

LaPIS Diagnostic Test Workbook - Mathematics

Name : Sathana N P

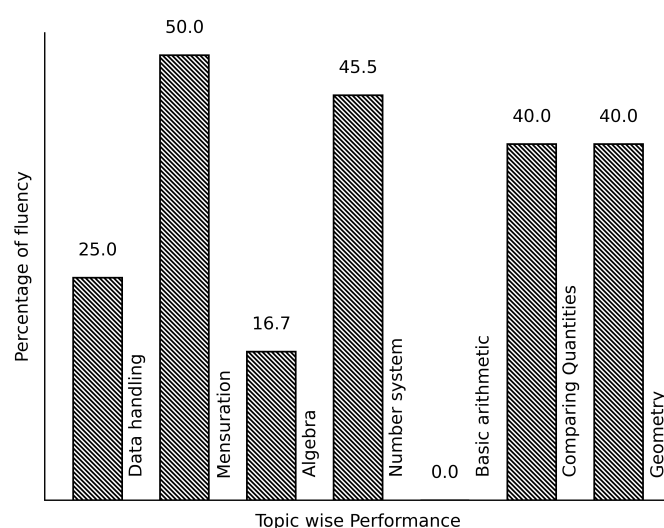
Class : 7

Section : B

School : AKV Public School

Login ID : AKV163

Sathana N P's Performance Report



Score: 14/40

Percentage: 35.0%

Sathana N P'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

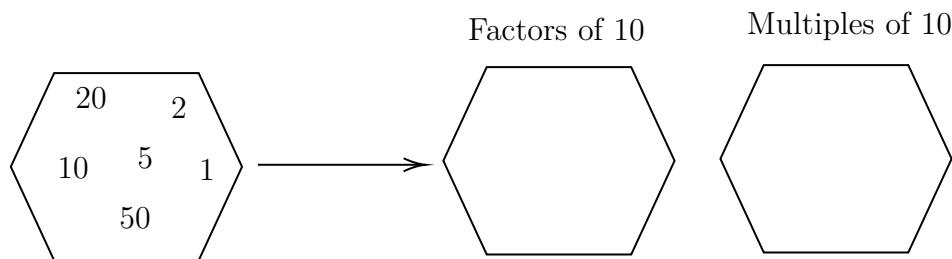
Topics to be Improved	
LCM	Finding LCM
Types of angles	Identification of types of angles

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



Question: 1

Fill the hexagon with factors and multiples of 10.



Answer:

A _____ (factor/multiple) of a number is an exact divisor of that number.

The factors of 10 are

$10 \times 1 = \underline{\quad}$	$\underline{\quad} \times \underline{\quad} = 10$
$2 \times \underline{\quad} = 10$	$\underline{\quad} \times \underline{\quad} = 10$

Let's find the multiple of 10

$10 \times 1 = \underline{\quad}$	$10 \times 4 = \underline{\quad}$
$10 \times 2 = \underline{\quad}$	$10 \times 5 = \underline{\quad}$
$10 \times 3 = \underline{\quad}$	$10 \times 6 = \underline{\quad}$

Therefore, factors of 10 are _____ and multiples of 10 are _____.

Question: 2

Find the LCM of 50, 100.

Answer:

Complete the division using least common multiple.

50 , 100

The LCM of 50, 100 is $2 \times 2 \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}}$.

Question: 3

Every number is the multiple of _____

Answer:

Let's find the first ten multiple of random numbers,

Multiple of 1 = _____

Multiple of 2 = _____

Multiple of 13 = _____

Multiple of 20 = _____

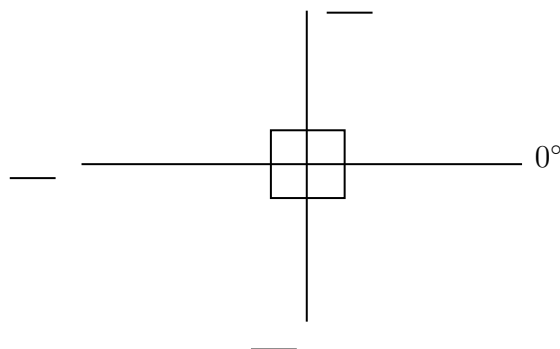
Here, _____ is the common factor of every number.

