

# LaPIS Diagnostic Test Workbook - Mathematics

---

Name : Harini S

Class : 7

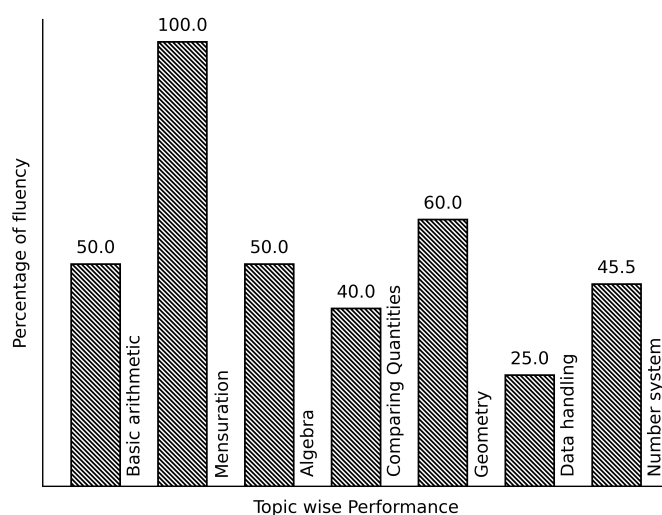
Section : B

School : AKV Public School

Login ID : AKV156

---

## Harini S's Performance Report



---

Score: 20/40

Percentage: 50.0%

---

## Harini S's Study Planner

---

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

Teacher's Feedback to Student

---

Class Teacher Signature

---

Principal Signature

---

## Basic arithmetic

---

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

---

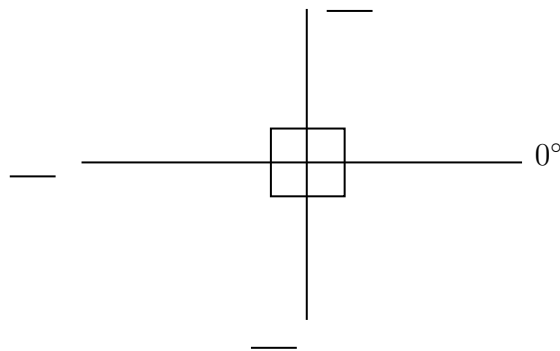
Hi, here in this video you will learn **Types of Angles**

---



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

Find the angles.



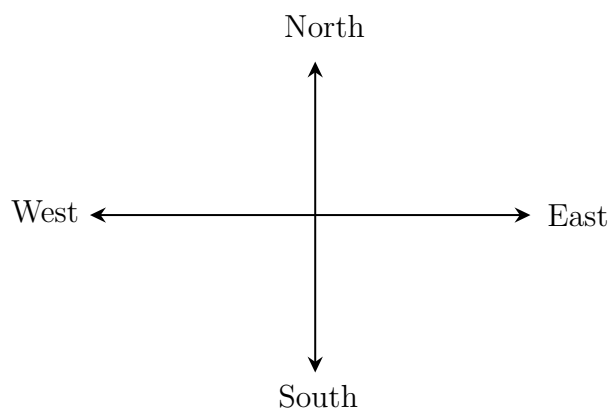
**Answer:**

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.

# Data handling

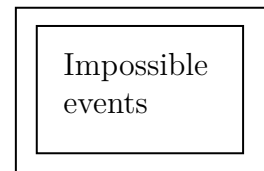
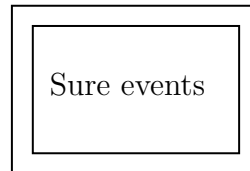
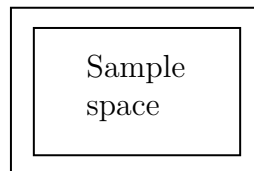
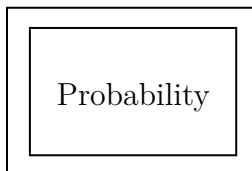
Topics to be Improved	
Chance of probability	Sample space in probability, Basis of probability
Arithmetic mean, mode and median	Mean, Median and Mode

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



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

Which of the following contains list of all possible outcomes.



