

# LaPIS Diagnostic Test Workbook - Mathematics

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Name : Rithik K V

Class : 7

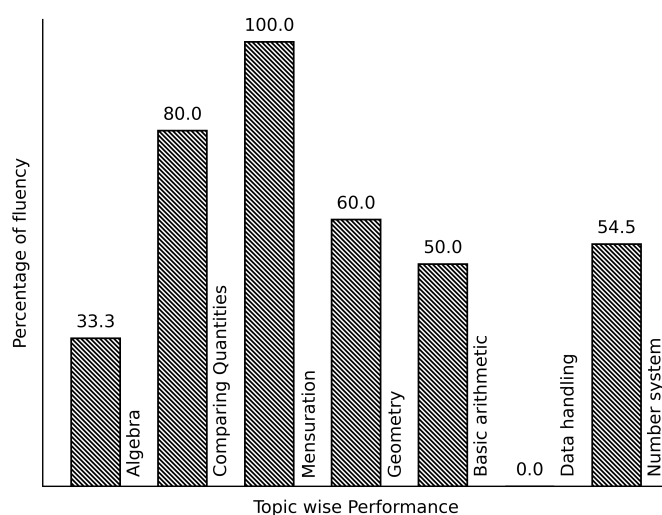
Section : A

School : AKV Public School

Login ID : AKV112

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## Rithik K V's Performance Report



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Score: 21/40

Percentage: 52.5%

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## Rithik K V's Study Planner

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Date	Topics Planned	Q. Numbers	Teacher Remark	Teacher Sign	Parent Sign

Teacher's Feedback to Student

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Class Teacher Signature

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Principal Signature

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## Basic arithmetic

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Topics to be Improved	
Types of angles	Identification of types of angles

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Hi, here in this video you will learn **Types of Angles**

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**Question: 1** .....

Find the angles.



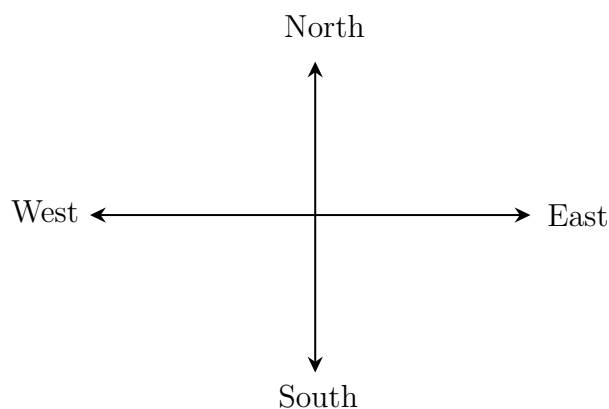
**Answer:**

The angle ranges from \_\_\_\_° to \_\_\_\_°.

The angle perpendicular to 0° is \_\_\_\_°.

The straight line measures \_\_\_\_°.

**Question: 2** .....



The angle formed between the directions

(i) West and East is \_\_\_\_\_ angle.

(ii) North and East is \_\_\_\_\_ angle.

(iii) East and South is \_\_\_\_\_ angle.

**Answer:**

The angle formed between West and East is \_\_\_\_° and it is called \_\_\_\_\_ angle.

The angle formed between North and East is \_\_\_\_° and it is called \_\_\_\_\_ angle.

The angle formed between East and South is \_\_\_\_° and it is called \_\_\_\_\_ angle.

**Question: 3** .....

The addition of straight angle and right angle is \_\_\_\_\_ angle.

**Answer:**

The measurement of straight angle is \_\_\_\_\_°

The measurement of right angle is \_\_\_\_\_°.

Straight angle + Right angle = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

It is called as \_\_\_\_\_ angle.

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## Data handling

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Topics to be Improved	
Chance of probability	Basis of probability, Sample space in probability
Range	Finding the range
Arithmetic mean, mode and median	Mean, Median and Mode

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Hi, here in this video you will learn **Basics of probability**

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**Question: 4** .....

Identify the sure events and impossible events

- (i) The sun rises in the west.
- (ii) Water is colourless.
- (iii) Clock rotates in clock wise direction.
- (iv) Ball is square in shape.

**Answer:**

Events that always occur are called \_\_\_\_\_ (sure/ impossible) events.

Events that cannot occur are called \_\_\_\_\_ (sure/ impossible) events.

Here, The sun rises in the west is \_\_\_\_\_ event. Water is colourless is \_\_\_\_\_ event.

Clock rotates in clock wise direction is \_\_\_\_\_ event. Ball is square in shape is \_\_\_\_\_ event.

**Question: 5** .....

Probability of sure events is \_\_\_\_\_ (greater / smaller) than probability of impossible events.

**Answer:**

Probability of sure event = \_\_\_\_\_ (0/ 1/ any number).

Probability of impossible event = \_\_\_\_\_ (0/ 1/ any number).

Therefore, Probability of sure event \_\_\_\_\_ Probability of impossible event.

**Question: 6** .....

Raju has pencil, an eraser, a scale, sharpener, colour pencil and protractor in his box. What is the probability of getting a pen from his box.

**Answer:**

Things Raju have \_\_\_\_\_

Does Raju have pen in his box, \_\_\_\_\_ (Yes/ No).

