# LaPIS Diagnostic Test Workbook - Mathematics

Name : Bandita A

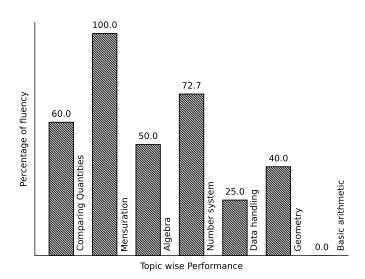
Class: 7

Section : A

School : AKV Public School

Login ID : AKV121

# Bandita A's Performance Report



Score: 21/40 Percentage: 52.5%

# Bandita A's Study Planner

| Date | Topics Planned  | Q. Numbers   | Teacher Remark    | Teacher Sign  | Parent Sign |
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# Basic arithmetic

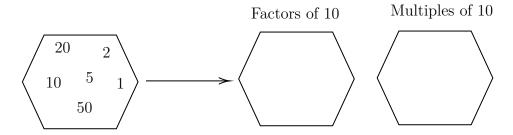
| Topics to be Improved |                                   |
|-----------------------|-----------------------------------|
| LCM Finding LCM       |                                   |
| Types of angles       | Identification of types of angles |

# Hi, here in this video you will learn LCM



Question: 1

Fill the hexagon with factors and multiples of 10.



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#### $\underline{Answer}$ :

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

The factors of 10 are

| 10 x 1 = | x = 10 |
|----------|--------|
| 2 x = 10 | x = 10 |

Let's find the multiple of 10

| 10 x 1 = | 10 x 4 = |
|----------|----------|
| 10 x 2 = | 10 x 5 = |
| 10 x 3 = | 10 x 6 = |

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 |  |
|----|-------|--|
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |

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The LCM of 50, 100 is 2 x 2 x \_\_\_\_ x \_\_\_.

#### Question: 3

Every number is the multiple of \_\_\_\_\_

#### Answer:

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

Multiple of  $1 = \underline{\hspace{1cm}}$ 

Multiple of  $2 = \underline{\hspace{1cm}}$ 

Multiple of 13 =

Multiple of 20 = \_\_\_\_\_

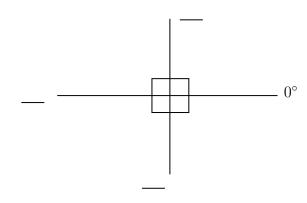
Here, \_\_\_\_\_ is the common factor of every number.

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



Question: 4

Find the angles.



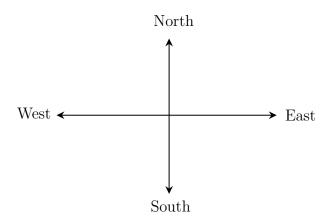
#### Answer:

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

The angle perpendicular to  $0^{\circ}$  is  $\_\_$ .

The straight line measures  $\_\_\_^{\circ}$ .

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.

# Data handling

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

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.

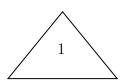
#### Answer:

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

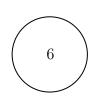
Arranging the data in ascending order: \_\_\_\_\_ occurs most number of times. Then, mode of the given data is \_\_\_\_\_

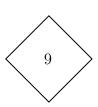
# Question: 8

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: \_\_\_\_\_ and it is the \_\_\_\_\_ of a data.

Question: 9

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

 $Mean = \underline{\hspace{1cm}}$ ,  $Median = \underline{\hspace{1cm}}$  and  $Mode = \underline{\hspace{1cm}}$ .

| Answer:                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $Mean = \frac{\text{of all observation}}{\text{number of observation}}.$                                                                                                                                                                                                 |
| Here s sum of all observation = $\_\_\_$ , number of observation = $\_\_\_$<br>Therefore, mean = $\_\_\_$                                                                                                                                                                |
| Arrange the data in ascending order:                                                                                                                                                                                                                                     |
| Here, $median = \underline{\hspace{1cm}}$ , $mode = \underline{\hspace{1cm}}$ .                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                          |
| 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.                                                                                                                                                                                                                                            |
| $\underline{Answer:}$                                                                                                                                                                                                                                                    |
| 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 = $\underline{\hspace{1cm}}(0/\ 1/\ any\ number)$ .<br>Probability of impossible event = $\underline{\hspace{1cm}}(0/\ 1/\ any\ number)$ .<br>Therefore, Probability of sure event $\underline{\hspace{1cm}}$ Probability of impossible event. |
| Therefore, I robability of sure event I robability 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 $(0/1)$                                                                                                                                                                        |

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



#### Question: 13

Which of the following contains list of all possible outcomes.

