

LaPIS Diagnostic Test Workbook - Mathematics

Name : Navajeevan S

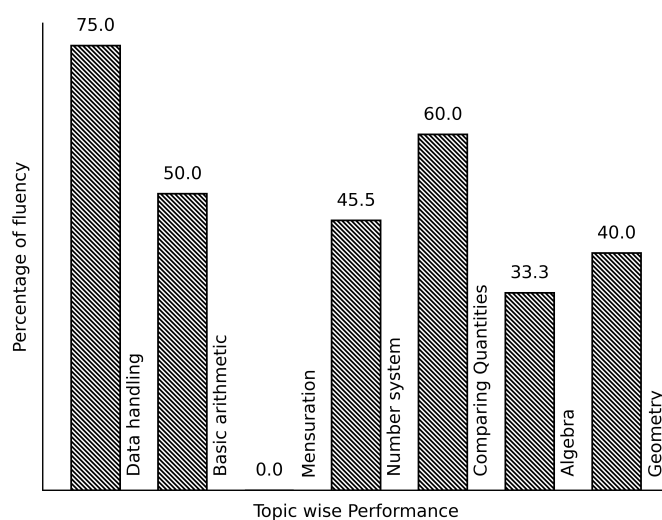
Class : 7

Section : C

School : AKV Public School

Login ID : AKV177

Navajeevan S's Performance Report



Score: 18/40

Percentage: 45.0%

Navajeevan 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

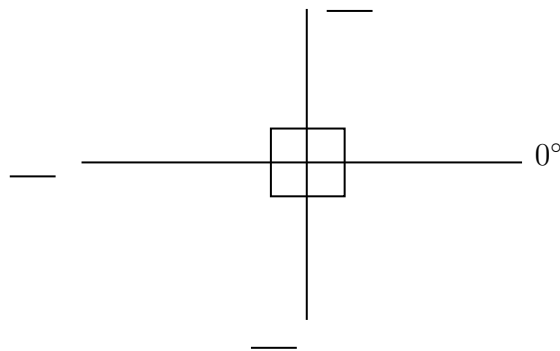
Topics to be Improved	
Types of angles	Identification of types of angles

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



Question: 1

Find the angles.



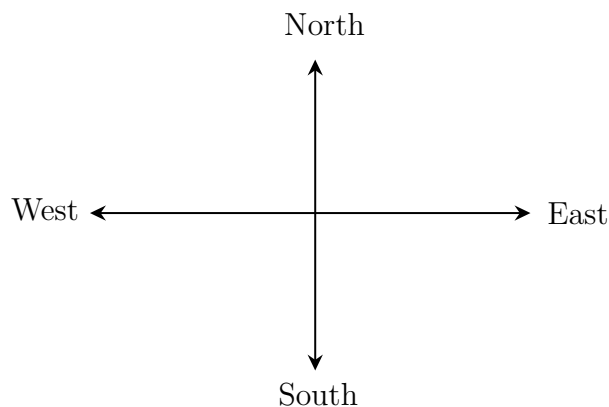
Answer:

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.

Mensuration

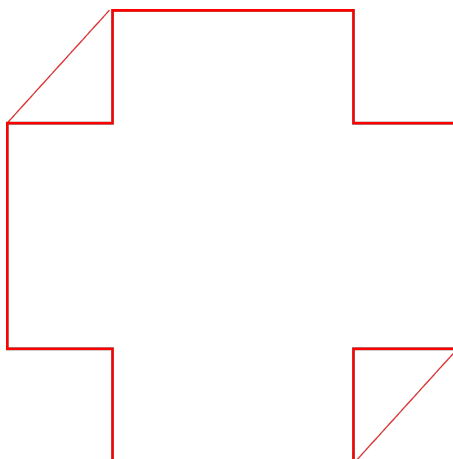
Topics to be Improved	
Perimeter	Perimeter of triangle
Area	Area of rectangle

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



Question: 4

Highlight the perimeter in the given image.

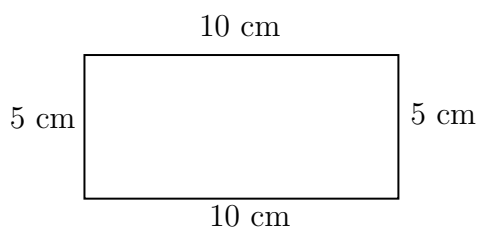


Answer:

Perimeter is the _____ (outer / inner) boundary of the shape

Question: 5

Find the perimeter of the given figure.



Answer:

Sides of the given shape = _____.