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



Question: 4

Find the angles.



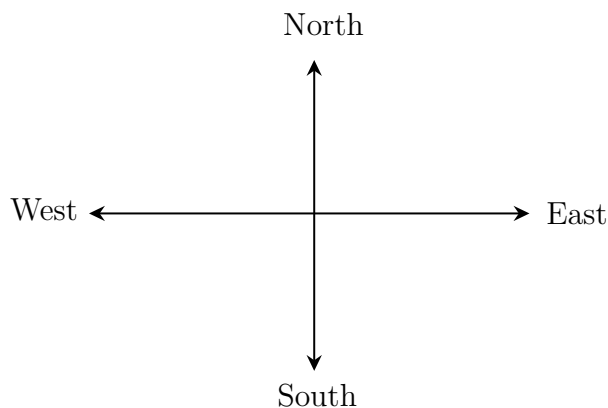
Answer:

The angle ranges from $\underline{\hspace{1cm}}^\circ$ to $\underline{\hspace{1cm}}^\circ$.

The angle perpendicular to 0° is $\underline{\hspace{1cm}}^\circ$.

The straight line measures $\underline{\hspace{1cm}}^\circ$.

Question: 5



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: 6

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

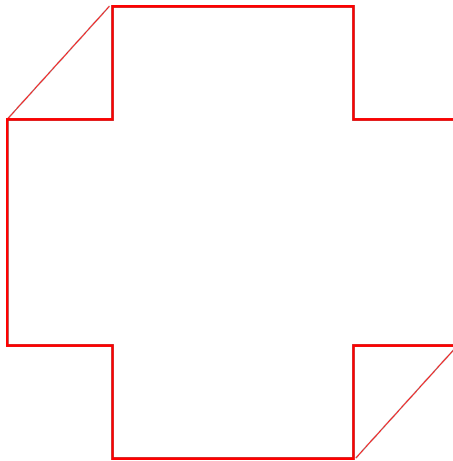
Perimeter of triangle

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



Question: 7

Highlight the perimeter in the given image.

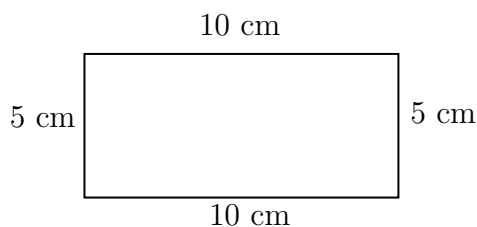


Answer:

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

Question: 8

Find the perimeter of the given figure.



Answer:

Sides of the given shape = _____.

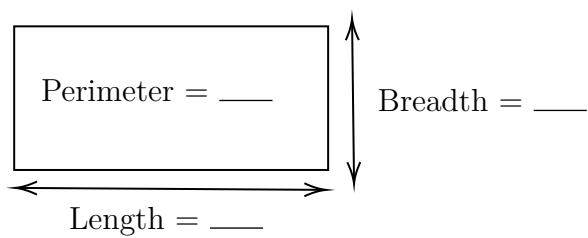
Perimeter of a shape is _____ (sum / difference) of _____ (all/ opposite) sides.

Perimeter of the given shape = _____

Question: 9

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 _____.