Then probability of getting pen from his box is \_\_\_\_\_ (0/1)

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Hi, here in this video you will learn **Basics of probability**

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**Question: 7** .....

Which of the following contains list of all possible outcomes.

Probability

Sample  
space

Sure events

Impossible  
events

**Answer:**

Probability is the measure of \_\_\_\_\_ ( chance /number) of an events happenings.

Sample space consists of \_\_\_\_\_ ( possible/ impossible) outcomes.

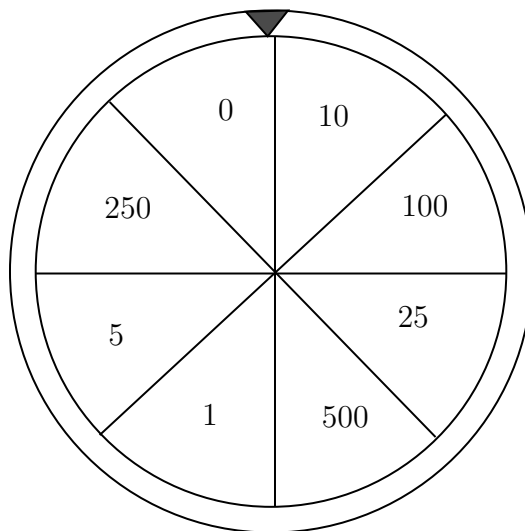
Sure events always \_\_\_\_\_ (occurs/don't occurs).

Impossible events \_\_\_\_\_ (occurs/ don't occurs).

Therefore, \_\_\_\_\_ contains list of possible outcomes.

**Question: 8** .....

Write the possible outcomes while spinning the given wheel.



**Answer:**

Outcomes are \_\_\_\_\_ (possible/impossible) results of an experiment.

The possible outcomes while spinning wheel are ₹0, ₹10, \_\_\_\_\_

**Question: 9** .....

A bag contains three balls of colour blue, green and red. Write the possible outcomes if two balls are taken out.

**Answer:**

A bag contains \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ balls.

If one of the ball is blue in colour, then other ball can be \_\_\_\_\_ or \_\_\_\_\_

If one of the ball is green in colour, then other ball can be \_\_\_\_\_ or \_\_\_\_\_.

If one of the ball is red in colour, then other ball can be \_\_\_\_\_ or \_\_\_\_\_.

Therefore, if two balls are taken out then possible outcomes are blue + \_\_\_\_\_ ,  
\_\_\_\_\_ + \_\_\_\_\_, \_\_\_\_\_ + \_\_\_\_\_,

Hi, here in this video you will learn **Range**



**Question: 10** .....

Range of the data = \_\_\_\_\_ - \_\_\_\_\_

**Answer:**

The difference between highest value and lowest value is \_\_\_\_\_.

Example: Find the range of 10, 5, 30, 23, 54, 39 and 16

Highest value = \_\_\_\_\_ , Lowest value = \_\_\_\_\_ .

Range = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_.

**Question: 11** .....

Circle the correct range for the following data 31, -20, 35, -38, 29, 0, 43, -25, 51, 14, 9

$$-20 + 51$$

$$\frac{-38-51}{2}$$

$$51 + 38$$

$$\frac{51+20}{2}$$

**Answer:**

Range = \_\_\_\_\_ - \_\_\_\_\_.

Arranging the data in ascending order, \_\_\_\_\_

In the given data,

Highest value = \_\_\_\_\_ , Lowest value = \_\_\_\_\_ , Range = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

**Question: 12** .....

Find the range of first 10 multiple of 5.

**Answer:**

First 10 multiple of 5 = \_\_\_\_\_

Therefore,

Highest value = \_\_\_\_\_ , Lowest value = \_\_\_\_\_ , Range = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

Hi, here in this video you will learn **Mean, Median, Mode**



**Question: 13** .....

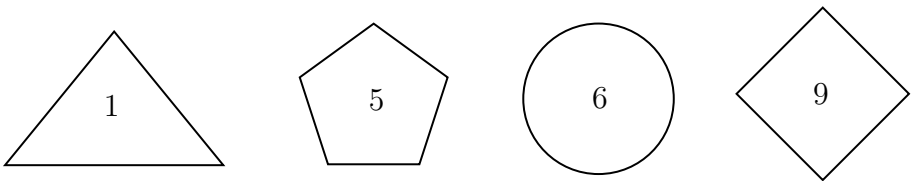
Find the mode of the following data: 5, 15, 23, 5, 32, 44, 72, 55, 6, 3, 5, 65, 45, 67, 24, 19 and 98.

**Answer:**

Mode is the number that occurs \_\_\_\_\_ (frequently / rarely) in a given list of observations.  
Arranging the data in ascending order: \_\_\_\_\_  
\_\_\_\_\_ occurs most number of times. Then, mode of the given data is \_\_\_\_\_

**Question: 14** .....

Which shape contains median of the given data 3, 5, 6, 2, 7, 9, 6, 4 and 1



**Answer:**

Median is the \_\_\_\_\_(first/central/last) value of a data when the data is arranged in ascending or descending order.  
Arrange the given data in ascending order : \_\_\_\_\_  
Central value of the given data is \_\_\_\_\_ and it is the \_\_\_\_\_ of a data.

