INTERVAL
Individual Tuition Concept

Team INTERVAL

Foundation Course

MATHS

Level - **Basic**

1 2 3 4

10 9 8 7 6 5

1 2 3 4 5 6 7 9

QUESTION BANK
BASIC
CAT - 3

1 - Write the smallest 4-digit number using the digits 4, 0, 7, and 2 (without repeating digits).

....

2 - Arrange in ascending order: 5203, 5093, 5209, 5032.

....

3 - Write the place value of 5 in 3,452

....

4 - Write any 5 numbers between 1 and 50 and arrange them in ascending and descending order.

....

5 - Identify odd or even?

a) Identify whether the following numbers are odd or even:

 a) 34 b) 65 c)89   d) 99 e) 24

b) Write all even numbers between 21 and 31

c) Write all odd numbers between 90 and 100

6 - Fill in the missing numbers?

☐ + 6 = 9	2 + ☐ = 10
4 + ☐ = 8	☐ + 1 = 7
☐ + 7 = 12	3 + ☐ = 12
8 + ☐ = 11	☐ + 7 = 9
☐ + 3 = 10	6 + ☐ = 8
4 + ☐ = 12	☐ + 9 = 13
☐ + 10 = 14	5 + ☐ = 11

7 - Solve the following equations?

a) 245 + 356 = _____

b) 6,582 + 2,436 = _____

c) 562 + 1,278 = _____

d) 3,129 + 472 = _____

8 - Word problems?

a) A shopkeeper sold 356 apples on Monday and 487 apples on Tuesday. How many apples did he sell in total?

b) A factory produced 1,245 toys in January and 1,378 toys in February. How many toys were produced in two months?

9 - Add or Subtract

5 ☐ 5 = 10	6 ☐ 2 = 4
9 ☐ 5 = 14	4 ☐ 2 = 6
7 ☐ 2 = 9	8 ☐ 2 = 10
2 ☐ 7 = 9	2 ☐ 8 = 6
4 ☐ 2 = 2	9 ☐ 2 = 11
7 ☐ 1 = 6	6 ☐ 2 = 8
9 ☐ 2 = 11	3 ☐ 9 = 12
5 ☐ 2 = 7	2 ☐ 8 = 6

10 - solve it.

a) 900 − 675 = _____

b) 8,000 − 3,275 = _____

c) 4,205 − 829 = _____

d) 3,000 − 1,748 = _____

11 - Word problems.

a) A shop had 750 chocolates. It sold 438 chocolates. How many are left?

b) There were 2,486 people in a village last year. This year, the number decreased by 359. Find the new population.

c) A factory produced 6,500 toys in May and 5,875 in June. How many fewer toys were produced in June?

12 - Write the multiplication table of 6,7 ?

13 -   In 6 × 4 = 24

a) What is the multiplicand?

b) What is the multiplier?

c) What is the product?

14 - Fill in the blanks.

a) In 8 × 3 = 24, the number 8 is the _____.

b) In 8 × 3 = 24, the number 3 is the _____.

c) In 8 × 3 = 24, the number 24 is the _____.

d) The result we get after multiplying two numbers is called the _____.

e) In multiplication, the number that is multiplied is called the _____.

15 - Word problem?

a) There are 245 students in one class. Find the total number of students in 2 such classes.

b) A car travels 125 km in one hour. How much distance will it cover in 3 hours?

c) A box contains 150 pencils. How many pencils in 100 boxes?

d) Each packet has 35 chocolates. How many chocolates in 2 packets?

16 - Calculate it?

19	23	37	54
× 22	× 64	× 15	× 55

14	71	98	15
× 64	× 82	× 43	× 16

27	62	83	48
× 36	× 74	× 23	× 91

17 - Fill in the blanks.

a) 18 ÷ ___ = 9

b) ___ ÷ 7 = 10

c) 45 ÷ 5 = ___

d) 100 ÷ 10 = ___

e) 32 ÷ 8 = ___

e) If 24 ÷ 6 = 4, then 6 × 4 = ___

18 - Write the division statement for:
Dividend = 45, Divisor = 6, Quotient = 7,
Remainder = 3

19 - Word problems?

a) 96 apples are shared equally among 8 baskets. How many apples in each basket?

b) 225 students are divided equally into 5 groups. How many students per group?