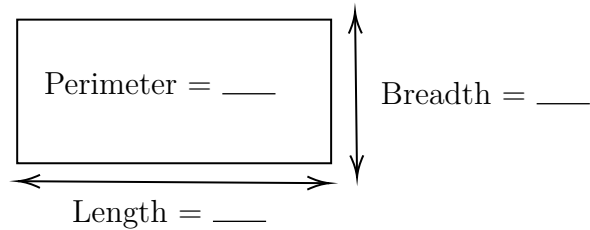
Perimeter of a shape is _____ (sum / difference) of _____ (all/ opposite) sides.

Perimeter of the given shape = _____

Question: 6

Find the length of the rectangular floor if its perimeter is 60 ft and breadth is 3 ft.

Answer:



Shape of the floor is _____ and its perimeter formula is _____.

Given:

floor perimeter = _____, and breadth = _____.

Perimeter of the floor = $2(\text{_____} + \text{_____})$.

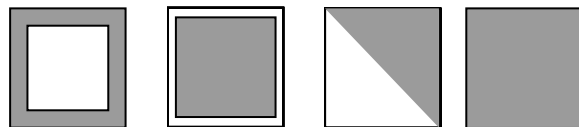
Therefore, length of the rectangular floor is _____.

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



Question: 7

Find which of the shaded portion in the given shape represent it's area.



Answer:

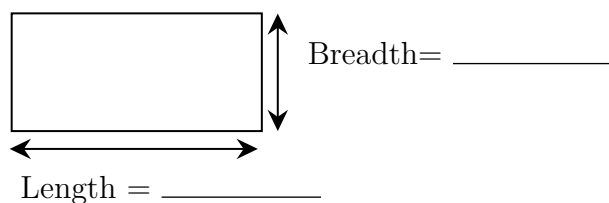
Given figure is _____ in shape.

Area is the _____ (inside/ outside/ boundary) of a shape.

Question: 8

Find the area of a rectangular garden whose dimension is 25 ft in length and 20 ft in breadth.

Answer:



The garden is in _____ shape.

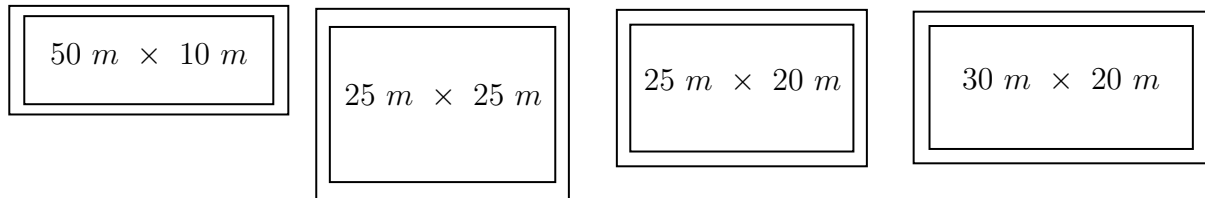
Length of garden is _____ and breadth of garden is _____.

Formula for area of the shape = _____.

The area of garden = _____ x _____ = _____ cm^2

Question: 9

Shade the possible dimension of the door whose area is $500\ m^2$



Answer:

Door is _____ in shape. Area of the _____ shaped door is _____.

Dimensions	Length	Breadth	Area
$50\text{m} \times 10\text{m}$			
$25\text{m} \times 25\text{m}$			
$25\text{m} \times 20\text{m}$			
$30\text{m} \times 20\text{m}$			

Therefore, possible dimension of the door whose area is $500\ m^2$ is/are _____

Data handling

Topics to be Improved

Arithmetic mean, mode and median

Mean, Median and Mode

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



Question: 10

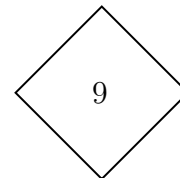
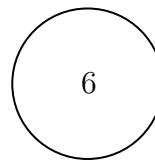
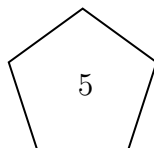
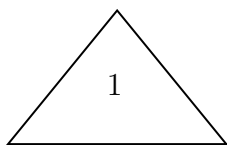
Find the mode of the following data: 5, 15, 23, 5, 32, 44, 72, 55, 6, 3, 5, 65, 45, 67, 24, 19 and 98.

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: 11

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: 12

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 = _____.