**Question: 15** .....

Marks scored	100	90	80	70
Number of students	4	5	2	1

Mean = \_\_\_\_\_ , Median = \_\_\_\_\_ and Mode = \_\_\_\_\_.

**Answer:**

Mean =  $\frac{\text{sum of all observation}}{\text{number of observation}}$ .  
Here s sum of all observation = \_\_\_\_\_ , number of observation = \_\_\_\_\_  
Therefore, mean = \_\_\_\_\_  
Arrange the data in ascending order : \_\_\_\_\_  
Here, median = \_\_\_\_\_ , mode = \_\_\_\_\_.



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# Geometry

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Topics to be Improved	
Faces vertex and edges	Identification of faces, edges and vertices
Transversal angle made by transversal	Basics of Transversal angle
Right angle triangle and pythagoras property	Basics of Pythagoras property
Sum of lengths of two sides of a triangle	Sum of two sides of a triangle

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Hi, here in this video you will learn **Basics of 3D model**

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**Question: 16** .....

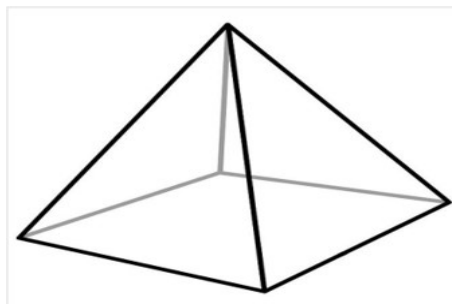
A point at which two or more lines segments meet is called \_\_\_\_\_(Vertex/ edges/ faces).

**Answer:**

\_\_\_\_\_ has two end point (line/line segment/ray).

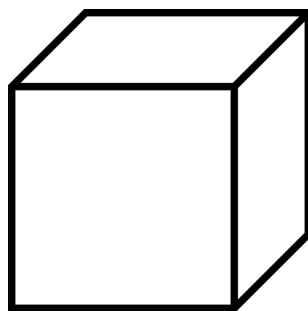
A \_\_\_\_\_ is a point where two or more line segments meet(Vertex/ edges/ faces).

Mark the vertices in the diagram,



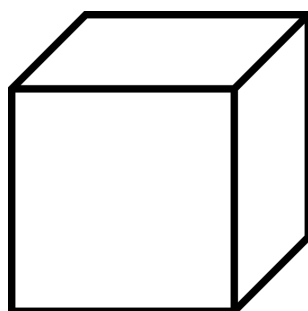
**Question: 17** .....

Mark and find the number of vertices, edges and faces in a cube.



**Answer:**

Mark the vertex, edges and faces in a cube.



Count the number of vertex, edges and faces in a cube.

Cube have \_\_\_\_\_ vertices, \_\_\_\_\_ edges and \_\_\_\_\_ faces.

**Question: 18** .....

How many vertices, edges and faces does dices have?



**Answer:**

The shape of dice is \_\_\_\_\_.

Dices have \_\_\_\_\_ vertices, \_\_\_\_\_ edges and \_\_\_\_\_ faces.

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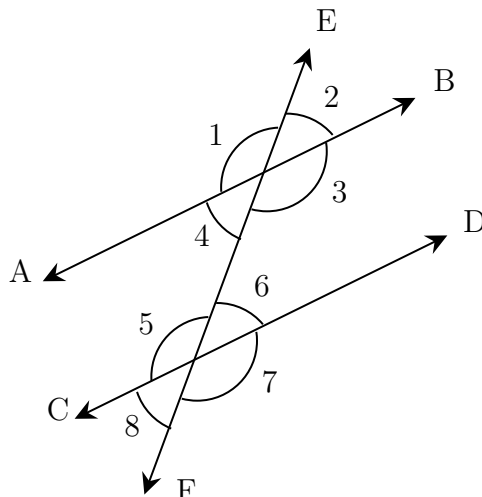
Hi, here in this video you will learn **Basics of Transversal angle**

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**Question: 19** .....

In given diagram,  $\angle 1$  and  $\angle 7$  are \_\_\_\_\_ (alternate / corresponding) angles.



**Answer:**

A line that intersects two or more lines at distinct points is called a \_\_\_\_\_ (transversal/ Intersecting line).

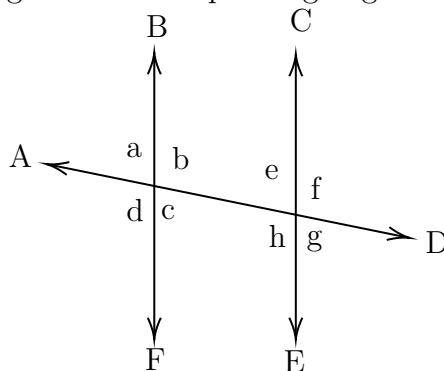
Angle that lies on different vertices and on the opposite sides of transversal is \_\_\_\_\_ angles.

Angle that lies on different vertices and on the same sides of transversal is \_\_\_\_\_ angles.

Therefore,  $\angle 1$  and  $\angle 7$  are \_\_\_\_\_

**Question: 20** .....

Find the transversal, alternate angles and corresponding angles in a given diagram.