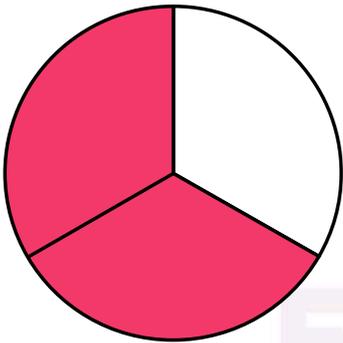c) 360 chocolates are divided among 9 children. How many does each get?

d) A shopkeeper has 512 toffees and packs 8 in each packet. How many packets can he make?

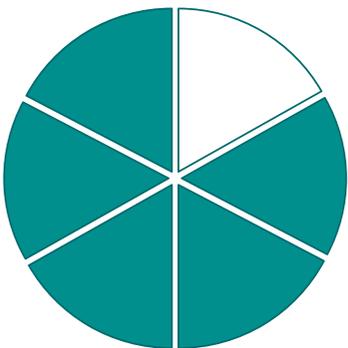e) 624 mangoes are kept in baskets with 6 mangoes each. How many baskets are needed?

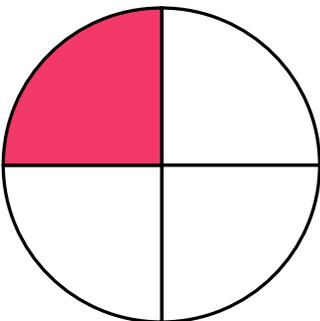# 20 - What is the fraction of shaded part?

....

....

....

....
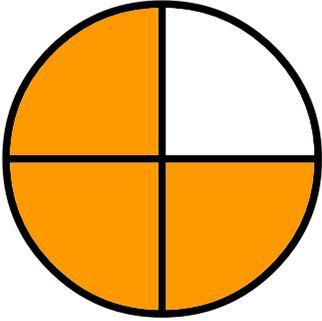
21 - Choose the correct answer.

1) A fraction with numerator smaller than denominator is called

a) Proper b) Improper c) Mixed

2) 5/2 is an example of

a) Proper fraction b) Improper fraction c) Mixed fraction

3) 3/5 and 7/5 are

a) Unlike b) Like c) Equivalent

4) ½ and 2/4 are

a) Equivalent b) Unlike c) Improper

22 - Fill in the blanks.

a) A fraction that has equal numerator and denominator represents the number _____.

b) Fractions with same denominators are called _____ fractions.

c) Fractions with different denominators are called _____ fractions.

23 - Word problems.

a) Riya ate 2/8 of a cake and her brother ate 3/8. How much of the cake did they eat together?

b) A bottle is 6/10 full. 3/10 of the water is poured out. How much water is left?

c) Out of 12 equal parts of a ribbon, 5/12 were used on Day 1 and 4/12 on Day 2. How much ribbon was used in total?

23 - Simplify ?

$\dfrac{2}{6} \times \dfrac{1}{2}$ = $\dfrac{}{12}$ = $\boxed{}$

$\dfrac{2}{4} \times \dfrac{2}{4}$ = $\boxed{}$ = $\dfrac{}{4}$

$\dfrac{2}{5} \times \dfrac{1}{4}$ = $\dfrac{}{20}$ = $\boxed{}$

$\dfrac{1}{3} \times \dfrac{3}{4}$ = $\boxed{}$ = $\boxed{}$

$\dfrac{3}{7} \times \dfrac{1}{3}$ = $\boxed{}$ = $\boxed{}$

23- Write the decimal form?

a) 3 ones and 5 tenths = _____

b) 7 ones and 2 tenths = _____

c) 9 ones and 8 hundredths = _____

d) 5 ones and 6 tenths = _____

e) 4 ones and 25 hundredths = _____

24- Add or subtract the decimals.

a) 0.2 + 0.3 = _____

b) 0.7 – 0.4 = _____

c) 1.2 + 0.5 = _____

d) 2.5 – 1.1 = _____

e) 3.6 + 2.3 = _____

25- Choose the correct answer.