Geometry

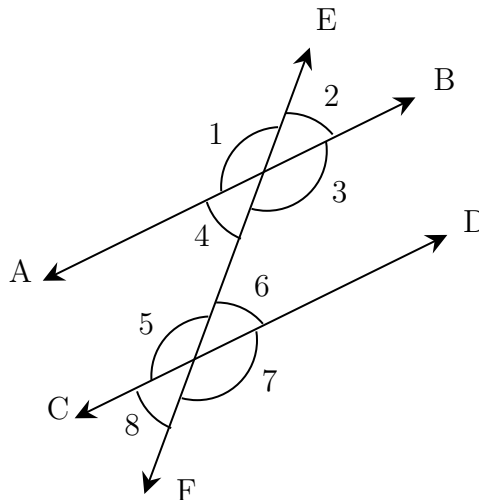
Topics to be Improved	
Transversal angle made by transversal	Basics of Transversal angle
Criteria for congruence of triangle	Identification of criteria of congruence of triangles
Angle sum property of triangle	Angle sum property of triangle
Right angle triangle and pythagoras property	Basics of Pythagoras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

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



Question: 13

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



Answer:

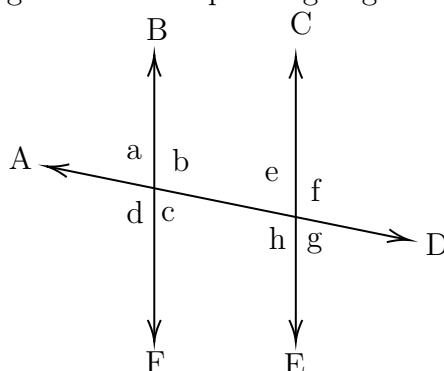
A line that intersects two or more lines at distinct points is called a _____ (transversal/ Intersecting line).

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: 14

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



Answer:

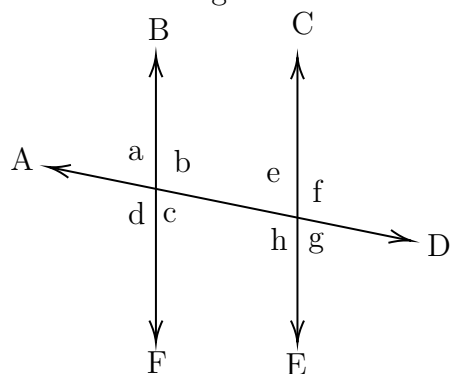
A line that intersects two or more lines at distinct points is called a _____ (transversal/Intersecting line).

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: 15

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).

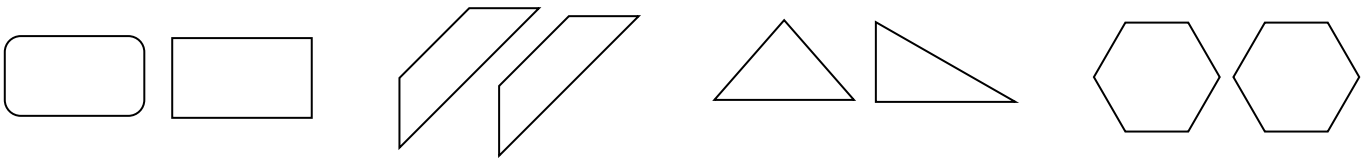
Here, alternate angle of $\angle a$ is _____ and its value is _____.
 Corresponding angle of $\angle a$ is _____ and its value is _____.

Hi, here in this video you will learn **Criteria of congruence**



Question: 16

Circle the groups that contain congruent images.



Answer:

Two geometrical shapes are said to be congruent if they are _____
 (identical/non-identical) in shapes and size.

Example: Square and Rectangle are _____ (congruent/not congruent).

Question: 17

If the three sides of the triangle are equal to the corresponding sides of the other triangle, then two triangles are congruent under _____ (SSS/ASA/SAS) criteria .

Answer:

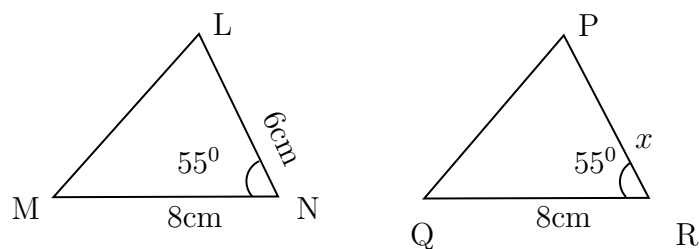
Two triangle are _____ (congruent/not congruent) if they are identical in shapes and size.
 Criteria for congruence of triangles are SSS, _____ and _____.

1. In SSS Congruence criteria - ____ (2/ 3/ 5) sides of the triangle are _____ (equal/ not equal) to the three corresponding sides of the other triangle.
2. In SAS Congruence criteria - ____ (2/ 3/ 5) sides and _____ (one/two) angle between them are equal to the corresponding sides and the included angle of the other triangle.
3. In ASA Congruence criteria - ____ (2/ 3/ 5) angles and _____ (one/two) side between them are equal to the corresponding angles and the included side of the other triangle.