**Answer:**

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

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

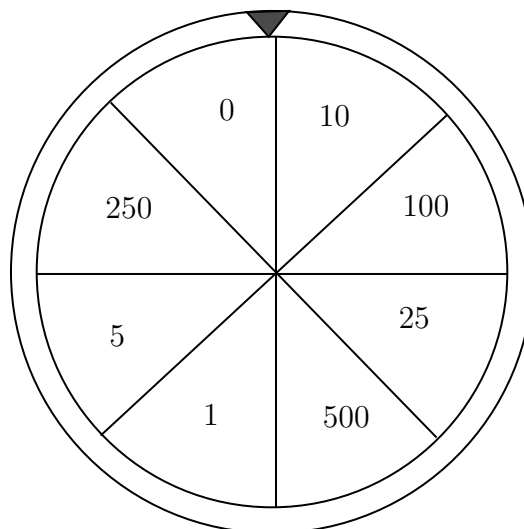
Sure events always \_\_\_\_\_ (occurs/don't occurs).

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

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

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

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: 6** .....

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 **Mean, Median, Mode**



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

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:**

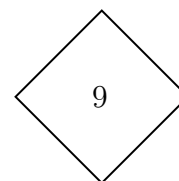
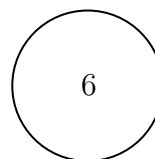
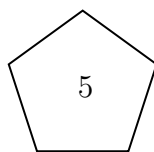
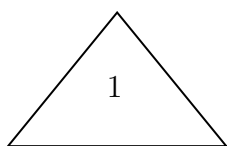
Mode is the number that occurs \_\_\_\_\_ (frequently / rarely) in a given list of observations.

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

\_\_\_\_\_ occurs most number of times. Then, mode of the given data is \_\_\_\_\_

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

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: 9** .....

\_\_\_\_\_

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 = \_\_\_\_\_.

---

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

---



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

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: 11** .....

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: 12** .....

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)



# Geometry

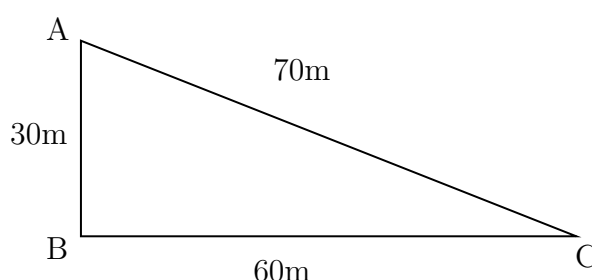
Topics to be Improved	
Sum of lengths of two sides of a triangle	Sum of two sides of a triangle
Right angle triangle and pythagoras property	Basics of Pythagoras property
Angle sum property of triangle	Angle sum property of triangle
Transversal angle made by transversal	Basics of Transversal angle

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



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

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: 14** .....

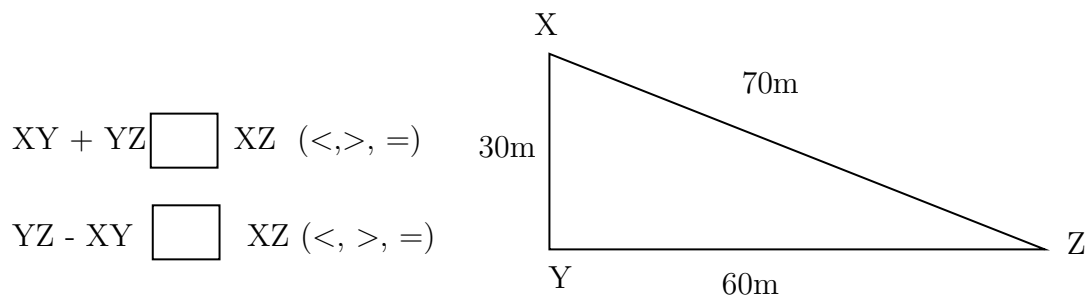
\_\_\_\_\_ (Sum of / Difference between) the length of any two sides of a triangle is smaller than the length of the third side.

**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: 15** .....

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 \_\_\_\_\_
- 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 \_\_\_\_\_.