1) 7.6, the 6 is in the

a) Tenths place b) Ones place c) Hundredths place

2) 0.5 + 0.4 =

a) 0.8 b) 0.9 c) 1.0

3) 1.0 – 0.4 =

a) 0.6 b) 0.4 c) 0.5

4) Which is greater?

a) 0.8 b) 0.09

5) 0.25 =

a) ¼ b) ½ c) ¾

26- Convert the fraction into decimal.

½ = _____

¼ = _____

¾ = _____

³⁄₁₀ = _____

⁷⁄₁₀₀ = _____

27 - Finish the pattern
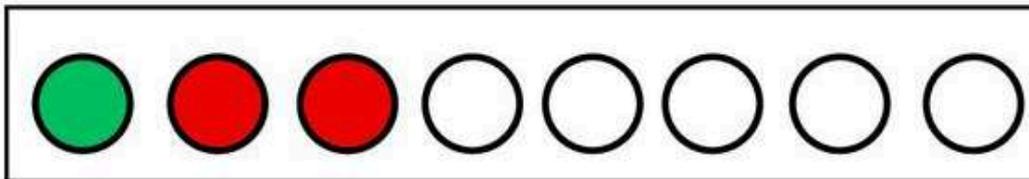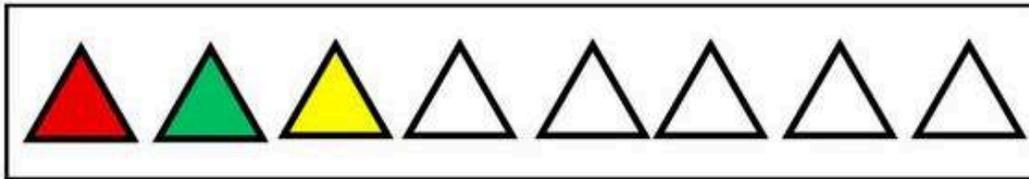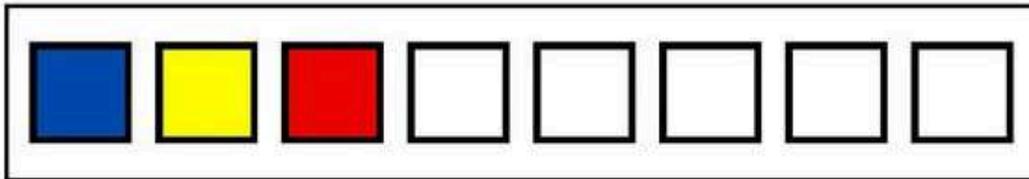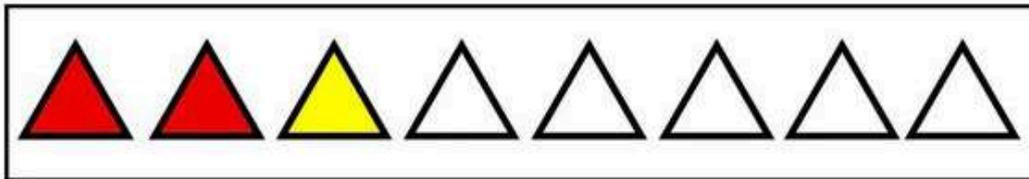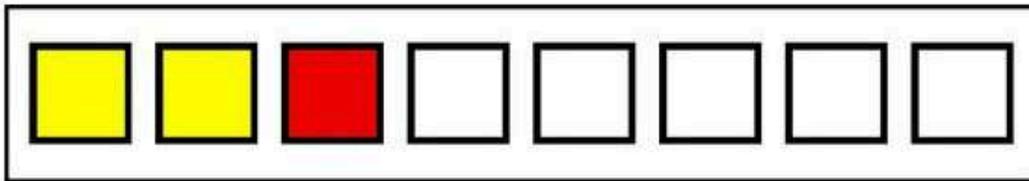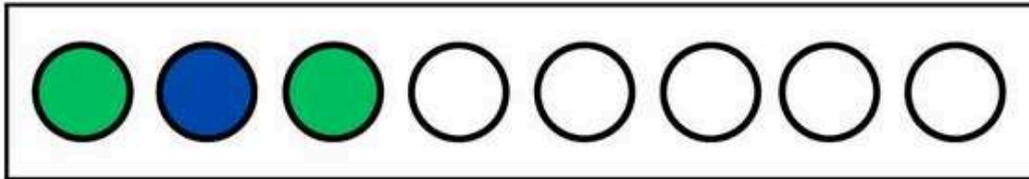
27 - Draw the picture that comes next in the growing pattern?

