\ \hline \end{array}$	2) $\begin{array}{r} 56 \\ + 38 \\ \hline \end{array}$	3) $\begin{array}{r} 483 \\ + 366 \\ \hline \end{array}$	4) $\begin{array}{r} 247 \\ + 256 \\ \hline \end{array}$	5) $\begin{array}{r} 188 \\ + 198 \\ \hline \end{array}$
--	--	--	--	--

B. Estimate each sum to the nearest hundred. Compare with the actual sums.

1) $\begin{array}{r} 278 \\ + 387 \\ \hline \end{array}$	2) $\begin{array}{r} 432 \\ + 381 \\ \hline \end{array}$	3) $\begin{array}{r} 4476 \\ + 2297 \\ \hline \end{array}$	4) $\begin{array}{r} 3627 \\ + 1268 \\ \hline \end{array}$	5) $\begin{array}{r} 3627 \\ + 3210 \\ \hline \end{array}$
--	--	--	--	--

• Word problems on addition

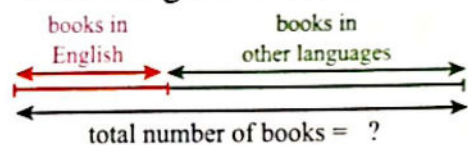
Example 1 : A large public library has 23,456 books in English and 7,25,608 books in other languages. How many books does the library have?

The total number of books is the sum of the number of books in English and the number of books in other languages (see the picture).

Number of books in English = 23 456

Number of books in other languages = 7 2 5 6 0 8

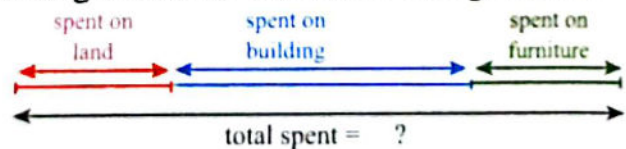
Total number of books = 7 4 9 0 6 4



Answer : 7,49,064 books

Example 2 : Mr Hashmi bought a plot of land for ₹ 1,35,466. He built a house on it for ₹ 2,86,566. He then bought furniture and other things for the house for ₹ 75,580. How much money in all did he spend?

The total amount of money Mr Hashmi spent is the sum of the amount he spent on the plot of land, in making the house, and in purchasing furniture and other things for the house (see the picture).



Amount spent on the plot of land = ₹ 1 3 5 4 6 6

Amount spent in building the house = ₹ 2 8 6 5 6 6

Amount spent on furniture and other things = ₹ 7 5 5 8 0

Total amount spent = ₹ 3 6 2 1 4 6 **Answer :** ₹ 3,62,146

	Tth	Th	H	T	O
	5	9	9	8	7
-	2	4	8	5	6
	3	5	1	3	1

Answer : 35,131

Step 1 : Subtract the ones : $7 - 6 = 1$. Write 1 in the ones column.

Step 2 : Subtract the tens : $8 - 5 = 3$. Write 3 in the tens column.

Step 3 : Subtract the hundreds : $9 - 8 = 1$. Write 1 in the hundreds column.

Step 4 : Subtract the thousands : $9 - 4 = 5$. Write 5 in the thousands column.

Step 5 : Subtract the ten thousands : $5 - 2 = 3$. Write 3 in the ten thousands column.

Example 2: Subtract 3,54,620 from 7,66,754

	L	Tth	Th	H	T	O
	7	6	6	7	5	4
-	3	5	4	6	2	0
	4	1	2	1	3	4

Answer : 4,12,134

Step 1 : Subtract the ones : $4 - 0 = 4$

Step 2 : Subtract the tens : $5 - 2 = 3$

Step 3 : Subtract the hundreds : $7 - 6 = 1$

Step 4 : Subtract the thousands : $6 - 4 = 2$

Step 5 : Subtract the ten thousands : $6 - 5 = 1$

Step 6 : Subtract the lakhs : $7 - 3 = 4$

The number which is subtracted is called the **subtrahend**.

The number from which the subtrahend is subtracted is called the **minuend**.

The result we get after the subtraction is called the **difference**.

Exercise 3.1

A. Subtract

$$\begin{array}{r} 1) \quad 58394 \\ - 36272 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 68305 \\ - 47102 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 73494 \\ - 42164 \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 85436 \\ - 43215 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 389634 \\ - 252521 \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 464050 \\ - 342030 \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 565965 \\ - 332555 \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 367455 \\ - 252003 \\ \hline \end{array}$$

Subtraction

3

Learning Objectives



You will be able to:

- subtract large numbers without and with regrouping.
- apply the skill of subtraction to solving word problems and everyday problems.
- estimate difference by rounding off.