SSS	_____ sides and _____ angles are equal
SAS	_____ sides and _____ angles are equal
ASA	_____ sides and _____ angles are equal

Question: 18

The triangles LNM and PRQ are congruent by SAS criteria. Then find the side PR



Answer:

The given two triangles satisfy _____ criteria of congruence.

By SAS congruence criteria, $MN = \underline{\hspace{2cm}}$, $\underline{\hspace{2cm}}$ and $\angle N = \underline{\hspace{2cm}}$

The side $MN = 8\text{ cm}$ in $\triangle LMN$ is equal to the side _____ in $\triangle PRQ$

The common included angle in $\triangle LMN$ and $\triangle PRQ$ are _____

The side PR is equal to the side in _____ $\triangle LMN$.

Therefore, length of side $PR = \underline{\hspace{2cm}}$

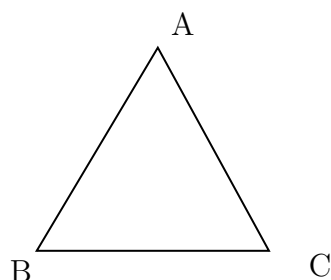
Hi, here in this video you will learn **Angle sum property**



Question: 19

Sum of the angles of triangle is _____.

Answer:



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

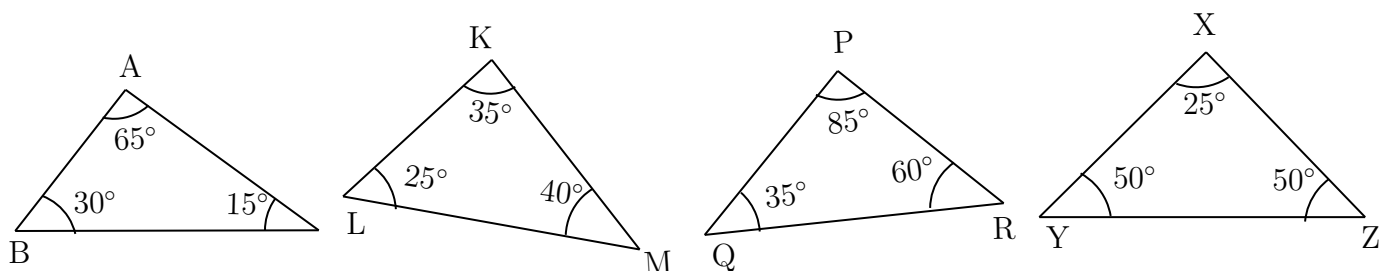
Angle sum formula = $(n - 2) \times 180^\circ$, n = number of sides

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 = _____ = _____ = _____
In $\triangle KLM$, Sum of the angles = _____ = _____ = _____
In $\triangle XYZ$, Sum of the angles = _____ = _____ = _____
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, $8x + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = 180^\circ$. The value of $x = \underline{\hspace{2cm}}$
The angles of the triangle are _____

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



Question: 22

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

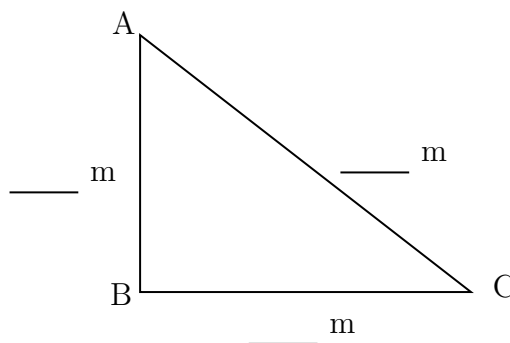
Answer:

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.

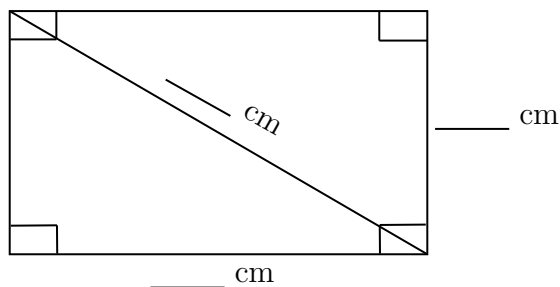
By Pythagoras theorem, $(\text{_____})^2 = (\text{_____})^2 + (\text{_____})^2$
 $\text{_____} = \text{_____} + \text{_____}$

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 **Basics of 3D model**



Question: 25

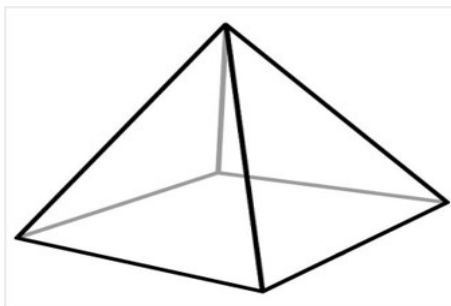
A point at which two or more lines segments meet is called _____(Vertex/ edges/ faces).