INTERVAL
Individual Tuition Concept
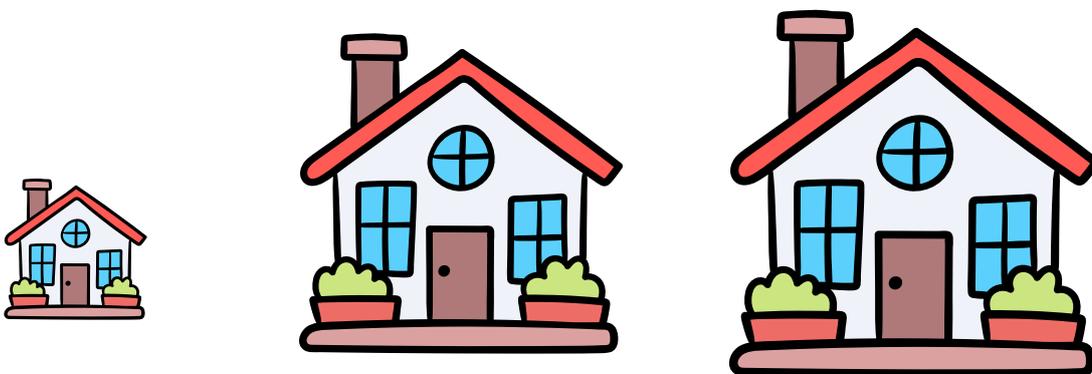
Team INTERVAL

Foundation
Course

MATHS

Level - Intermediate

1 2 3 4

9 8 7 6 5

10

1 3 5
2 4 6 7 9

1 - Word problems

a) Find the average of 10, 20, and 30.

b) The marks obtained by Riya in 3 tests are 60, 70, and 80. What is her average score?

c) If the average of 5, 10, and 15 is 10, what is the total sum of the numbers?

d) The average of 4 numbers is 25. Find their total sum.

e) Find the average of first five natural numbers.

2 - Find percentage of each number?

10% of 70 = _____

65% of 20 = _____

15% of 400 = _____

63% of 100 = _____

10% of 50 = _____

3 - Write 0.75 as a percentage.

4 - Write the following in Roman numerals:
a) 24 b) 36 c) 47 d) 58 e) 99

5 - Write the following Roman numerals in numbers:
a) XLV b) LXII c) XCIX d) LXXX e) XXXVII

6 - Fill in the missing numerals:
a) 20 = ___ 25 = ___ 30 = ___
b) 70 = ___ 90 = ___ 100 = ___

7 - Arrange in ascending order (smallest to largest):
a) XX, XV, XL, XXX
b) LXX, LX, XC, L

8 - Find the square of:
a) 2 b) 3 c) 4 d) 5 e) 6

9 - Write the first 10 square numbers.

10 - Fill in the blanks:

√36 = ___

√49 = ___

√64 = ___

√81 = ___

11 - Find the cube of:

a) 2 b) 3 c) 4 d) 5 e) 6

12 - Write the first five cube numbers.
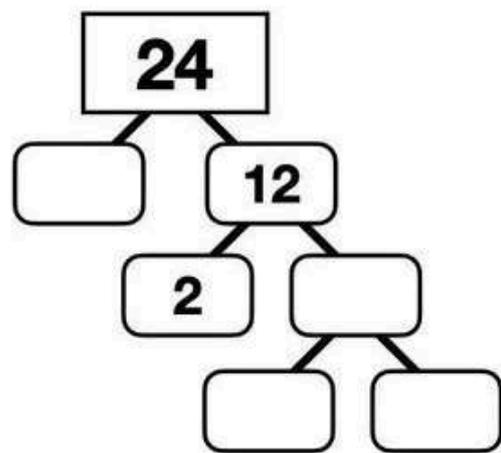
13 - Write the number whose cube is 64.
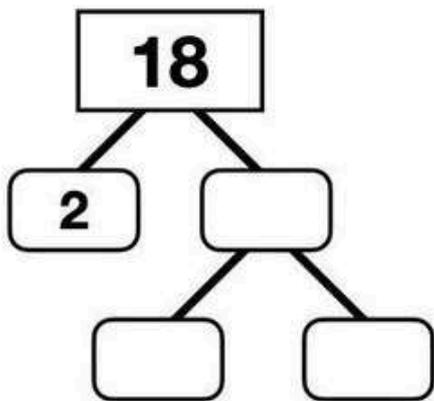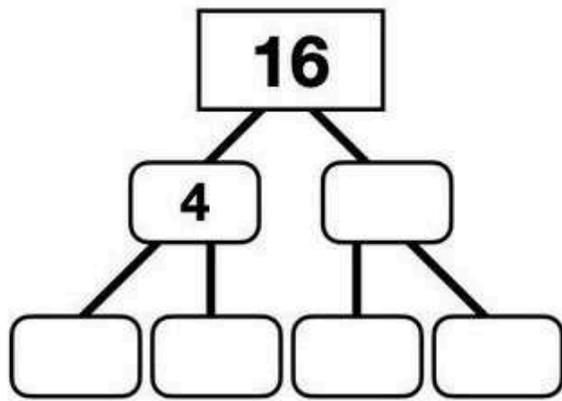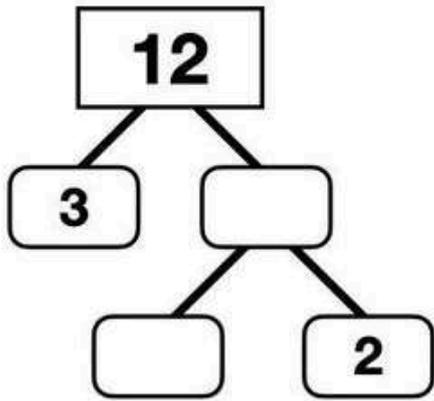
14 - True or False:

a) 8 is the cube of 2.

b) The cube of 0 is 1.

c) Cube of an even number is always even.

d) Cube of 1 is 1.

15 - Complete the factor tree.

16 - Write all factors of 12 using the multiplication method.

17 - Write all factors of 18 using the division method.

18 - Find all factors of 120 using both multiplication and division.

19 - - Choose the correct answer**?**

1) The longer hand of a clock is called the:
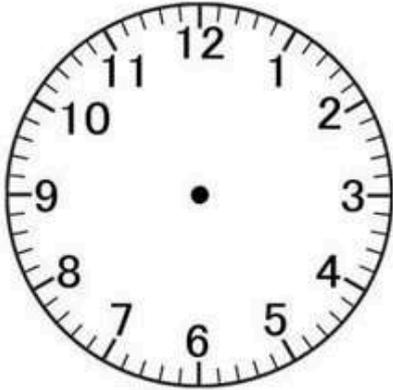
a) Hour hand

b) Minute hand

c) Second hand

d) Time hand

2) The shorter hand of a clock shows:

a) Minutes

b) Hours

c) Seconds

d) None of these

3)How many times does the hour hand move around the clock in one day?