Probability

Sample space

Sure events

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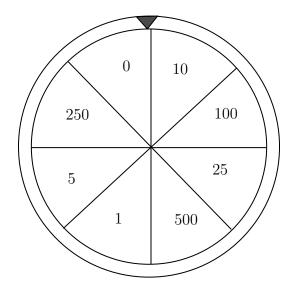
Impossible events

#### Answer:

Probability is the measure of \_\_\_\_\_\_ ( chance /number) of an events happenings. Sample space consists of \_\_\_\_\_ ( possible/ impossible) outcomes. Sure events always \_\_\_\_\_ (occurs/don't occurs). Impossible events \_\_\_\_\_ (occurs/ don't occurs). Therefore, \_\_\_\_\_ contains list of possible outcomes.

#### Question: 14

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  $\mathbf{\xi}0$ ,  $\mathbf{\xi}10$ , \_\_\_\_\_

#### Question: 15

A bag contains three balss 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 colou | r, then other ball can be or          |     |
| If one of the ball is green in colo | ur, 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 + | - , |
| +                                   | _                                     |     |

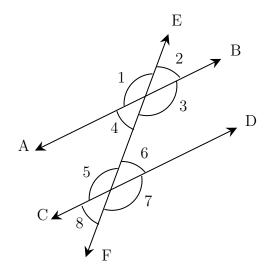
# Geometry

| Topics to be Improved                                                       |                                           |  |
|-----------------------------------------------------------------------------|-------------------------------------------|--|
| Transversal angle made by transversal                                       | Basics of Transversal angle               |  |
| Angle sum property of triangle                                              | Angle sum property of triangle            |  |
| Sum of lengths of two sides of a triangle                                   | Sum of two sides of a triangle            |  |
| Faces vertex and edges                                                      | Idenfication of faces, edges and vertices |  |
| Right angle triangle and pythagoras property  Basics of Pythagoras property |                                           |  |
| Related angles                                                              | Basic of angles                           |  |

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



Question: 16



#### Answer:

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

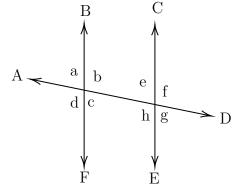
Angle that lies on different vertices and on the opposite sides of transversal is \_\_\_\_\_ angles.

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

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

# Question: 17

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



#### Answer:

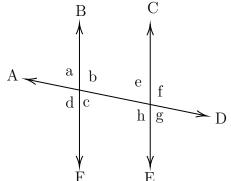
A line that intersects two or more lines at distinct points is called a \_\_\_\_\_ (transversal/Intersecting line).

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: 18

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 \_\_\_\_\_.

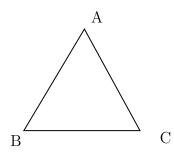
# Hi, here in this video you will learn Angle sum property



Question: 19

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

#### Answer:



$$\angle A + \angle B + \angle C = \underline{\hspace{1cm}}$$

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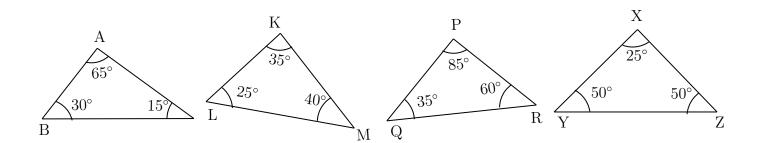
Angle sum formula =  $(n-2) \times 180^{\circ}$ , n = number of sides

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

Sum of the angles of triangle =  $(\underline{\phantom{0}} - 2) \times 180^{\circ} = \underline{\phantom{0}}$ 

#### Question: 20

Which of the following triangle satisfy the angle sum property.