**Answer:**

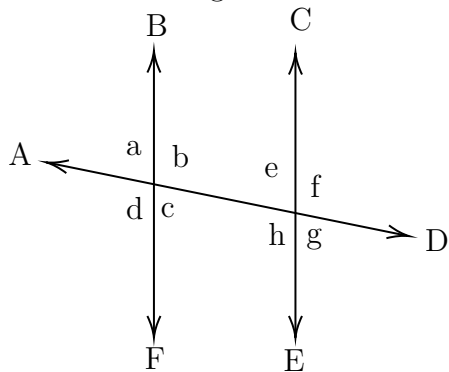
A line that intersects two or more lines at distinct points is called a \_\_\_\_\_ (transversal/ Intersecting line).

In a given diagram, \_\_\_\_\_ is a transversal line. (BF/AD/CE)

Alternate angles	Corresponding angles
$\angle a$ and $\angle g$ , $\angle b$ and $\angle h$ ,	$\angle a$ and $\angle e$ , $\angle b$ and $\angle f$ ,

**Question: 21** .....

Find  $\angle e$  and  $\angle g$  if  $\angle a = 30^\circ$ .



**Answer:**

When parallel lines cut by a transversal,

- (i) Alternate angles are \_\_\_\_\_ (equal / not equal).
- (ii) Corresponding angles are \_\_\_\_\_ (equal / not equal).

Here, alternate angle of  $\angle a$  is \_\_\_\_\_ and its value is \_\_\_\_\_.

Corresponding angle of  $\angle a$  is \_\_\_\_\_ and its value is \_\_\_\_\_.

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Hi, here in this video you will learn **Pythagoras property**

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**Question: 22** .....

In a right angled triangle, square of the \_\_\_\_\_ = sum of the squares of the legs.

**Answer:**

Pythagoras theorem is only applicable for \_\_\_\_\_ triangle.

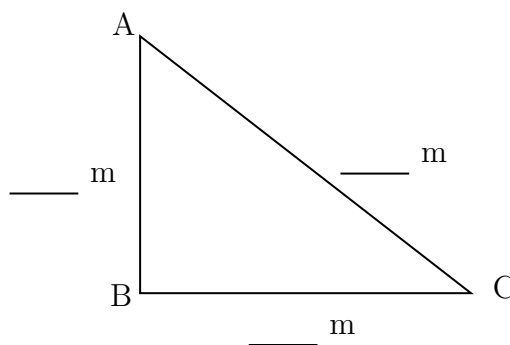
Longest side of the triangle is \_\_\_\_\_ (hypotenuse/ legs) and other two sides are called \_\_\_\_\_ (hypotenuse/ legs).

Pythagoras theorem states that \_\_\_\_\_.

**Question: 23** .....

Find the hypotenuse of the triangle ABC if base is 12 m and altitude is 5 m.

**Answer:**



Pythagoras theorem states that square of the \_\_\_\_\_ = sum of the squares of its \_\_\_\_\_.

*Given:* Base = \_\_\_\_\_, Altitude = \_\_\_\_\_,

Base and altitude are \_\_\_\_\_ (hypotenuse/ legs) of the triangle.

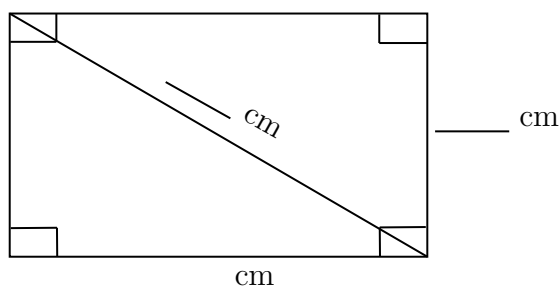
By Pythagoras theorem,  $(\text{_____})^2 = (\text{_____})^2 + (\text{_____})^2$   
 $\text{_____} = \text{_____} + \text{_____}$

Therefore, hypotenuse of the triangle is \_\_\_\_\_.

**Question: 24** .....

Find the length of the rectangle, if breadth is 3 cm and diagonal is 5 cm.

**Answer:**



Pythagoras theorem states that square on the \_\_\_\_\_ = sum of the squares on \_\_\_\_\_.

Is Pythagoras theorem applicable in rectangle? \_\_\_\_ ( yes/ no).

*Given:* breadth = \_\_\_\_\_, length of diagonal = \_\_\_\_\_

By Pythagoras theorem,  $(\text{_____})^2 = (\text{_____})^2 + (\text{_____})^2$   
 $\text{_____} = \text{_____} + \text{_____}$

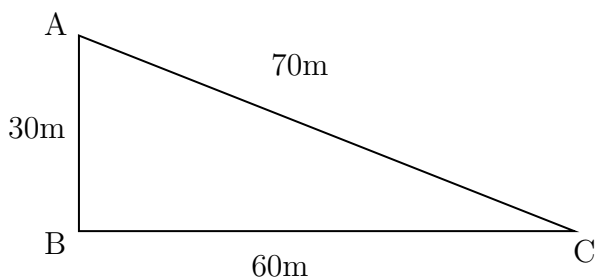
Therefore, diagonal of the rectangle is \_\_\_\_\_

Hi, here in this video you will learn **Sum of the length of sides of the triangle**



**Question: 25** .....

Find the greatest distance to reach C from A in the given diagram.