Data handling

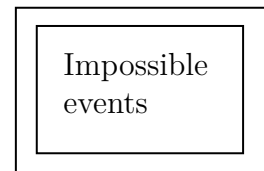
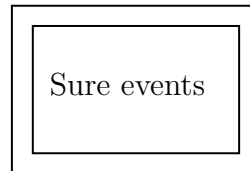
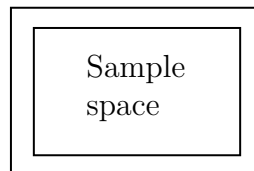
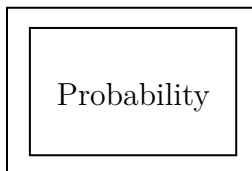
Topics to be Improved	
Chance of probability	Sample space in probability, Basis of probability
Arithmetic mean, mode and median	Mean, Median and Mode

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



Question: 10

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.

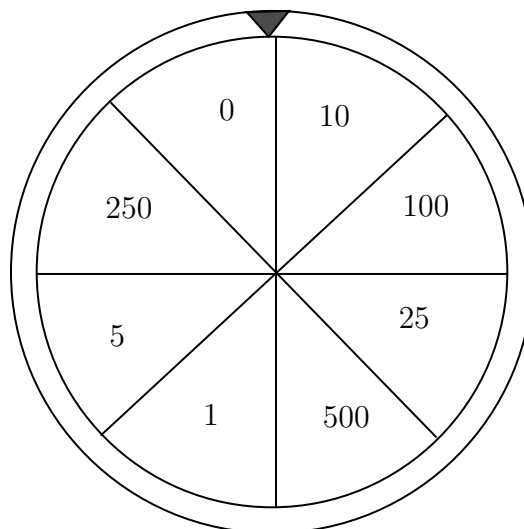
Sure events always _____ (occurs/don't occurs).

Impossible events _____ (occurs/ don't occurs).

Therefore, _____ contains list of possible outcomes.

Question: 11

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: 12

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 **Basics of probability**



Question: 13

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: 14

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: 15

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)

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



Question: 16

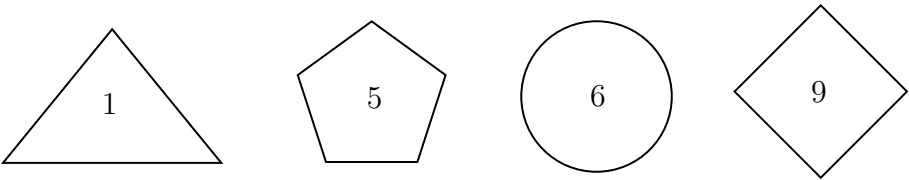
Find the mode of the following data: 5, 15, 23, 5, 32, 44, 72, 55, 6, 3, 5, 65, 45, 67, 24, 19 and 98.

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: 17

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: 18

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

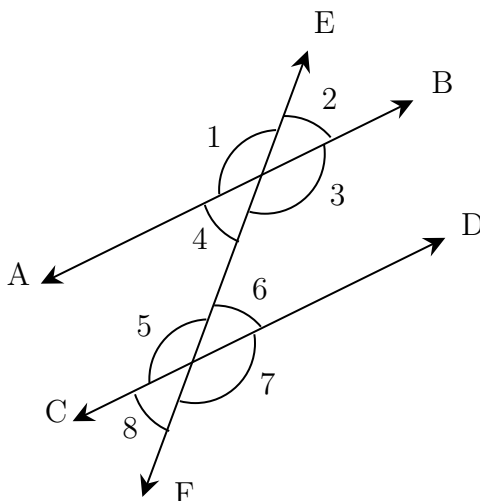
Topics to be Improved	
Transversal angle made by transversal	Basics of Transversal angle
Sum of lengths of two sides of a triangle	Sum of two sides of a triangle
Lines of symmetry for regular polygons	Identification of lines of symmetry
Related angles	Basic of angles
Faces vertex and edges	Identification of faces, edges and vertices
Types of triangle	Basics of types of triangle (sides)

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



Question: 19

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



Answer:

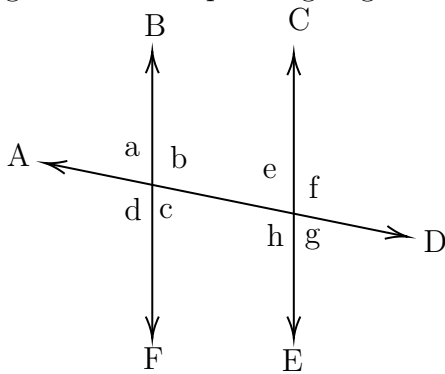
A line that intersects two or more lines at distinct points is called a _____ (transversal/ Intersecting line).