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#### Answer:

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

In  $\triangle ABC$ , Sum of the angles  $= \angle A + \angle B + \angle C = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ 

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:

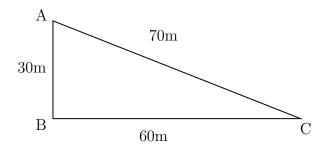
Ratio of angles in the triangle is \_\_\_\_\_\_\_ Let's consider the angles of triangle be 8x, \_\_\_\_ and \_\_\_\_ We know sum of the angles of a triangle is \_\_\_\_\_ Therefore, 8x+ \_\_\_\_ =  $180^{\circ}$ . The value of x= \_\_\_\_\_ The angles of the triangle are \_\_\_\_\_

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.



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#### 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.

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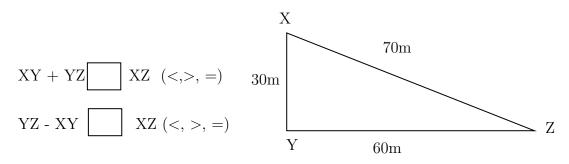
#### Answer:

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

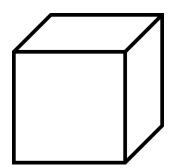
The sum of the two sides of a triangle is \_\_\_\_\_\_ than the other side of the triangle.

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

Example: In triangle XYZ,

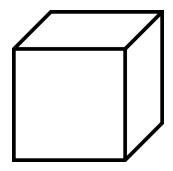


| etween which two numbers can length                                            |
|--------------------------------------------------------------------------------|
| tween which two numbers can length                                             |
|                                                                                |
| than the third side of the triangle.  greater) than sum of other two sides.  = |
| than the third side of the greater) than sum of other two sides.               |
| but less than                                                                  |
| model(Vertex/ edges/ faces).  meet(Vertex/ edges/ faces).                      |
| be.                                                                            |
|                                                                                |



#### Answer:

Mark the vertex, edges and faces in a cube.



| Count the Cube have |     |   | , , |   |    |   |   | es.  |      |      |      |  |
|---------------------|-----|---|-----|---|----|---|---|------|------|------|------|--|
| Question:           | 27  |   |     |   |    |   |   | <br> | <br> | <br> | <br> |  |
| TT                  | , . | 1 | 1.0 | 1 | 1. | 1 | 0 |      |      |      |      |  |

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 Pythagoras property Question: 28

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).

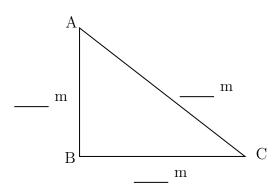
Pythagoras theorem states that \_\_\_\_\_

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#### Question: 29

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

 $Given: Base = \underline{\hspace{1cm}}, Altitude = \underline{\hspace{1cm}},$ 

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

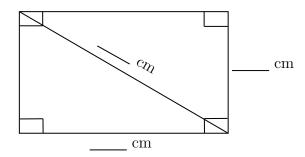
By Pythagoras theorem, 
$$(____)^2 = (____)^2 + (____)^2$$

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

Question: 30

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

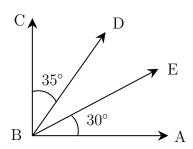
#### Answer:



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,  $(____)^2 = (___)^2 + (___)^2$ Therefore, diagonal of the rectangle is \_\_\_ Hi, here in this video you will learn Related Angles ..... Question: 31 (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 \_\_\_\_oand it is called \_\_\_\_\_ angles. .....

Question: 32

Find the angle of  $\angle DBE$ 



#### Answer:

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

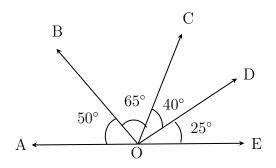
$$\angle ABC = \angle ABE + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= 30^{\circ} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$
Therefore,  $\angle DBE = \underline{\hspace{1cm}}$ 

Question: 33 .....