**Answer:**

The sides of the given triangle are \_\_\_\_\_.

The possible way to reach point C from point A are \_\_\_\_\_ and AB then to \_\_\_\_\_

Side AC = \_\_\_\_\_

Side AB + BC = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Therefore, the greatest distance to reach C from A in the given diagram is \_\_\_\_\_.

**Question: 26** .....

\_\_\_\_\_ (Sum of / Difference between) the length of any two sides of a triangle is smaller than the length of the third side.

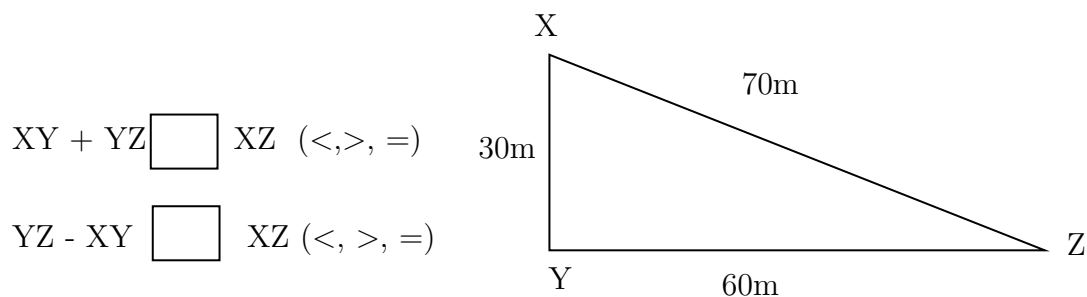
**Answer:**

There are \_\_\_\_\_ sides in a triangle.

The sum of the two sides of a triangle is \_\_\_\_\_ than the other side of the triangle.

The difference of the two sides of a triangle is \_\_\_\_\_ than the other side of the triangle.

Example: In triangle XYZ,



**Question: 27** .....

The lengths of two sides of a triangle are 7 cm and 10 cm. Between which two numbers can length of the third side fall?

**Answer:**

- The sum of the two sides of a triangle is \_\_\_\_\_ than the third side of the triangle.  
 Therefore, the third side should be \_\_\_\_\_ (less/ greater) than sum of other two sides.  
 Here, sum of the two sides = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
 Therefore, the length of the third side is less than \_\_\_\_\_

2. The difference of the two sides of a triangle is \_\_\_\_\_ than the third side of the triangle.

Therefore, the third side should be \_\_\_\_\_(less/ greater) than sum of other two sides.

Here, difference of the two sides = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

Therefore, the length of the third side is greater than \_\_\_\_\_

Therefore, length of the third side is greater than \_\_\_\_\_ but less than \_\_\_\_\_.

# Number system

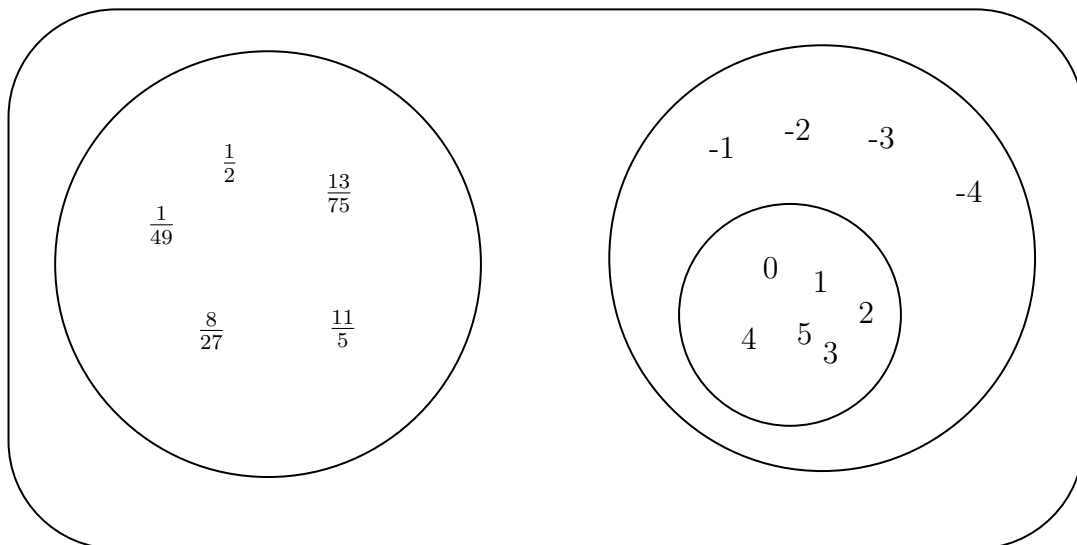
Topics to be Improved	
Introduction to rational numbers	Basics of rational numbers
Positive and negative rational numbers	Identification of positive rational numbers
Integers	Basics of integers
Fractions	Division of fraction, Multiplication of fractions

Hi, here in this video you will learn **Basics of rational numbers**



**Question: 28** .....

The numbers in the diagram represents\_\_\_\_\_.



**Answer:**

0, 4, 5, 2, 3, 1 are \_\_\_\_\_ numbers.