Answer:

_____ has two end point (line/line segment/ray).

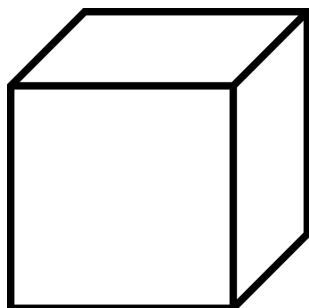
A _____ is a point where two or more line segments meet(Vertex/ edges/ faces).

Mark the vertices in the diagram,



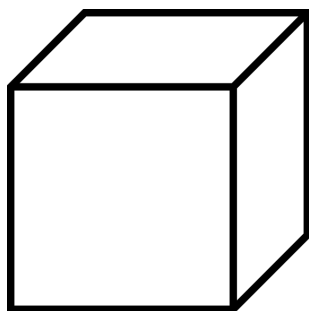
Question: 26

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: 27

How many vertices, edges and faces does dices have?



Answer:

The shape of dice is _____.

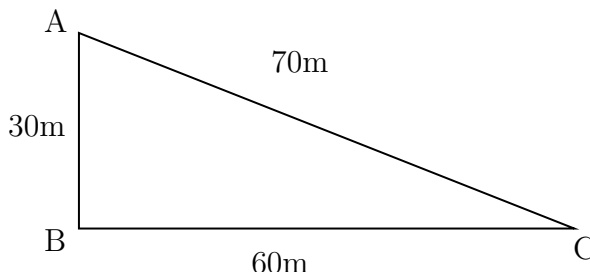
Dices have _____ vertices, _____ edges and _____ faces.

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



Question: 28

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: 29

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

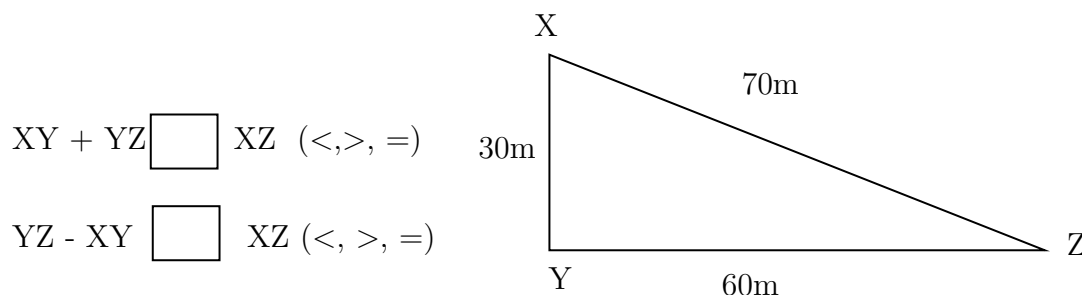
Answer:

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: 30

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:

1. 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

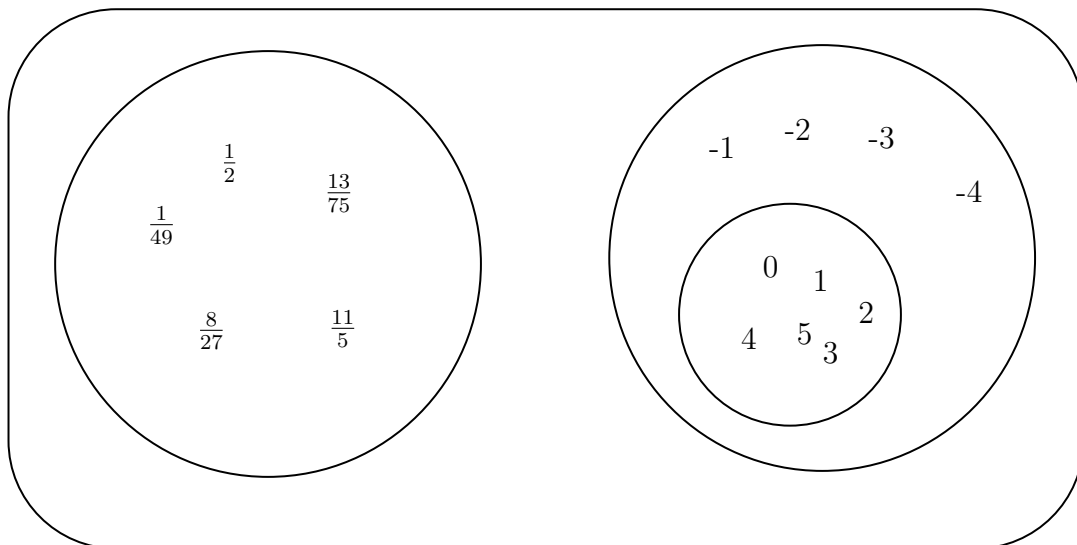
Topics to be Improved	
Introduction to rational numbers	Basics of rational numbers
Exponents	Solving exponents
Fractions	Multiplication of fractions, Division of fraction
Operations on rational numbers	Division of rational numbers
Positive and negative rational numbers	Identification of positive rational numbers