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.



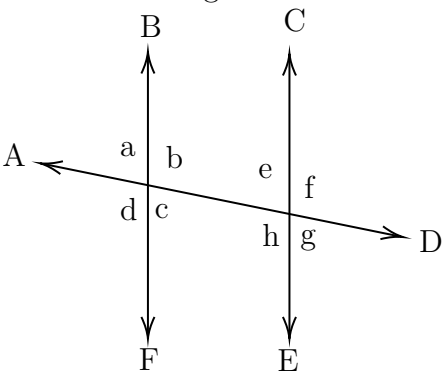
Answer:

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).

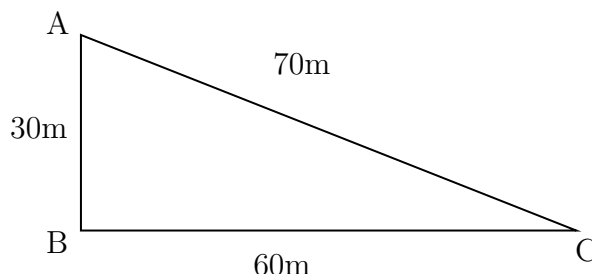
Here, alternate angle of $\angle a$ is _____ and its value is _____.
Corresponding angle of $\angle a$ is _____ and its value is _____.

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



Question: 22

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: 23

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

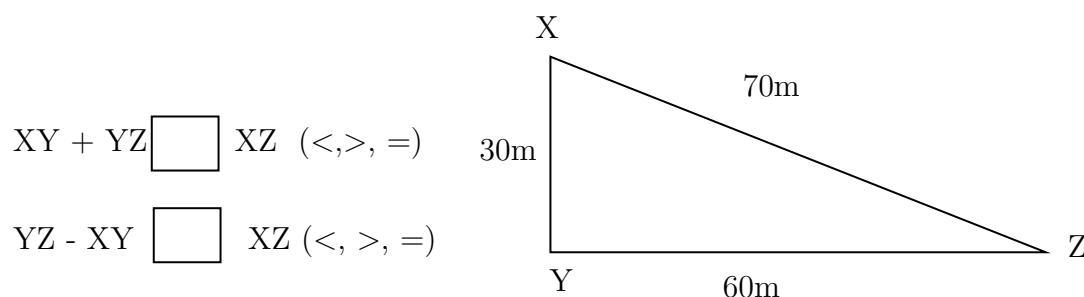
Answer:

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: 24

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 _____.

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



Question: 25

Line of symmetry is divides any shape into _____ (one / two) _____ (identical / non identical) halves.

Answer:

Lines of symmetry is a line that divides any shape into _____ (equal / unequal) halves.
Symmetrical image have _____ (identical / non identical) parts.
Therefore, line of symmetry is dividing the shape into _____ halves.

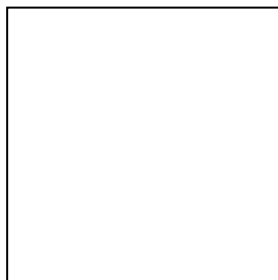
Question: 26

How many lines of symmetry does square have?

Answer:

Square have _____ sides.
All sides of square are _____ and all angles are _____.

Mark the lines of symmetry.



Therefore, square has _____ lines of symmetry.

Question: 27

Classify the following based on the symmetry.

Letter S, scalene triangle, Letter K, Rhombus, Number 8, and circle .

Answer:

Lines of symmetry is a line that divides the shape into _____ (equal / unequal) halves.
The letter S is _____ (symmetrical / asymmetrical) and have _____ lines of symmetry.