-1, -2, -3, -4 are \_\_\_\_\_ numbers.

The combination of these circles are called \_\_\_\_\_.

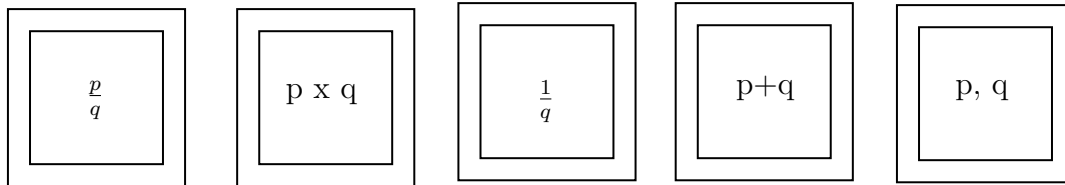
$\frac{1}{49}$ ,  $\frac{1}{2}$ ,  $\frac{8}{27}$ ,  $\frac{11}{5}$ ,  $\frac{13}{75}$  are \_\_\_\_\_.

Combination of all three circles are called as \_\_\_\_\_ numbers.

**Question: 29** .....

Shade the correct form of rational numbers.





**Answer:**

Rational number can be expressed as \_\_\_\_\_, where both numerator and denominator are \_\_\_\_\_ (integer/ not a integer), denominator is equal to \_\_\_\_\_ ( zero/ one/ any integer other than zero).

**Question: 30** .....

Circle the number which is not a rational number.

$\frac{-5}{-8}$      $\frac{-3}{2}$      $\frac{12}{-6}$      $\frac{0}{-9}$     256     $\frac{4}{0}$

**Answer:**

Rational number can be expressed as \_\_\_\_\_, where both numerator and denominator are \_\_\_\_\_ (integer/ not a integer), denominator is equal to \_\_\_\_\_ ( zero/ one/ any integer other than zero).

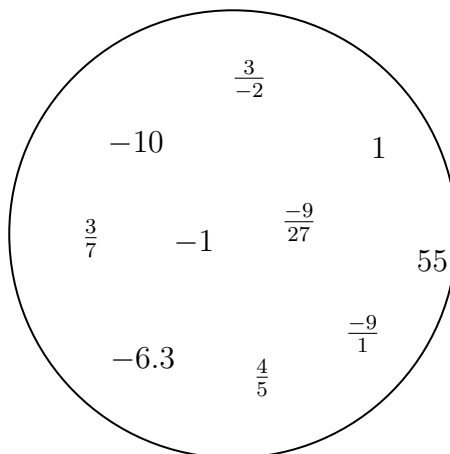
Here, \_\_\_\_\_ is/are rational number and \_\_\_\_\_ is/are not a rational number.

Hi, here in this video you will learn **Positive and Negative rational numbers**



**Question: 31** .....

Segregate positive and negative rational number.



**Answer:**

- If both the numerator and the denominator of a rational number are \_\_\_\_\_ (positive/negative), then it is positive rational number.
- If either the numerator and the denominator of a rational number are negative, then it is \_\_\_\_\_ (positive/negative) rational number.

In the given circle, positive rational numbers are \_\_\_\_\_ and negative rational numbers are \_\_\_\_\_.

**Question: 32** .....

$\frac{-3}{-4}$  is a \_\_\_\_\_ (positive /negative / neither positive nor negative) rational number.

**Answer:**

-3 is a \_\_\_\_\_ number, -4 is a \_\_\_\_\_ number.

Division of  $\frac{-3}{-4} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$  and this \_\_\_\_\_ rational number.

(Positive / Negative / Neither positive nor negative rational number)

**Question: 33** .....

The product of a positive rational number and a negative rational number is \_\_\_\_\_ rational number. (Positive/ Negative/ neither positive nor negative)

**Answer:**

Examples for positive rational numbers: \_\_\_\_\_

Examples for negative rational numbers: \_\_\_\_\_

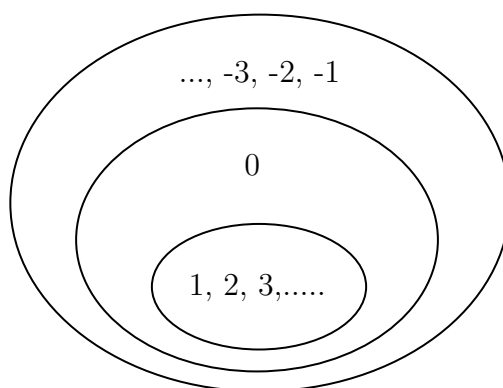
Positive rational number  $\times$  Negative rational number = \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ and this is \_\_\_\_\_ rational number

Hi, here in this video you will learn **Basics of integers**



**Question: 34** .....

Highlight the ring that contains whole numbers.



**Answer:**

The numbers inside the inner ring (1, 2, 3,...) are \_\_\_\_\_ numbers.

The numbers inside the middle ring are \_\_\_\_\_ numbers.

The numbers inside the outer ring are negative numbers, positive numbers and zero and they are called as \_\_\_\_\_.