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



Question: 31

The numbers in the diagram represents_____.



Answer:

0, 4, 5, 2, 3, 1 are _____ numbers.

-1, -2, -3, -4 are _____ numbers.

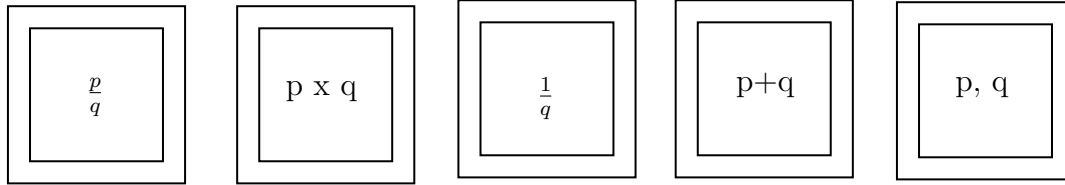
The combination of these circles are called _____.

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

Combination of all three circles are called as _____ numbers.

Question: 32

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: 33

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 **Exponents and power**



Question: 34

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 $\text{___} = (10)\text{---}$

Question: 35

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 = ____.
 $(-2)^3 = ___ \times ___ \times ___ = ___.$

Question: 36

- (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)——

- (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 **Multiplication on fractions**



Question: 37

Fill the boxes

$$2 + 4 + \frac{6}{2} = \frac{2}{\square} + \frac{4}{\square} + \frac{3}{\square} = \frac{\square}{\square} = 9$$

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.

$$2 + 4 + \frac{6}{2} = \frac{2}{1} + \frac{4}{\square} + ___ = \frac{2}{1} + \frac{4}{\square} + \frac{3}{\square} = \frac{\square}{\square} = 9$$

Question: 38

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 = $\frac{\square}{\square} \times \text{_____} = \text{_____}$

Question: 39

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 $2\frac{7}{4} = \text{_____}$

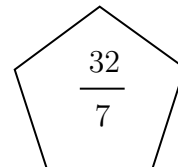
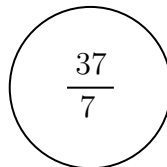
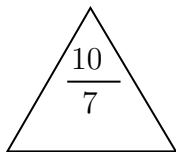
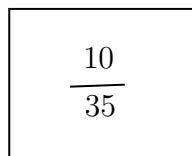
$$2\frac{7}{4} \times \frac{2}{3} = \frac{\square}{\square} \times \frac{2}{3} = \frac{\square}{\square}$$

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

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

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 = _____.

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

Question: 42

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

Answer:

To find half of a number, divide the number by _____

$$\frac{12}{40} \div \underline{\hspace{2cm}} = \frac{12}{40} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Then the answer is _____

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



Question: 43

Fill in the boxes to make the given expression correct.

$$\frac{1}{5} \div \frac{14}{15} = \frac{1}{\boxed{}} \times \frac{\boxed{}}{\boxed{}}$$

Answer:

When any fraction is divided by a fraction, we multiply the dividend by the _____ (same/reciprocal) of the divisor.

Here, dividend = _____ and divisor = _____

$$\frac{1}{5} \div \frac{14}{15} = \frac{1}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Question: 44

Solve: $\frac{18}{7} \div 0.6$

Answer:

Fraction form of 0.6 = _____,

when any fraction is divided by a fraction, we multiply the dividend by the _____ (same/reciprocal) of the divisor. Here, dividend = _____ and divisor = _____.

$$\frac{18}{7} \div \frac{\square}{\square} = \frac{18}{7} \times \frac{\square}{\square} = \frac{\square}{\square}$$

Question: 45

Find the missing number in the expression $\frac{8}{3} \div \frac{16}{\square} = 2$