---

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

---



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

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

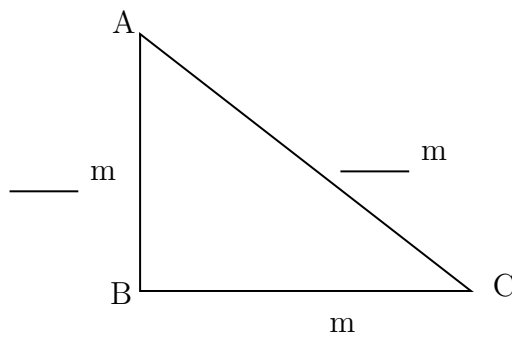
**Answer:**

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: 17** .....

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.

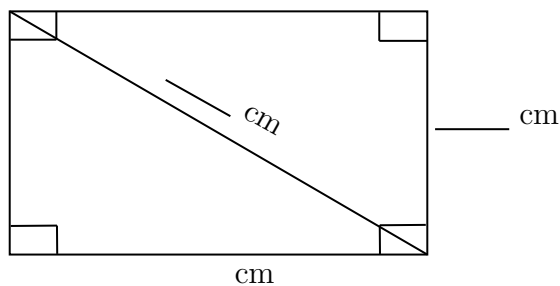
By Pythagoras theorem,  $(\text{_____})^2 = (\text{_____})^2 + (\text{_____})^2$   
 $\text{_____} = \text{_____} + \text{_____}$

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

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

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 **Angle sum property**

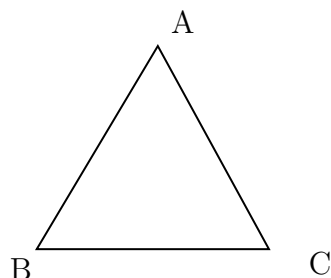
---



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

Sum of the angles of triangle is \_\_\_\_\_.

**Answer:**



$$\angle A + \angle B + \angle C = \underline{\hspace{2cm}}$$

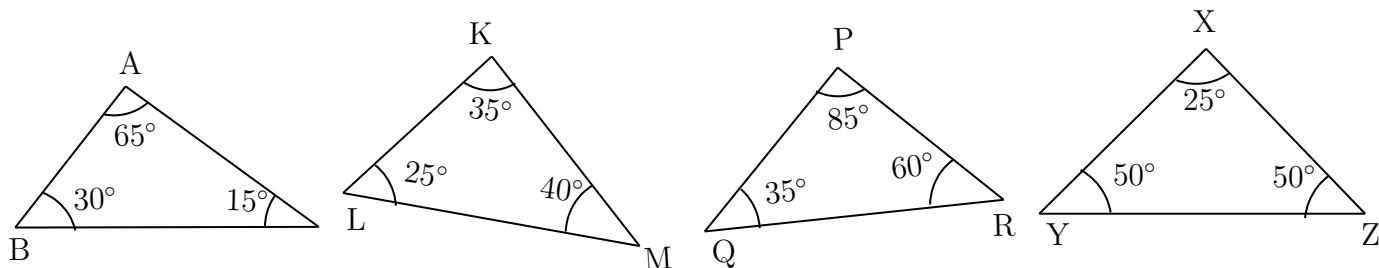
Angle sum formula =  $(n - 2) \times 180^\circ$ ,  $n$  = number of sides

Triangle has \_\_\_\_\_ sides.

Sum of the angles of triangle =  $(\underline{\hspace{2cm}} - 2) \times 180^\circ = \underline{\hspace{2cm}}$

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

Which of the following triangle satisfy the angle sum property.



**Answer:**

Angle sum property of triangle: sum of the angles of a triangle is \_\_\_\_\_

In  $\triangle ABC$ , Sum of the angles =  $\angle A + \angle B + \angle C = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

In  $\triangle PQR$ , Sum of the angles =  $\underline{\hspace{2cm}} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

In  $\triangle KLM$ , Sum of the angles =  $\underline{\hspace{2cm}} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

In  $\triangle XYZ$ , Sum of the angles =  $\underline{\hspace{2cm}} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Therefore, the triangles that satisfy the angle sum property are = \_\_\_\_\_

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

Find the angles of triangle, if their angles are in the ratio 8:6:4.