**Question: 35** .....

Colour the frame of the box which contains the number 1, 4 and -10

Whole numbers	Negative numbers	Integers	Naturals numbers
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**Answer:**

Whole number consists of 0,1,2,3,4,..... Negative number consists of \_\_\_\_\_.  
 Natural numbers consists of \_\_\_\_\_. Integers consists of \_\_\_\_\_.  
 Now, 1, 4, -10 are in \_\_\_\_\_.

**Question: 36** .....

State whether the statement is true or false.  
 Every positive number is an integer.

**Answer:**

Positive numbers are \_\_\_\_\_. Integers consists of \_\_\_\_\_.  
 Therefore, positive numbers are \_\_\_\_\_ (in/not in) integers.

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Hi, here in this video you will learn **Division on fractions**

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**Question: 37** .....

Find the shape which contains the improper fraction of  $5\frac{2}{7}$ .

$\frac{10}{35}$			
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**Answer:**

$5\frac{2}{7}$  is a \_\_\_\_\_ (proper/mixed) fraction.  
 Here, 5 is \_\_\_\_\_, 2 is \_\_\_\_\_ and 7 is \_\_\_\_\_.

To convert mixed fraction into improper fraction,  $\frac{(\text{Whole} \times \text{Denominator}) + \text{Numerator}}{\text{Denominator}}$

$$5\frac{2}{7} = \frac{(\text{ } \times \text{ } ) + \text{ } }{7} = \frac{\boxed{\text{ }}{\boxed{\text{ }}}$$

**Question: 38** .....

Solve:  $\frac{1}{3} \div \frac{14}{3}$

**Answer:**

To divide a fraction by another fraction, multiply the dividend by \_\_\_\_\_ ( same / reciprocal) of the divisor. Here, dividend = \_\_\_\_\_ and divisor = \_\_\_\_\_.

$$\frac{1}{3} \div \frac{14}{3} = \frac{1}{3} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

**Question: 39** .....

Find the half of the fraction  $\frac{12}{40}$ .

**Answer:**

To find half of a number, divide the number by \_\_\_\_\_

$$\frac{12}{40} \div \underline{\hspace{1cm}} = \frac{12}{40} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

Then the answer is \_\_\_\_\_

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Hi, here in this video you will learn **Multiplication on fractions**

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**Question: 40** .....

Fill the boxes

$$2 + 4 + \frac{6}{2} = \frac{2}{\boxed{\phantom{00}}} + \frac{4}{\boxed{\phantom{00}}} + \frac{3}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = 9$$

**Answer:**

The whole number can be expressed in fraction with denominator equal to \_\_\_\_\_ (zero/one).

Therefore, 2 can be written as \_\_\_\_\_ in fraction.

4 can be written as \_\_\_\_\_ in fraction.

$$2 + 4 + \frac{6}{2} = \frac{2}{1} + \frac{4}{\boxed{\phantom{00}}} + \underline{\hspace{1cm}} = \frac{2}{1} + \frac{4}{\boxed{\phantom{00}}} + \frac{3}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = 9$$

**Question: 41** .....

There are 400 students in a school. Find the number of girls, if three sixteenth of the students are girls.

**Answer:**

Total number of students = \_\_\_\_\_

Fraction of students who are girls = \_\_\_\_\_

Number of girls =  $\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$   $\times$  \_\_\_\_\_ = \_\_\_\_\_

**Question: 42** .....

Solve :  $2\frac{7}{4} \times \frac{2}{3}$

**Answer:**

$2\frac{7}{4}$  is a \_\_\_\_\_ (proper / mixed) fraction.

Here, 2 is \_\_\_\_\_, 7 is \_\_\_\_\_ and 4 is \_\_\_\_\_.

To convert mixed fraction into improper fraction,  $\frac{(\text{Whole} \times \text{Denominator}) + \text{Numerator}}{\text{Denominator}}$

Improper fraction of  $2\frac{7}{4}$  = \_\_\_\_\_

$$2\frac{7}{4} \times \frac{2}{3} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times \frac{2}{3} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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## Comparing Quantities

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Topics to be Improved	
Percentage	Basic of percentage

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Hi, here in this video you will learn **Basics of percentage**

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**Question: 43** .....

2% can be written as

**Answer:**

Percentages are numerators of fractions with denominator \_\_\_\_\_

$$2\% = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

**Question: 44** .....

Arun attended the LaPIS test for 100 marks and got 75% marks. What is the mark scored by Arun?

**Answer:**

Arun attended LaPIS test for \_\_\_\_\_ marks. He got \_\_\_\_\_ marks.

75 % can be written in fraction form  $\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$

Then the mark scored by Arun = Total mark  $\times$  75% = \_\_\_\_\_  $\times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$  = \_\_\_\_\_

**Question: 45** .....

There are 25 apples in a basket in which 10 of them are rotten. Find the percentage of rotten apples.

**Answer:**

There are \_\_\_\_\_ apples in a basket.

Number of rotten apples are \_\_\_\_\_ .

Fraction form of rotten apples in a basket =  $\frac{\square}{\square}$

Convert it into a percent = \_\_\_\_\_ x \_\_\_\_\_% = \_\_\_\_\_

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# Algebra

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Topics to be Improved	
Monomials, binomials, trinomials and polynomials	Types of algebraic expression
Addition and subtraction of algebraic expressions	Like terms and Unlike terms
subtraction of algebraic expressions	subtraction of algebraic expressions
Basics of simple equation	Solving of simple equation

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Hi, here in this video you will learn **Types of expression**

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**Question: 46** .....