Warm Up



• Recall – Subtraction of 4-digit numbers

You know that to subtract one 4-digit number from another, the numbers are written one below the other. The thousands, hundreds, tens and ones digits should appear one below the other.

Subtract the ones first, then the tens, hundreds and thousands.

Th	H	T	O
3	5	5	8
- 2	5	6	6
	9	9	2

Recall Exercises

$$\begin{array}{r} 1) \quad 683 \\ - 492 \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 786 \\ - 397 \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 573 \\ - 264 \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 342 \\ - 176 \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 400 \\ - 301 \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 6832 \\ - 2876 \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 9832 \\ - 7999 \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 7865 \\ - 3978 \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 6587 \\ - 1698 \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 3068 \\ - 2489 \\ \hline \end{array}$$

• Subtraction without regrouping

Subtraction of numbers with 5 or more digits follows the same rules as subtraction of 4-digit numbers.

Example 1 : Subtract 24,856 from 59,987

Exercise 5.6

A. Find the quotient and the remainder.

- | | | | |
|------------------|-------------------|--------------------|-------------------|
| 1) $93 \div 11$ | 2) $84 \div 28$ | 3) $92 \div 41$ | 4) $73 \div 13$ |
| 5) $332 \div 11$ | 6) $240 \div 18$ | 7) $405 \div 21$ | 8) $613 \div 24$ |
| 9) $394 \div 23$ | 10) $693 \div 17$ | 11) $6792 \div 38$ | 12) $320 \div 29$ |

B. Find the quotient and the remainder.

- | | | | |
|--------------------|--------------------|--------------------|--------------------|
| 1) $7183 \div 46$ | 2) $2903 \div 27$ | 3) $6792 \div 38$ | 4) $4560 \div 15$ |
| 5) $6003 \div 31$ | 6) $4293 \div 12$ | 7) $9311 \div 22$ | 8) $2601 \div 51$ |
| 9) $6265 \div 25$ | 10) $8080 \div 11$ | 11) $2329 \div 79$ | 12) $2487 \div 63$ |
| 13) $6561 \div 81$ | 14) $3089 \div 16$ | 15) $5678 \div 31$ | 16) $4231 \div 49$ |

C. Fill in the blanks to make the sentences true.

- 1) $936 \div \underline{\hspace{1cm}}$ gives quotient 104 and remainder 0.
- 2) $\underline{\hspace{1cm}} \div 23$ gives quotient 15 and remainder 5.
- 3) $1022 \div 14$ gives quotient $\underline{\hspace{1cm}}$ and remainder 0.
- 4) $1932 \div 31$ gives quotient $\underline{\hspace{1cm}}$ and remainder $\underline{\hspace{1cm}}$.

• Division by 100 and 1000 with remainder

Study the table:

Dividend	Divisor	Quotient	Remainder
62 <u>36</u>	100	62	36
50 <u>3</u>	100	5	3
789 <u>4</u>	100	78	94
630 <u>2</u>	1000	6	302
802 <u>8</u>	1000	8	28
934 <u>0</u>	1000	9	340

What do you observe?

- When we divide a number by 100, the quotient is obtained by removing the digits in the tens and ones places. The number formed by the digits in tens and ones places is the remainder.
- When we divide a number by 1000, the quotient is obtained by removing the digits in the hundreds, tens and ones places. The number formed by the digits in hundreds, tens and ones places is the remainder.

There can be a situation where the cost of 1 dozen articles is given and you want to buy say 7 articles. How do you find the cost of 7 articles?

Example 2 : A dozen notebooks cost ₹ 36. How much will 7 notebooks cost?

Cost of 12 notebooks = ₹ 36

Cost of 1 notebook = ₹ $36 \div 12 = ₹ 3$

Cost of 7 notebooks = ₹ $3 \times 7 = ₹ 21$

The problem is solved in two steps.

- 1) Find the cost of 1 article by dividing the cost of 12 articles by 12.
- 2) Find the cost of 7 articles by multiplying the cost of 1 article by 7.

Example 3 : The distance covered by a car in 5 hours is 200 km. What is the distance covered by the car in 3 hours?