Answer:

$$\frac{8}{3} \div \frac{16}{\square} = 2$$

$$\frac{8}{3} \times \frac{\square}{16} = 2$$

Transposing $8/3$ to RHS,

$$\frac{\square}{16} = 2 \times \frac{8}{3}$$

$$\frac{\square}{16} = 2 \times \frac{\square}{\square}$$

$$\frac{\square}{16} = \frac{\square}{\square}$$

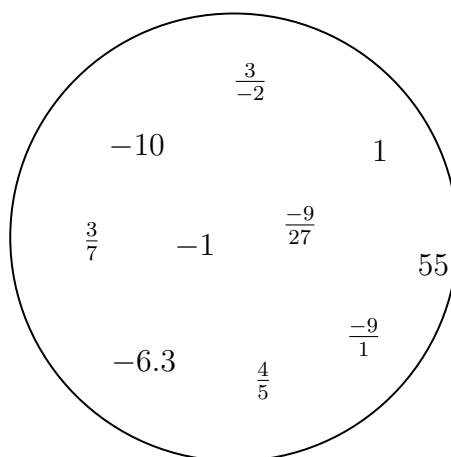
Transposing 16 to other side, the result is _____.

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



Question: 46

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: 47

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

Answer:

-3 is a _____ number, -4 is a _____ number.

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

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

Question: 48

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

Comparing Quantities

Topics to be Improved	
Equivalent ratios	Basic of proportion
Simple interest	Calculation of simple interest

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



Question: 49

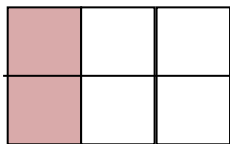
If $a:b$ and $c:d$ are equivalent ratio, then it can be expressed as _____

Answer:

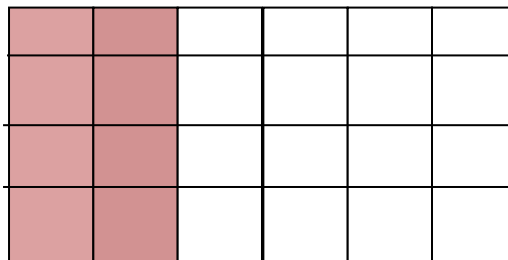
A _____ (proportion / ratio) is used to express _____ (one/two) equivalent ratios.
Standard form to express proportion is _____.

Question: 50

Find the ratio of shaded part to unshaded part of A and B. Are the two ratios equivalent ?



A



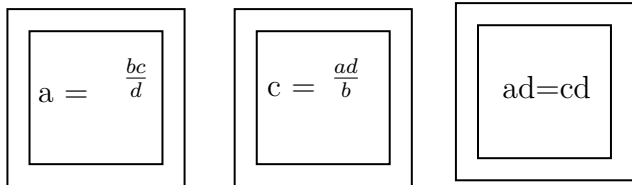
B

Answer:

Shaded part of A = _____, Unshaded part of A = _____.
Ratio of shaded to unshaded parts of A is _____. Fractional form = _____.
Shaded part of B = _____ ,
Unshaded part of B = _____.
Ratio of shaded to unshaded parts of B is _____.
Fractional form = _____.
Fraction form of A _____ (equal/ not equal) to Fraction form of B.

Question: 51

If $a : b :: c : d$ is proportion, shade the correct expression



Answer:

Two equivalent ratio which are proportion, it can be written as $a : b :: c : d$

or _____ = _____ (in fraction) .

First and fourth term are called _____ and second and third term are called _____.

In proportion, product of extreme terms is _____ (equal to/ not equal to) product of middle terms.

Therefore, $a \times d = \text{_____}$,

then $a = \text{_____}$ and $c = \text{_____}$

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



Question: 52

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: 53

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: 54

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

Answer:

Interest = _____ , Time period = _____ , Principal = _____.

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

Substituting values in the formula,

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

Rate of interest = _____

Therefore, the rate of interest is _____ %

Algebra

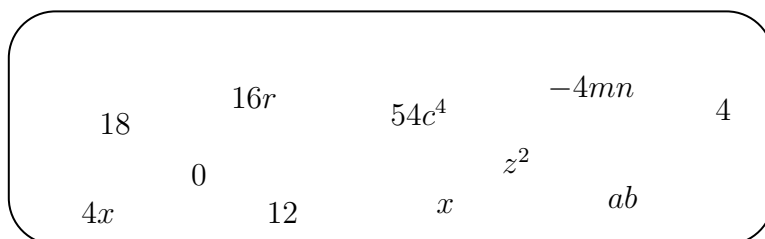
Topics to be Improved	
Terms of an expression	Identification of terms in an expression
subtraction of algebraic expressions	subtraction of algebraic expressions
Basics of simple equation	Solving of simple equation
Addition and subtraction of algebraic expressions	Like terms and Unlike terms

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



Question: 55

Separate the variables and constants for all the terms given in the box



Answer:

In algebraic expression, variables are represented by _____ and Constant is a _____.