There are \_\_\_\_\_ terms in the expression  $7x + 3y + m + 5$ .

**Answer:**

In algebraic expression, \_\_\_\_\_ (variables/ terms) are connected together with operations of addition.

The terms in the expression are \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_ , and \_\_\_\_\_ .

Therefore, there are \_\_\_\_\_ terms in the expression.

**Question: 47** .....

Classify the following expression into monomial, binomial and polynomial.

1.  $7m + n + 2$
2.  $8x^2 + 0$
3.  $7xy + 4m$

**Answer:**

1. The terms in expression  $8x^2 + 0$  are \_\_\_\_\_.  
Here, expression has \_\_\_\_\_ term and it is a \_\_\_\_\_.
2. The terms in expression  $7xy + 4m$  are \_\_\_\_\_.  
Here, expression has \_\_\_\_\_ term and it is a \_\_\_\_\_.
3. The terms in expression  $7m + n + 2$  are \_\_\_\_\_.  
Here, expression has \_\_\_\_\_ term and it is a \_\_\_\_\_.





**Answer:**

	Chocolates	Icecream
Sam		
Ram		

(i) Total chocolates Ram and Sam have :

Ram's chocolate + Sam's chocolates = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

(ii) How many icecreams Sam have more than Ram :

\_\_\_\_\_ icecream - \_\_\_\_\_ icecream = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

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Hi, here in this video you will learn **Subtraction on expression**

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**Question: 52** .....

Find the sum of two expressions  $a + b + c$  and  $b + c + d$

**Answer:**

The given two expressions are \_\_\_\_\_ and \_\_\_\_\_.

The two terms will get added only if they are \_\_\_\_\_ ( Like/ Unlike) terms.

The sum of two expressions = \_\_\_\_\_ + \_\_\_\_\_.

The answer is \_\_\_\_\_

**Question: 53** .....

	School A	School B
Number of boys	100b	250b
Number of girls	150g	200g
Number of teachers	25t	45t

(i) Total number of boys in school A and B is \_\_\_\_\_

(ii) Total number of students in school B is \_\_\_\_\_

(iii) How many more teachers are there in school B than school A ? \_\_\_\_\_

**Answer:**

- (i) Number of boys in school A = \_\_\_\_\_,  
 Number of boys in school B = \_\_\_\_\_.  
 Total number of boys in school A and school B is \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_.
- (ii) Number of boys in school B = \_\_\_\_\_,  
 Number of girls in school B = \_\_\_\_\_.  
 Total number of students in school B is \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_.
- (iii) Number of teachers more in school B than school A = Teachers in school B – Teachers in school A = \_\_\_\_\_.

**Question: 54** .....

Solve the following:

13x + \_\_\_\_

(+) 12x + 10y

\_\_\_\_\_ + 25y

3a – 5b

(-) 5a – 7b

\_\_\_\_\_ -2a – \_\_\_\_

**Answer:**

The two terms will get added only if they are \_\_\_\_\_ (like/unlike) terms.

13x + \_\_\_\_

(+) 12x + 10y

\_\_\_\_\_ + 25y

3a – 5b

(-) 5a – 7b

\_\_\_\_\_ -2a – \_\_\_\_

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Hi, here in this video you will learn **Solving an equation**

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**Question: 55** .....

If ☺= 5, then 5 ☺ +5 = \_\_\_\_\_

**Answer:**

The value of the given smiley ☺ is \_\_\_\_\_.  
 Substituting the value in the expression = 5(\_\_\_\_) + 5 = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_.

**Question: 56** .....

Which of the following number can be placed in the box to make the equation correct (-2, -1, 0, 1, 2)  
 7  + 3 = -4

**Answer:**

The given equation is 7\_\_\_\_ +3 =-4 Substitute the values (-2, -1, 0, 1, 2) in the circle,  
 7× \_\_\_\_+3= \_\_\_\_  
 7× \_\_\_\_+3 = \_\_\_\_  
 7× \_\_\_\_+3 = \_\_\_\_

$$7 \times \underline{\hspace{1cm}} + 3 = \underline{\hspace{1cm}}$$

$$7 \times \underline{\hspace{1cm}} + 3 = \underline{\hspace{1cm}}$$

Therefore,            is the number that can be placed in a box to make the equation correct.

**Question: 57** .....

Arrange the terms in the descending order when the value of x is 2.

$$2x \quad 5x \times 1 \quad x + 3 \quad 2x - 4 \quad \frac{1}{2}x$$

**Answer:**

The given expression are                                 .

The value of x is           .

substituting value of x

$$2x = 2 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$2x - 4 = 2 \times \underline{\hspace{1cm}} - 4 = \underline{\hspace{1cm}}$$

$$x + 3 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$\frac{1}{2}x = \frac{1}{2} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

$$5x \times 1 = 5 \times \underline{\hspace{1cm}} \times 1 = \underline{\hspace{1cm}}$$

Arranging in descending order:       ,       ,       ,       ,       .

Their respective algebraic terms are       ,       ,       ,       ,       .