Scalene triangle is _____(symmetrical / asymmetrical) and have _____lines of symmetry.

The letter K is _____ (symmetrical / asymmetrical) and have _____ lines of symmetry.

Rhombus is _____(symmetrical / asymmetrical) and have _____ lines of symmetry.

Cat is _____ (symmetrical / asymmetrical) and have _____ lines of symmetry.

Stars is _____ (symmetrical / asymmetrical) and have _____ lines of symmetry.

Hi, here in this video you will learn **Related Angles**



Question: 28

(i) When two rays of an angle are perpendicular, then the angle formed between them is a _____ angle .

(ii) When two rays of an angle are in opposite sides, then the angle formed between them is a _____ angle .

Answer:

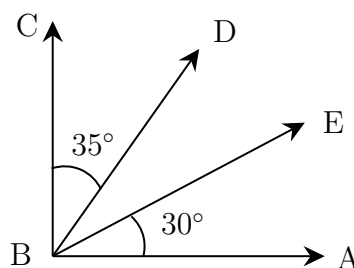
A _____ (line segment /ray) begins from one point and travels endlessly in a direction.

(i) The angle formed between two perpendicular rays is ____° and it is called _____ angle.

(ii) If two rays starting at same point moves in opposite direction, they form a _____ (straight / perpendicular) line. The measure of the angle formed is ____°and it is called _____ angles.

Question: 29

Find the angle of $\angle DBE$



Answer:

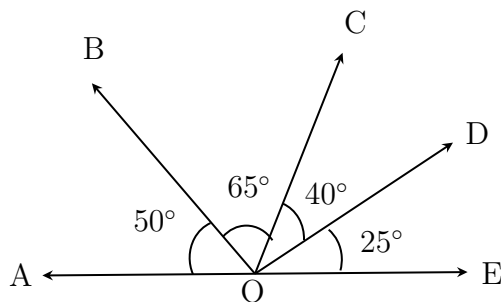
BA and BC are _____ (parallel / perpendicular) rays.
The angle formed between this rays is ____, $\angle ABC =$ ____.

$$\begin{aligned}\angle ABC &= \angle ABE + \text{_____} + \text{_____} \\ &= 30^\circ + \text{_____} + \text{_____} \\ &= \text{_____}\end{aligned}$$

Therefore, $\angle DBE =$ _____

Question: 30

Find the complementary angles in the given diagram.



Answer:

Two angles are said be complementary if sum of their angles is equal to _____.

$\angle AOB =$ _____, and its complement angle is _____.

$\angle BOC =$ _____, and its complement angle is _____.

$\angle COD =$ _____, and its complement angle is _____.

$\angle DOE =$ _____, and its complement angle is _____.

Therefore, in the given figure the complementary angles are $\angle AOB$, _____ and $\angle BOC$, _____

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



Question: 31

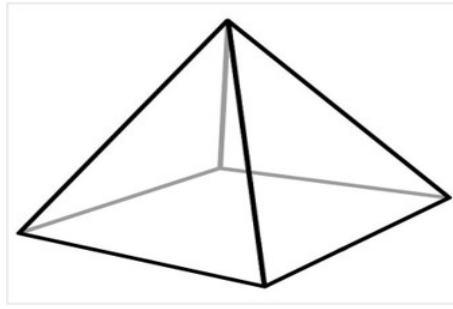
A point at which two or more lines segments meet is called _____(Vertex/ edges/ faces).

Answer:

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

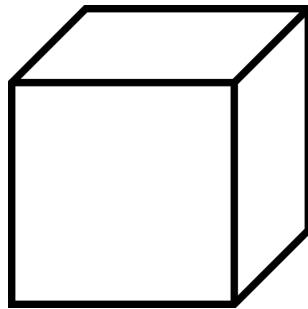
A _____is a point where two or more line segments meet(Vertex/ edges/ faces).