**Answer:**

Ratio of angles in the triangle is \_\_\_\_\_

Let's consider the angles of triangle be  $8x$ , \_\_\_\_ and \_\_\_\_  
 We know sum of the angles of a triangle is \_\_\_\_  
 Therefore,  $8x + \text{____} + \text{____} = 180^\circ$ . The value of  $x = \text{_____}$   
 The angles of the triangle are \_\_\_\_\_

---

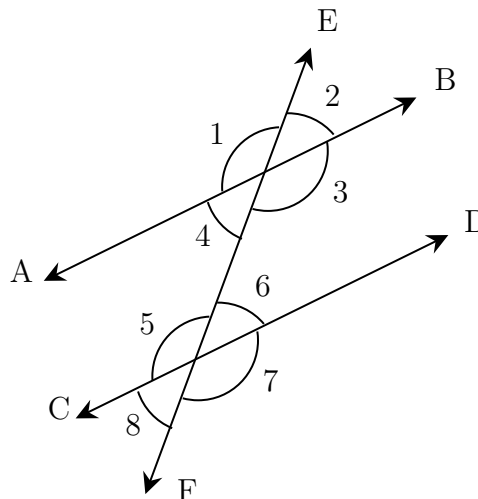
Hi, here in this video you will learn **Basics of Transversal angle**

---



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

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

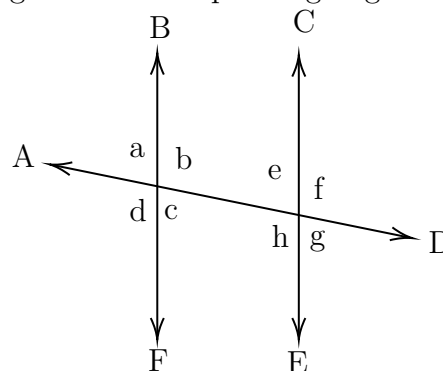


**Answer:**

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: 23** .....

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



**Answer:**

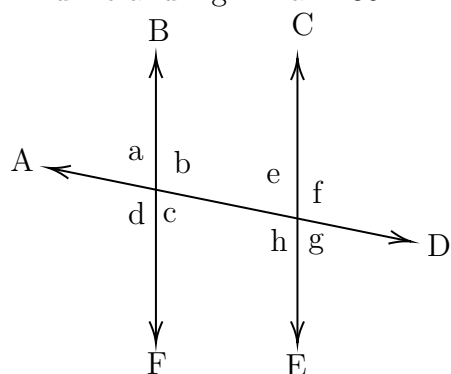
A line that intersects two or more lines at distinct points is called a \_\_\_\_\_ (transversal/Intersecting line).

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: 24** .....

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 \_\_\_\_\_.

# Number system

Topics to be Improved	
Operations on rational numbers	Subtraction of rational numbers
Properties of integers	Associative property
Positive and negative rational numbers	Identification of positive rational numbers
Integers	Basics of integers
Exponents	Solving exponents
Fractions	Division of fraction

Hi, here in this video you will learn **Operation on rational numbers**



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

Solve:  $\frac{-3}{3} + \frac{1}{3}$

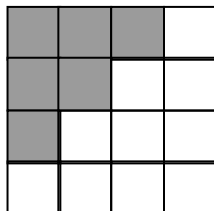
**Answer:**

Fractions with same denominators are called \_\_\_\_\_ (like/ unlike) fractions.  
 Fraction can be added only if they are \_\_\_\_\_(like/ unlike) fractions.

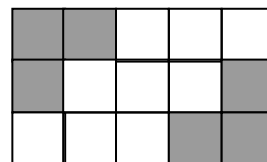
$$\frac{-3}{3} + \frac{1}{3} = \frac{-}{3} =$$

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

Find the addition of shaded part of box A and shaded part of box B.



A



B

**Answer:**

Total number of square in box A = \_\_\_\_\_.