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 \_\_\_\_\_\_.

 $\angle BOC = \underline{\hspace{1cm}}$ , and its complement angle is  $\underline{\hspace{1cm}}$ .

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

 $\angle DOE = \underline{\hspace{1cm}}$ , and its complement angle is  $\underline{\hspace{1cm}}$ .

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

# Number system

| Topics to be Improved                  |                                             |  |  |  |  |
|----------------------------------------|---------------------------------------------|--|--|--|--|
| Exponents                              | Solving exponents                           |  |  |  |  |
| Positive and negative rational numbers | Identification of positive rational numbers |  |  |  |  |
| Fractions                              | Division of fraction                        |  |  |  |  |

| Hi, | here | in | this | video | you | will | learn | Exponents | and | power |
|-----|------|----|------|-------|-----|------|-------|-----------|-----|-------|
| ,   |      |    |      |       | •   |      |       | 1         |     | _     |



| Question: | 34 |
|-----------|----|
| a account | 04 |

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).

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1000 can be written as =  $10 \times$  \_\_\_\_  $\times$  \_\_\_\_ 10 is raised to the power of \_\_\_\_ = (10)

#### 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.

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

# 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)—

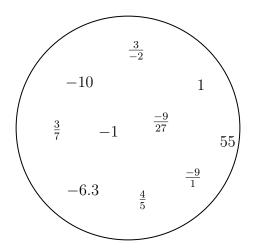
- (i) Tenth power of 100: Base = \_\_\_\_, Power/Exponents = \_\_\_\_, exponential form = \_\_\_\_.
- (ii) k is raised to the power of 5: Base = \_\_\_\_, Power/Exponent = \_\_\_\_, exponential form = \_\_\_

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



Question: 37

Segregate positive and negative rational number.



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#### 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

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Question: 38

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

Answer:

-3 is a \_\_\_\_\_ number, -4 is a \_\_\_\_\_ number. Division of  $\frac{-3}{-4} = \boxed{\ }$  and this \_\_\_\_\_ rational number.

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

#### Question: 39

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 Division on fractions



Question: 40

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







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Answer:

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

Here, 5 is \_\_\_\_\_\_ and 7 is \_\_\_\_\_.

To convert mixed fraction into improper fraction,  $\frac{(\text{Whole} \times \underline{\hspace{1cm}}) + \text{Numerator}}{\text{Denominator}})$ 

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

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 =  $\_\_\_$ .

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

| 0 11 10      |      |
|--------------|------|
| Question: 42 | <br> |

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

#### Answer:

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

$$\frac{12}{40} \div \underline{\phantom{0}} = \frac{12}{40} \times \underline{\underline{\phantom{0}}} = \underline{\underline{\phantom{0}}}$$

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

# Comparing Quantities

| Topics to be Improved                  |                                        |  |  |  |  |  |
|----------------------------------------|----------------------------------------|--|--|--|--|--|
| Conversion of fraction into percentage | Conversion of fraction into percentage |  |  |  |  |  |
| Percentage                             | Basic of percentage                    |  |  |  |  |  |

.....

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



Question: 43

Complete the box in the given equation.

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

Answer:

Percentage are the fraction with the denominator \_\_\_\_\_.

Therefore, 5% can be expressed as \_\_\_\_\_

Question: 44

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) 
$$\frac{1}{2} \times \frac{100}{100} = \frac{100}{200} = 200\%$$

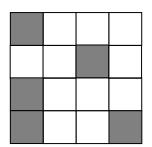
(iii) 
$$\frac{1}{2} \times 100 = \frac{100}{2} = 50\%$$

Answer:

To convert fraction into percentage, the value of \_\_\_\_\_\_ (denominator / numerator)should be 100 or \_\_\_\_\_ ( multiply / divide) the fraction with 100 %. Therefore, correct conversion form is \_\_\_\_\_

Question: 45 .....