Mark the vertices in the diagram,



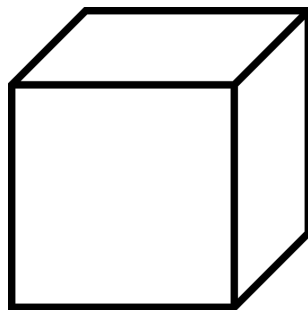
Question: 32

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: 33

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 **Types of triangle**



Question: 34

Polygon with three sides is called as _____.

Answer:

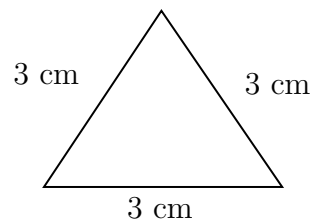
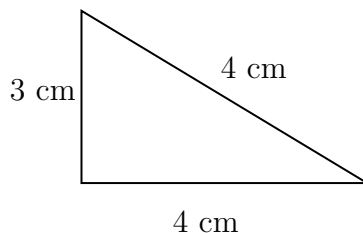
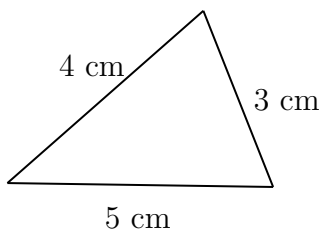
A polygon is a simple _____ (open / closed) curve made up of only line segments.

Polygon with three sides is called _____.

Draw a diagram of polygon with three sides :

Question: 35

Identify the types of triangles.



Answer:

Triangle has _____ sides.

- Triangle with all sides are equal is called _____ triangle.

- Triangle with two sides of equal length is called _____ triangle.
- Triangle with three sides of different length is called _____ triangle.

Question: 36

A park is in the shape of an isosceles triangle. If side length of the park is 30ft and 60ft. then the possible length of third side of park can be _____.

Answer:

The shape of the park is _____ .

The shape has _____ sides and this shape has _____ sides of equal length.

Given: length of sides of park is _____.

The possible length of third side is _____.

Number system

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

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.

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

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

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 $2\frac{7}{4} = \underline{\hspace{2cm}}$

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

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



Question: 40

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: 41

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: 42

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,

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

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

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

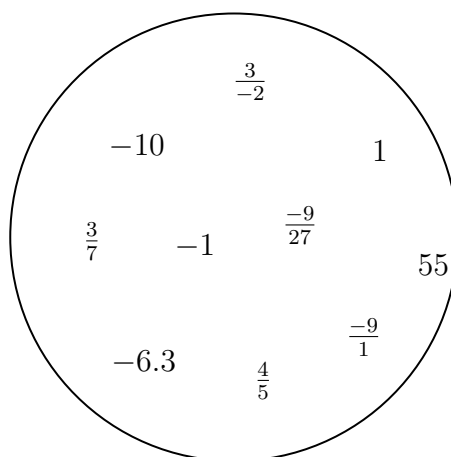
Transposing 16 to other side, the result is _____.