Number of shaded square in box A = \_\_\_\_\_

Shaded part of box A in fraction = \_\_\_\_\_

Total number of square in box B = \_\_\_\_\_.

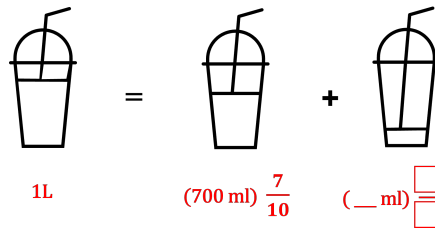
Number of shaded square in box B = \_\_\_\_\_.

Shaded part of box B in fraction = \_\_\_\_\_.

Shaded part of box A + Shaded part of box B = \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

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

Find the missing values in the given figure.



**Answer:**

One litre = \_\_\_\_\_ ml

$\frac{7}{10}$  of one liter =  $\frac{7}{10} \times \_ \text{ ml} = \_ \text{ ml}$

Given:  $1 = \frac{7}{10} + \_$

Transposing  $\frac{7}{10}$  to other sides,  $1 - \frac{7}{10} = \_$

Therefore, result is \_\_\_\_\_.

---

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

---



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

Match the following based on the properties of integers

i	Closure
ii	Associative
iii	Commutative
iv	Identity

a	$(5 + 7) + 3 = 3 + (7 + 5)$
b	$21 + 0 = 21$
c	$15 + 17 = 32$
d	$1 + 99 = 99 + 1$

**Answer:**

(i) Closure property :

The sum of integers is always \_\_\_\_\_( integer / not a integer).

Therefore, \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

From the given option \_\_\_\_\_ satisfies the closure property.



- (ii) Associative property :  
 Rearranging the parentheses ( brackets) \_\_\_\_\_ (does not/ does) change the sum.  
 Therefore,  $(a + b) + c =$  \_\_\_\_\_.  
 From the given option \_\_\_\_\_ satisfies the Associative property.
- (iii) Commutative property :  
 Changing the order of the addends \_\_\_\_\_ (does not/ does) change the sum.  
 Therefore,  $a + b =$  \_\_\_\_\_ + \_\_\_\_\_.  
 From the given option \_\_\_\_\_ satisfies the Commutative property.
- (iv) Identity property : The sum of \_\_\_\_\_ and any number always returns same number.  
 Therefore,  $a +$  \_\_\_\_\_  $= a$   
 From the given option \_\_\_\_\_ satisfies the Identity property.

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

Mark the operations in which commutative property holds true for any two integers.

Addition                      Subtraction                      Multiplication                      Division

**Answer:**

In commutative property, changing the \_\_\_\_\_ (order/ brackets) of the operands  
 \_\_\_\_\_ (does not/ does) change the result.  
 For any two integers, commutative property holds true for \_\_\_\_\_.  
 The commutative property for addition is \_\_\_\_\_.  
 The commutative property for multiplication is \_\_\_\_\_.

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

Are additive identity and multiplicative identity the same? (Yes or No)

**Answer:**

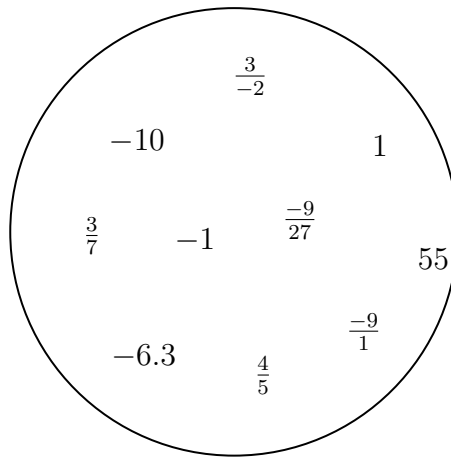
Identity property holds only for \_\_\_\_\_ , \_\_\_\_\_  
 The Identity property for addition is \_\_\_\_\_ and additive identity is \_\_\_\_\_.  
 The Identity property for multiplication is \_\_\_\_\_ and multiplicative identity is  
 \_\_\_\_\_.  
 Therefore, additive identity is \_\_\_\_\_ ( equal / not equal) to multiplicative identity.