Terms	Constants	Variables

Question: 56

Mark the expression that contains two terms.

$3x + 5$ $12a$ $4xy$ $12a + b + 1$ $7m + 0$

Answer:

The terms in the expression $3x + 5$ is/are _____.

The terms in the expression $12a$ is/are _____.

The terms in the expression $4xy$ is/are _____.

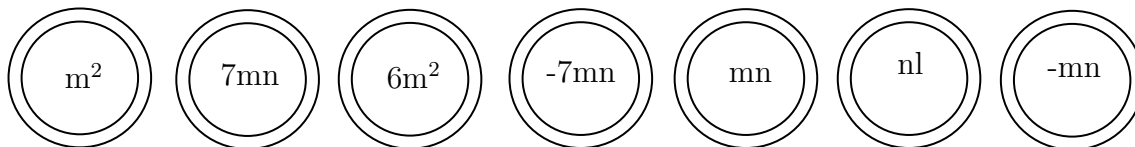
The terms in the expression $12a + b + 1$ is/are _____.

The terms in the expression $7m + 0$ is/are _____.

Question: 57

Shade the outline of circle that contains the term of the given expression.

$$6m^2 - 7mn + nl$$



Answer:

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

Here, _____, _____, _____ are the terms of the given expression.

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:

- (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: 60

Solve the following:

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

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

Answer:

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

$$\begin{array}{r} 13x + \underline{\hspace{1cm}} \\ (+) \ 12x + 10y \\ \hline \underline{\hspace{1cm}} + 25y \end{array}$$

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

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



Question: 61

If $\odot = 5$, then $5 \odot + 5 = \underline{\hspace{2cm}}$

Answer:

The value of the given smiley ☺ is _____.

Substituting the value in the expression $= 5(\underline{\hspace{1cm}}) + 5 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$.

Question: 62

Which of the following number can be placed in the box to make the equation correct $(-2, -1, 0, 1, 2)$

$$7\boxed{} + 3 = -4$$

Answer:

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

$$7 \times \underline{\quad} + 3 = \underline{\quad}$$

$$7 \times \underline{\quad} + 3 = \underline{\quad}$$

$$7 \times \underline{\quad} + 3 = \underline{\quad}$$

$$7 \times \underline{\quad} + 3 = \underline{\quad}$$

$$7 \times \underline{\quad} + 3 = \underline{\quad}$$

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

Question: 63

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

$$2x = 2 \times \underline{\quad} = \underline{\quad}$$

$$2x - 4 = 2 \times \underline{\quad} - 4 = \underline{\quad}$$

$$x + 3 = \underline{\quad} = \underline{\quad}$$

$$\frac{1}{2}x = \frac{1}{2} \times \underline{\quad} = \underline{\quad}$$

$$5x \times 1 = 5 \times \underline{\quad} \times 1 = \underline{\quad}$$

Arranging in descending order: _____, _____, _____, _____, _____.

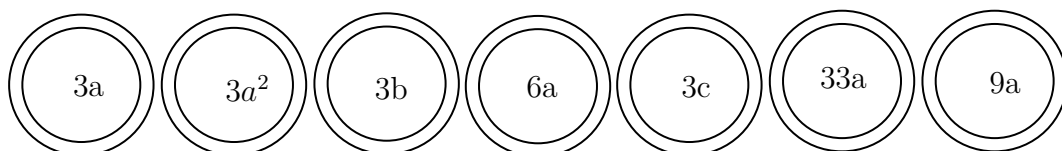
Their respective algebraic terms are _____, _____, _____, _____, _____.

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



Question: 64

Shade the like terms.



Answer:

Given terms are _____.

Two or more term have _____ (same/ different) variables is called like terms.

Here, like terms are _____.

Question: 65

Complete the expression $7r^2 + r \square - 2 \square = \underline{\quad} r^2$

Answer:

_____ (Like / Unlike) terms can be added or subtracted.

$$7r^2 + r \square - 2\square = (7 + \underline{\hspace{1cm}} - 2)r^2 = \underline{\hspace{2cm}}$$

Question: 66

Sam have 3a chocolates and 9y icecream. Ram have 7a chocolates and 5y icecream.

- (i) Total chocolates Ram and Sam have : _____.
- (ii) How many icecreams Sam have more than Ram : _____ .

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 = _____ - _____ = _____