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



Question: 43

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: 44

$\frac{-3}{-4}$ 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: 45

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: _____

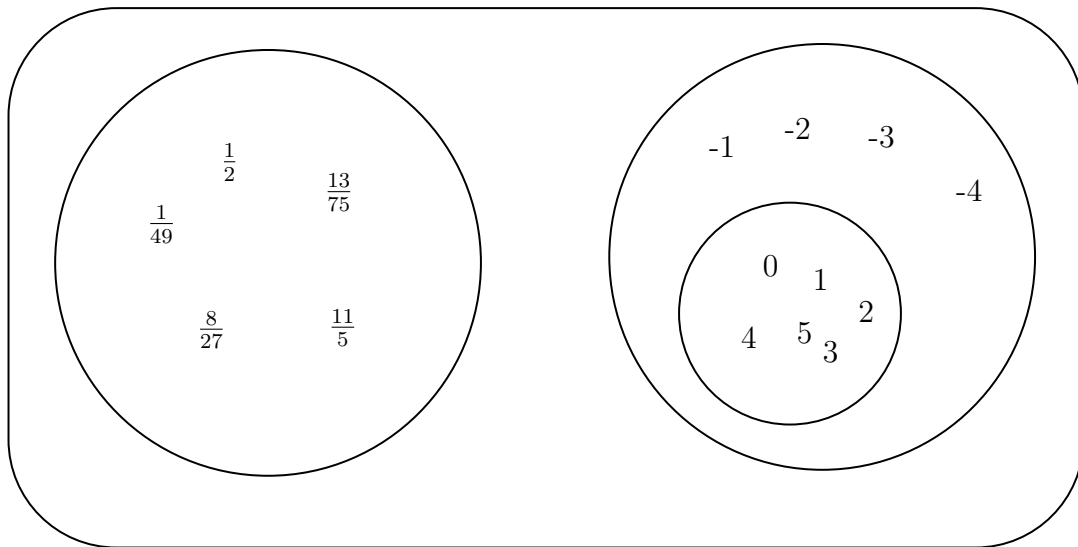
Positive rational number \times Negative rational number = _____ \times _____ = _____ and this is _____ rational number

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



Question: 46

The numbers in the diagram represents_____.



Answer:

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

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

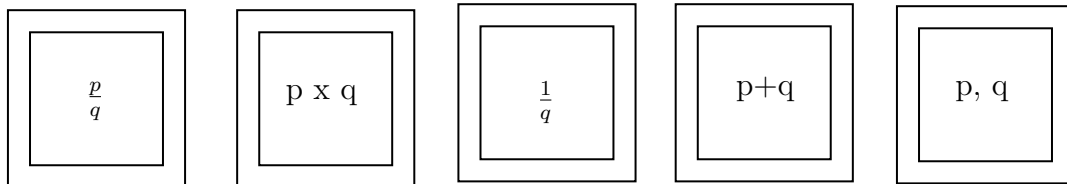
The combination of these circles are called _____.

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

Combination of all three circles are called as _____ numbers.

Question: 47

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: 48

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 **Properties of integers**



Question: 49

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: 50

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: 51

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 **Exponents and power**



Question: 52

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: 53

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: 54

(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 = ____.

Comparing Quantities

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

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



Question: 55

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: 56

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: 57

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 = $\text{ } \%$

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

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



Question: 58

2% can be written as

Answer:

Percentages are numerators of fractions with denominator $\text{ } \%$

$$2\% = \frac{\text{ } }{\text{ } }$$

Question: 59

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 $\text{ } \%$ marks. He got $\text{ } \%$ marks.

$$75\% \text{ can be written in fraction form } \frac{\text{ } }{\text{ } }$$

$$\text{Then the mark scored by Arun} = \text{Total mark} \times 75\% = \text{ } \times \frac{\text{ } }{\text{ } } = \text{ } \%$$

Question: 60

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

Answer:

There are $\text{ } \%$ apples in a basket.

Number of rotten apples are $\text{ } \%$.

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

Convert it into a percent = _____ x _____ % = _____

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



Question: 61

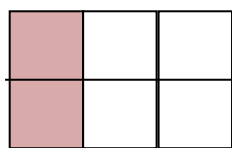
If a:b and c:d are equivalent ratio, then it can be expressed as _____

Answer:

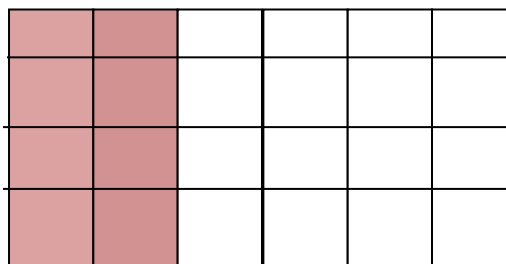
A _____ (proportion / ratio) is used to express _____ (one/two) equivalent ratios.
Standard form to express proportion is _____.