Distance covered by the car in 5 hours = 200 km

Step 1 : Distance covered by the car in 1 hour = $200 \text{ km} \div 5 = 40 \text{ km}$

Step 2 : Distance covered by the car in 3 hours = $40 \text{ km} \times 3 = 120 \text{ km}$

This method of solving such a problem is called the **unitary method**.

• Word problems

Example 1 : A Maths test paper has 10 questions and the total marks are 100. If Meghna answers 6 questions correctly, how many marks will she get?

Total marks for 10 questions = _____

Step 1 : Marks for 1 question = _____

Step 2 : Marks for 6 questions = _____

Hence Meghna will get _____ marks.

Example 2 : Rahaman painted 48 m of a fence in 6 days. How much did he paint in the first 4 days?

Fence painted in _____ days = _____ m

Step 1 : Fence painted in _____ day = _____ m

Step 2 : Fence painted in _____ days = _____ m

Rahaman painted _____ m in _____ days.

Factore and Multiples

6

Learning Objectives

You will be able to:

- list the multiples of a number.
- list the factors of a number.
- calculate the highest common factor (HCF) of two numbers.
- calculate the lowest common multiple (LCM) of two numbers.
- list the prime factors of a number.
- use the prime factorisation method to find HCF and LCM.



Warm Up



Maths Lab Activity 1

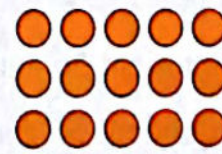
Materials required: 15 objects e.g. counters.

Learning outcome: Children understand that several pairs of numbers can be multiplied to get the same number.

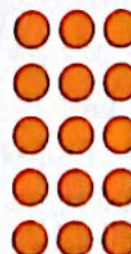
Method: Take 15 counters. Arrange them in rows and columns.

One way is to arrange them into 3 rows and 5 columns. This gives the multiplication fact: $3 \times 5 = 15$

How many more ways can you arrange these in? What multiplication facts do they show? Try with 24 counters. How many multiplication facts can you get?



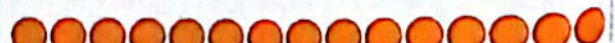
$$3 \times 5 = 15$$



$$5 \times 3 = 15$$



$$1 \times 15 = 15$$



$$15 \times 1 = 15$$

Exercise 6.6

A. Find the first two common multiples of the numbers in each pair

- | | | | |
|-----------|------------|------------|------------|
| 1) 6, 8 | 2) 3, 7 | 3) 8, 10 | 4) 9, 6 |
| 5) 12, 10 | 6) 12, 24 | 7) 4, 6 | 8) 5, 10 |
| 9) 8, 12 | 10) 10, 20 | 11) 15, 20 | 12) 20, 30 |

B. Find the LCM.

- | | | | |
|----------|--------------|---------------|-------------|
| 1) 6, 12 | 2) 8, 12 | 3) 9, 5 | 4) 6, 7 |
| 5) 4, 7 | 6) 7, 14 | 7) 10, 20 | 8) 4, 6 |
| 9) 6, 8 | 10) 4, 8, 12 | 11) 5, 15, 20 | 12) 3, 6, 8 |

• Prime factorisation

Example 1: Consider the number 21 and factorise it.

It can be factorised as shown.

We find that the factors of 21 are 1, 3, 7, 21.

Leave out 1 and 21 from this list of factors.

The remaining factors (3, 7) are prime numbers.

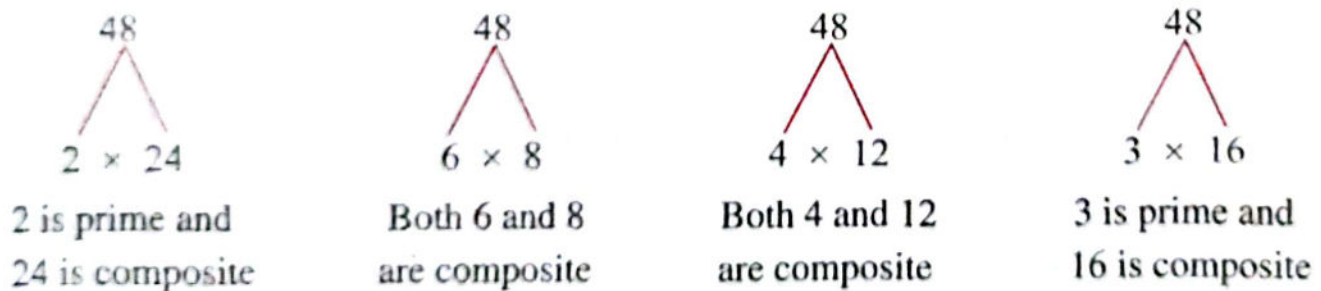


A factorisation in which every factor is prime is called **prime factorisation** of the number.