Find the percentage of shaded part of square.



| 1 | n | 011 | 10 | n |
|---|---|-----|----|---|

| The square shape is divided into        | parts |
|-----------------------------------------|-------|
| Number of shaded part of square is $\_$ |       |
| Shaded part of square in fraction is -  |       |
|                                         |       |
|                                         |       |

| To Convert | into percentage, | x 100 |
|------------|------------------|-------|
|            |                  |       |

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



Question: 46

2% can be written as

#### Answer:

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

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

.....

Question: 47

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 \_\_\_\_\_

| Then the mark scored by Arun = Total mark $\times$ 75% = $\times$ =                                      |
|----------------------------------------------------------------------------------------------------------|
| Question: 48                                                                                             |
| There are 25 apples in a basket in which 10 of them are rotten. Find the percentage of rotten apples.    |
| $\underline{Answer:}$                                                                                    |
| There are apples in a basket.  Number of rotten apples are  Fraction form of rotten apples in a basket = |
| Convert it into a percent= x% =                                                                          |

# Algebra

| Topics to be Improved                             |                                      |  |  |  |  |
|---------------------------------------------------|--------------------------------------|--|--|--|--|
| Basics of simple equation                         | Solving of simple equation           |  |  |  |  |
| 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 | Solving | an | equation |
|-----|---------|------|-------|-----|------|-------|---------|----|----------|
|-----|---------|------|-------|-----|------|-------|---------|----|----------|



| Ougation  | 10 |
|-----------|----|
| Question: | 49 |

If ©=5, then 5 © +5 =

#### Answer:

The value of the given smiley  $\odot$  is \_\_\_\_\_.

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

#### Question: 50

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

.....

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

#### Answer:

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

$$7 \times \_\_+3 = \_\_$$

$$7 \times$$
 \_\_\_\_+ $3 =$  \_\_\_\_

$$7 \times$$
 \_\_\_\_+ $3 =$  \_\_\_\_

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

# <u>Question: 51</u>

Arrange the terms in the descending order when the value of x is 2.  $2x 5x \times 1 x + 3 2x - 4 \frac{1}{2}x$ 

# Answer:

The given expression are \_\_\_\_\_

The value of x is \_\_\_\_\_.

substituting value of  $\mathbf x$ 

$$2x = 2 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$
$$x + 3 = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

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

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

Arranging in descending order: \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_.

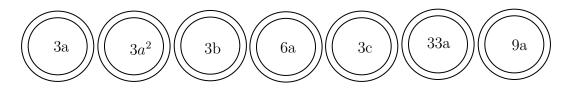
Their respective algebraic terms are \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_\_.

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



Question: 52

Shade the like terms.



Answer:

Given terms are \_\_\_\_\_

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

Here, like terms are \_\_\_\_\_\_.

<u>Question: 53</u>

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

Answer:

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

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

Question: 54

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 choc | olates Ran | n and  | Sam have   | :     |               |        |   |
|-----|------------|------------|--------|------------|-------|---------------|--------|---|
|     |            | Ram's cho  | ocolat | te + Sam's | choco | $olates = \_$ | <br>+= | = |
| /\  | **         |            | ~      | -          |       | -             |        |   |

| (11) | How many | icecreams Sa | m have mor | e than Ram:                              |       |  |
|------|----------|--------------|------------|------------------------------------------|-------|--|
|      |          | icec         | ream       | $\underline{}$ icecream = $\underline{}$ | <br>= |  |

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



| Question:  | 55 |
|------------|----|
| WILESLIUIL |    |

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 $=$ $\underline{\hspace{1cm}}$ $+$ $\underline{\hspace{1cm}}$ . |
| The answer is                                                                              |
|                                                                                            |

Question: 56

|                    | 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  $B = \underline{\hspace{1cm}}$

Total number of boys in school A and school B is  $\_\_\_$  +  $\_\_\_$  =  $\_\_\_$ .

- (ii) Number of boys in school B = \_\_\_\_\_,
  - Number of girls in school  $B = \underline{\hspace{1cm}}$

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: 57 .....

Solve the following:

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

Answer:

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

$$\begin{array}{r}
3a - 5b \\
\underline{(-) \quad 5a - 7b} \\
-2a - \underline{\qquad}
\end{array}$$