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: \_\_\_\_\_

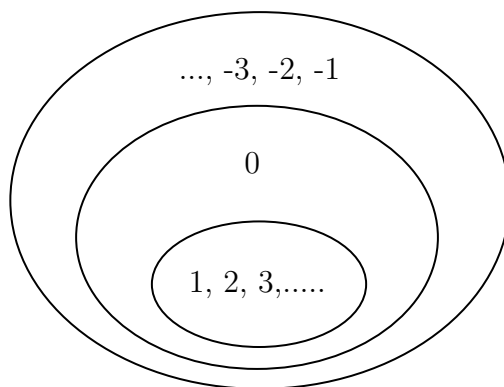
Positive rational number  $\times$  Negative rational number = \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_ and this is \_\_\_\_\_ rational number

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



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

Highlight the ring that contains whole numbers.



**Answer:**

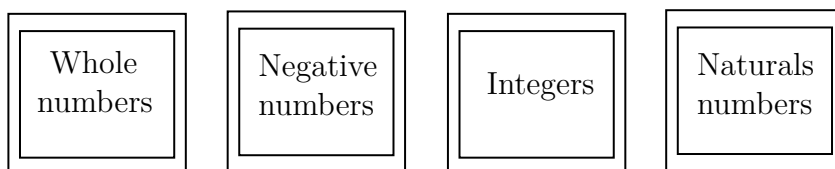
The numbers inside the inner ring (1, 2, 3,...) are \_\_\_\_\_ numbers.

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



**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.

---

Hi, here in this video you will learn **Exponents and power**

---



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

Find the exponential form of 1000.

**Answer:**

\_\_\_\_\_ (Exponents/Base) tells us how many times a number should be multiplied by itself to get the desired result.

Exponents is also called as \_\_\_\_\_ (Base / Power).

1000 can be written as  $= 10 \times \text{_____} \times \text{_____}$

10 is raised to the power of \_\_\_\_\_  $= (10)\text{---}$

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

Find the value of  $(-2)^3$ .

**Answer:**

\_\_\_\_\_ (Exponents/Base) tells us how many times a number should be multiplied by itself to get the desired result.

In this exponential form  $(-2)^3$ , base = \_\_\_\_\_, power = \_\_\_\_\_.

$$(-2)^3 = \text{_____} \times \text{_____} \times \text{_____} = \text{_____}.$$

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

(i) Tenth power of 100 is \_\_\_\_\_  $((10)^{100}$  or  $(100)^{10}$ ).

(ii)  $k$  is raised to the power of 5 is \_\_\_\_\_  $((k)^5$  or  $(5)^k$ ).

**Answer:**

Exponential form =  $(Base)\text{---}$

(i) Tenth power of 100 : Base = \_\_\_\_\_, Power/Exponents = \_\_\_\_\_, exponential form = \_\_\_\_\_.

(ii)  $k$  is raised to the power of 5 : Base = \_\_\_\_\_, Power/Exponent = \_\_\_\_\_, exponential form = \_\_\_\_\_.

---

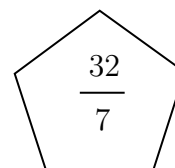
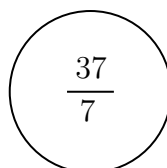
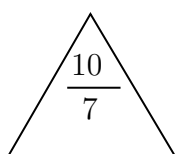
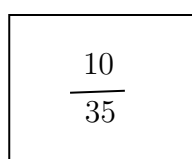
Hi, here in this video you will learn **Division on fractions**

---



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

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



**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,  $\frac{(\text{Whole} \times \text{Denominator}) + \text{Numerator}}{\text{Denominator}}$

$$5\frac{2}{7} = \frac{(\text{ } \times \text{ }) + \text{ }}{7} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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

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: 42** .....

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

**Answer:**

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

$$\frac{12}{40} \div \text{ } = \frac{12}{40} \times \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

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

---

## Comparing Quantities

---

Topics to be Improved	
Percentage	Basic of percentage
Simple interest	Calculation of simple interest
Conversion of fraction into percentage	Conversion of fraction into percentage

---

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

---



**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 =  $\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$

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

---

Hi, here in this video you will learn **Simple Interest**

---



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

Match the following.