The prime factorisation of 21 is 7×3 .

Example 2: Factorise 48.

Given below are several ways to factorise 48.



All the composite numbers can be factorised further as shown below. The ringed numbers have no further factors. Hence these factors are called **prime factors**.

Geometry

7

Learning Objectives

You will be able to:

- define an angle and name its parts.
- compare angles by paper folding.
- recognise the different types of angles.
- recognise the different types of triangles and quadrilaterals.
- recognise a circle and name its parts.
- draw a circle.



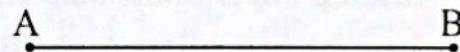
Warm Up



Recall

Let us recall what you have learnt about line segments, lines and rays.

A line segment is a straight line having a beginning and an end

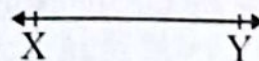


This line segment is called line segment AB or $\overline{AB}$.

Line

A line segment extending on both sides endlessly is called a line.

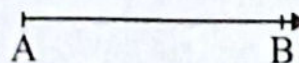
Draw a line segment XY and extend $\overline{XY}$ on both sides. Put two arrow marks on either end. This represents a line $\overleftrightarrow{XY}$.

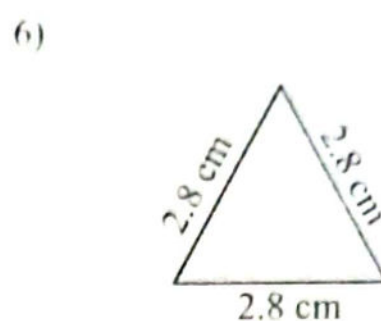
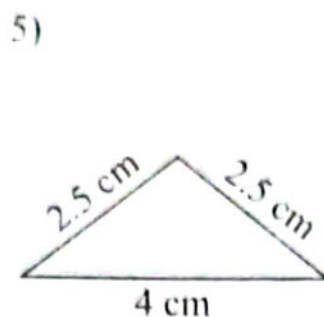
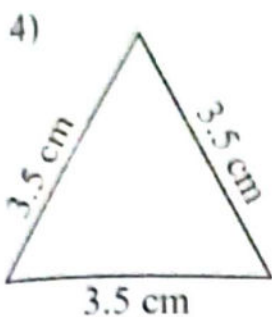


Ray

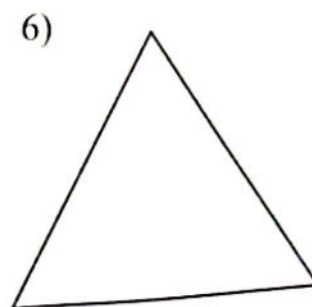
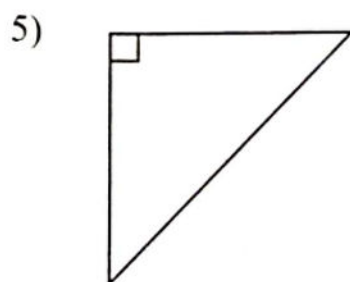
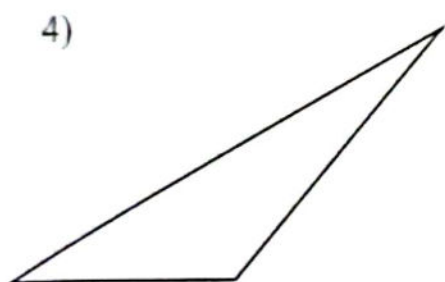
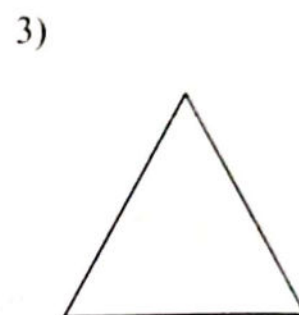
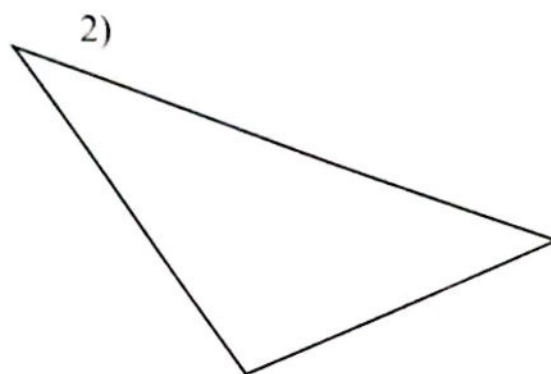
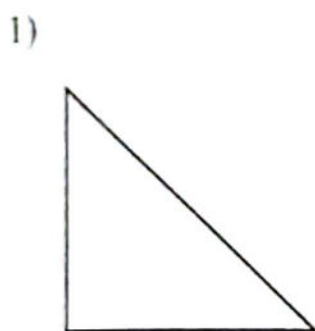
A ray is a part of a line which extends endlessly in one direction only.