Question: 62

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: 63

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

$a = \frac{bc}{d}$

$c = \frac{ad}{b}$

$ad=cd$

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, $a \times d =$ _____,

then $a =$ _____ and $c =$ _____

Algebra

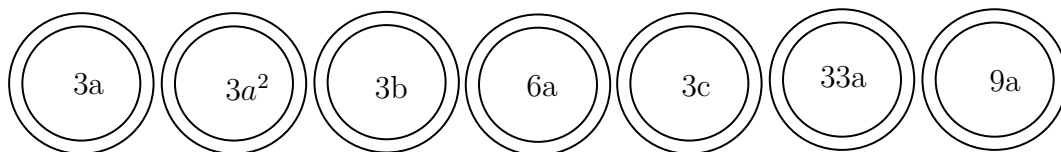
Topics to be Improved	
Addition and subtraction of algebraic expressions	Like terms and Unlike terms
Monomials, binomials, trinomials and polynomials	Types of algebraic expression
Terms of an expression	Identification of terms in an expression
Basics of simple equation	Solving of simple equation
subtraction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

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

Answer:

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

$$7r^2 + \boxed{} - 2\boxed{} = (7 + \underline{} - 2)r^2 = \underline{}$$

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 = _____ - _____ = _____

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



Question: 67

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: 68

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 _____.

Question: 69

$5m^2 + m + 0$ is a _____ expression. (Monomial/ Binomial/ Trinomial)

Answer:

The terms in expression $5m^2 + m + 0$ are _____.

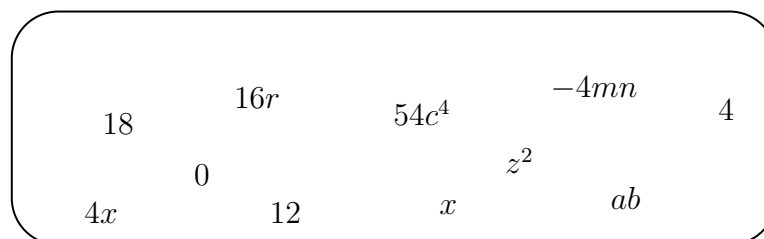
Here, the expression has _____ terms and it is called a _____ expression.

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



Question: 70

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: 71

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 _____.

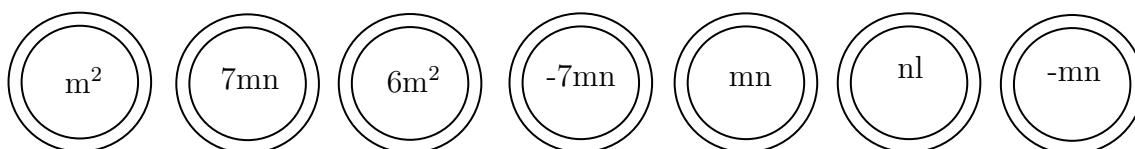
The terms in the expression $12a + b + 1$ is/are _____.

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

Question: 72

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 **Solving an equation**



Question: 73

If $\odot = 5$, then $5 \odot + 5 =$ _____

Answer:

The value of the given smiley \odot is _____.

Substituting the value in the expression $= 5(\text{---}) + 5 = \text{---} + \text{---} = \text{---}$.

Question: 74

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

$$7 \square + 3 = -4$$

Answer:

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

$$7 \times \text{---} + 3 = \text{---}$$

$$7 \times \text{---} + 3 = \text{---}$$

$$7 \times \text{---} + 3 = \text{---}$$

$$7 \times \text{---} + 3 = \text{---}$$

$$7 \times \text{---} + 3 = \text{---}$$

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

Question: 75

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

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

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

$$x + 3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

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

$$5x \times 1 = 5 \times \underline{\hspace{2cm}} \times 1 = \underline{\hspace{2cm}}$$

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

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

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



Question: 76

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: 77

	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: 78**

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

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

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

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

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