Column A	
i	Principle(P)
ii	Amount (A)
iii	Rate (R)
iv	Time period (T)

Column B	
a	Interest calculated based on this
b	Total sum you borrow
c	Number of years
d	Total sum with interest

**Answer:**

Formula for calculating simple interest = \_\_\_\_\_.

Interest calculated based on \_\_\_\_\_.

Total sum you borrow is known as \_\_\_\_\_.

Number of years is \_\_\_\_\_. Total sum with interest is \_\_\_\_\_.

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

Sara deposited Rs.1200 in a bank. After three years, she received Rs.1320. Find the interest she earned.

**Answer:**

Given:

Amount = \_\_\_\_\_ , Principle = \_\_\_\_\_ , Time period = \_\_\_\_\_.

If Amount and principle is given, then formula for calculating interest is \_\_\_\_\_.

Interest = \_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

**Question: 48** .....

The simple interest on Rs.5000 for 3 years is Rs.1350. Find the rate of interest.

**Answer:**

Interest = \_\_\_\_\_ , Time period = \_\_\_\_\_ , Principal = \_\_\_\_\_.

Rate of interest =  $\frac{\text{_____} \times 100}{\text{Principal} \times \text{_____}}$

Substituting values in the formula,

$$\text{Rate of interest} = \frac{\text{ } \times 100}{\text{Principal} \times \text{ } }$$

Rate of interest =  $\text{_____}$

Therefore, the rate of interest is  $\text{_____} \%$

Hi, here in this video you will learn **Converting fraction into percentage**



**Question: 49** .....

Complete the box in the given equation.

$$5\% = \frac{5}{\square}$$

**Answer:**

Percentage are the fraction with the denominator  $\text{_____}$ .

Therefore, 5% can be expressed as  $\text{_____}$

**Question: 50** .....

Mark the correct conversion form of fraction  $\frac{1}{2}$  to percentage.

- (i)  $\frac{1}{2} \times \frac{50}{50} = \frac{50}{100} = 50\%$
- (ii)  $\frac{1}{2} \times \frac{100}{100} = \frac{100}{200} = 200\%$
- (iii)  $\frac{1}{2} \times 100 = \frac{100}{2} = 50\%$

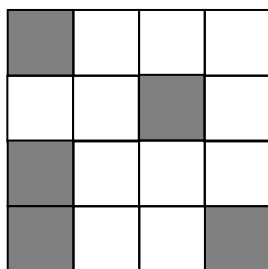
**Answer:**

To convert fraction into percentage, the value of  $\text{_____}$  (denominator / numerator) should be 100 or  $\text{_____}$  ( multiply / divide) the fraction with 100 %.

Therefore, correct conversion form is  $\text{_____}$

**Question: 51** .....

Find the percentage of shaded part of square.





**Answer:**

The square shape is divided into \_\_\_\_\_ parts.

Number of shaded part of square is \_\_\_\_\_.

Shaded part of square in fraction is \_\_\_\_\_

To Convert  $\frac{\square}{\square}$  into percentage ,  $\frac{\square}{\square} \times 100$

---

# Algebra

---

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

---

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

---



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

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: 53** .....

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

---

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

---



**Question: 58** .....

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: 59** .....

	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:**

- Question: 60 .....

$$\begin{array}{r} 13x + \_\_\_\_\_\_ \\ (+) 12x + 10y \\ \hline \_\_\_\_\_\_ + 25y \end{array}$$

$$\begin{array}{r} 3a - 5b \\ (-) \quad 5a - 7b \\ \hline -2a - \underline{\hspace{1cm}} \end{array}$$

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

$$\begin{array}{r} 13x + \_\_\_\_\_\_ \\ (+) 12x + 10y \\ \hline \_\_\_\_\_\_ + 25y \end{array}$$

$$\begin{array}{r} 3a - 5b \\ (-) \quad 5a - 7b \\ \hline -2a - \underline{\hspace{1cm}} \end{array}$$