To represent a ray draw a line segment AB and extend it in one direction only. Put an arrow mark on that end. This represents a ray $\overrightarrow{AB}$.



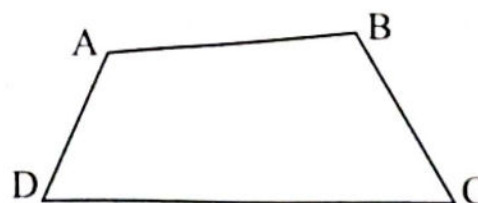


B. Classify the following triangles with respect to their angles.



● Quadrilaterals

Look at this closed figure. It is a polygon formed by four line segments. It is called a **quadrilateral**. The four line segments are the four sides of the quadrilateral.



A quadrilateral has 4 sides, 4 vertices and 4 angles.

Name the vertices of quadrilateral ABCD : _____ , _____ , _____ and _____

Name the sides of ABCD : _____ , _____ , _____ and _____

Name the angles of ABCD : _____ , _____ , _____ and _____

An equivalent fraction can be obtained by multiplying the numerator and denominator of a fraction by the same number.



The equivalent fraction of $\frac{1}{5}$ are

$$\frac{1 \times 2}{5 \times 2} = \frac{2}{10}, \quad \frac{1 \times 3}{5 \times 3} = \frac{3}{15}, \quad \frac{1 \times 4}{5 \times 4} = \frac{4}{20}, \dots \text{ and so on}$$



An equivalent fraction can also be obtained by dividing the numerator and denominator of a fraction by a common factor.

For example $\frac{2 \div 2}{4 \div 2} = \frac{1}{2}$; $\frac{2}{4}$ and $\frac{1}{2}$ are equivalent fractions.

$\frac{4 \div 2}{8 \div 2} = \frac{2}{4}$; $\frac{4}{8}$ and $\frac{2}{4}$ are equivalent fractions.

Exercise 9.2

Fill in the blanks to make the fractions equivalent.

1) $\frac{1}{3} = \frac{\quad}{6}$

2) $\frac{1}{3} = \frac{\quad}{15}$

3) $\frac{1}{4} = \frac{\quad}{12}$

4) $\frac{1}{5} = \frac{\quad}{25}$

5) $\frac{1}{2} = \frac{\quad}{20}$

6) $\frac{1}{7} = \frac{\quad}{21}$

7) $\frac{2}{9} = \frac{\quad}{18}$

8) $\frac{3}{7} = \frac{\quad}{35}$

9) $\frac{2}{3} = \frac{\quad}{9}$

10) $\frac{3}{4} = \frac{\quad}{16}$

11) $\frac{4}{7} = \frac{12}{\quad}$

12) $\frac{4}{9} = \frac{8}{\quad}$

13) $\frac{2}{5} = \frac{10}{\quad}$

14) $\frac{3}{4} = \frac{30}{\quad}$

15) $\frac{4}{5} = \frac{16}{\quad}$

16) $\frac{3}{8} = \frac{\quad}{40}$

Example 1 : Find an equivalent fraction of $\frac{2}{7}$ with the numerator 8.

To get the numerator 8, we have to multiply the numerator 2 by 4. The numerator and denominator have to be multiplied by the same whole number. Thus to get the denominator we also multiply the denominator 7 by 4.

$$\text{Hence } \frac{2}{7} = \frac{2 \times 4}{7 \times 4} = \frac{8}{28}$$

Exercise 9.7

A. Which fraction is greater in each pair?

- 1) $\frac{1}{3}, \frac{5}{3}$ 2) $\frac{4}{5}, \frac{3}{5}$ 3) $\frac{1}{8}, \frac{1}{4}$ 4) $\frac{1}{6}, \frac{5}{12}$ 5) $\frac{5}{16}, \frac{3}{8}$
 6) $\frac{2}{5}, \frac{3}{10}$ 7) $\frac{1}{7}, \frac{3}{14}$ 8) $\frac{3}{7}, \frac{2}{5}$ 9) $\frac{3}{5}, \frac{5}{10}$ 10) $\frac{2}{3}, \frac{1}{9}$

B. Which fraction is smaller in each pair?

- 1) $\frac{2}{15}, \frac{7}{15}$ 2) $\frac{4}{9}, \frac{1}{9}$ 3) $\frac{1}{10}, \frac{1}{15}$ 4) $\frac{5}{8}, \frac{7}{12}$ 5) $\frac{3}{4}, \frac{5}{12}$
 6) $\frac{7}{12}, \frac{9}{16}$ 7) $\frac{5}{6}, \frac{11}{18}$ 8) $\frac{5}{21}, \frac{3}{7}$ 9) $1\frac{1}{4}, \frac{7}{8}$ 10) $2\frac{2}{3}, \frac{11}{6}$

C. Write in ascending order using the symbol $<$.

- 1) $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}$ 2) $\frac{1}{3}, \frac{5}{6}, \frac{4}{9}$ 3) $\frac{3}{4}, \frac{3}{8}, \frac{5}{12}$ 4) $\frac{1}{3}, \frac{1}{4}, \frac{1}{5}$
 5) $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}$ 6) $\frac{1}{2}, \frac{1}{4}, \frac{3}{8}$ 7) $\frac{3}{8}, \frac{5}{12}, \frac{5}{6}$ 8) $\frac{2}{5}, \frac{3}{10}, \frac{4}{15}$
 9) $\frac{5}{6}, \frac{5}{8}, \frac{5}{12}$ 10) $\frac{3}{4}, \frac{5}{6}, \frac{7}{12}$

D. Arrange in descending order using the symbol $>$.

- 1) $\frac{5}{12}, \frac{1}{6}, \frac{3}{8}$ 2) $\frac{5}{7}, \frac{9}{14}, \frac{11}{21}$ 3) $\frac{5}{8}, \frac{7}{16}, \frac{9}{32}$ 4) $\frac{7}{10}, \frac{17}{20}, \frac{23}{30}$
 5) $\frac{2}{5}, \frac{7}{15}, \frac{19}{30}$ 6) $\frac{5}{6}, \frac{7}{12}, \frac{13}{24}$ 7) $\frac{1}{9}, \frac{1}{18}, \frac{1}{12}$ 8) $\frac{10}{11}, \frac{19}{22}, \frac{19}{33}$

• Fraction as division

Munira has some sweets and she wants to distribute them equally among her two younger brothers. Help her distribute them.

Number of sweets	Number of children	Number of sweets each child gets
8	2	4
6	2	—
4	2	—
2	2	—
1	2	$\frac{1}{2}$

The Decimal System

10

Learning Objectives

You will be able to:

- write fractions with 10, 100 and 1000 as denominators as decimal numbers.
- write the expanded form of decimals.
- compare decimals and say which is bigger.
- add like and unlike decimals.
- subtract like and unlike decimals.



Warm Up



Recall

Study the place value chart for the numerals 1432, 142, 13 and 1.

The place value of 1 in 1 is 1

The place value of 1 in 13 is

$$1 \text{ ten} = 10 \times 1$$

The place value of 1 in 142 is

$$1 \text{ hundred} = 10 \times 1 \text{ ten}$$

The place value of 1 in 1432 is

$$1 \text{ thousand} = 10 \times 1 \text{ hundred}$$

Thus

Th	H	T	O
			1
		1	3
	1	4	2
1	4	3	2

The place value of a digit becomes 10 times as it moves from right to left by one place.



What happens to the place value of a digit as it moves one step from left to right?

The place value of 1 in 1432 is 1 thousand.

The place value of 1 in 142 is 1 hundred = 1 thousand $\div 10 = \frac{1}{10} \times 1 \text{ thousand}$

The place value of 1 in 13 is 1 ten = 1 hundred $\div 10 = \frac{1}{10} \times 1 \text{ hundred}$

The place value of 1 in 1 is 1 = 1 ten $\div 10 = \frac{1}{10} \times 1 \text{ ten}$

Thus

The place value of a digit becomes one-tenth as the digit moves from left to right by one place.