a) 1

b) 2

c) 3

d) 4

20 - Shown the time on each clock.
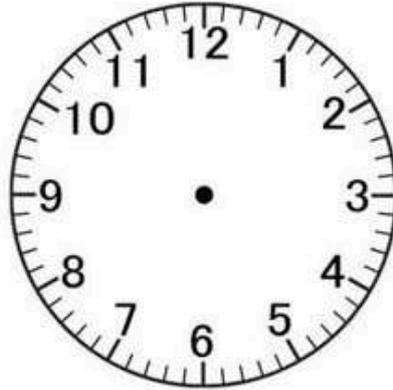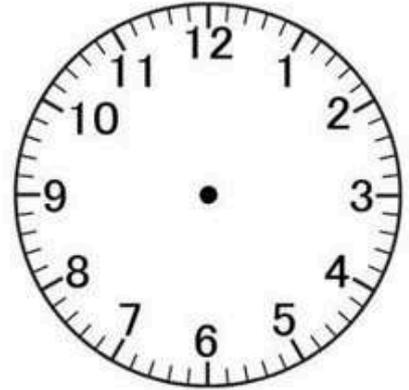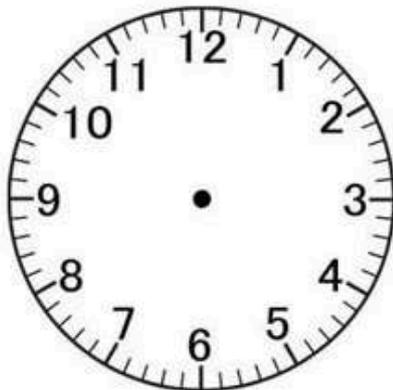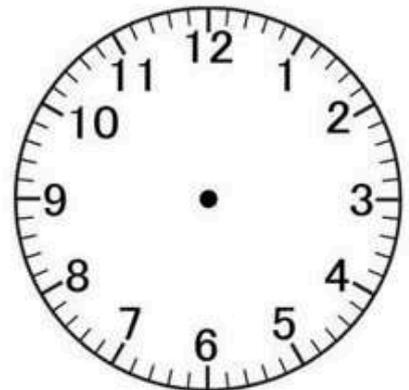
10:00	2:00	9:00
5:00	3:00	7:00
11:00	6:00	1:00
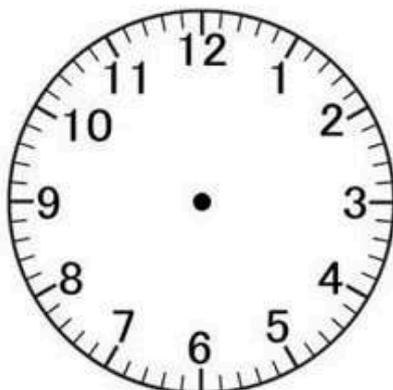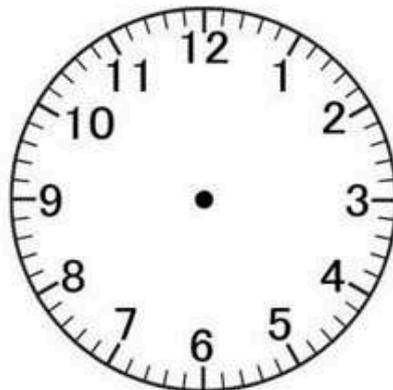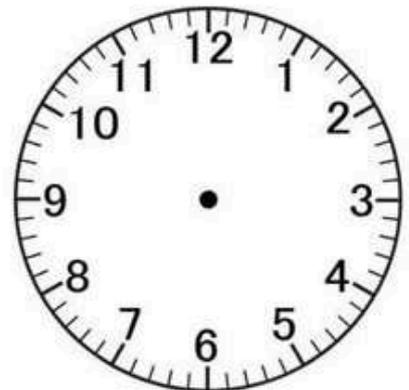
21 - True or False.

a) 3:00 A.M. means it is afternoon. ( )

b) 12:00 noon is written as 12:00 P.M. ( )

c) 12:00 midnight is written as 12:00 A.M. ( )

d) We go to school at 9:00 P.M. ( )

e) The sun rises in the A.M. ( )

22 - Answer the following questions?

1 week = _____ days.

2 minutes = _____ seconds.

1 day = _____ hours.

1 fortnight = _____ weeks.

1 year = _____ months.

3 minutes = _____ seconds.

4 hours = _____ minutes.

3 years = _____ months.

January = _____ days.

June = _____ days.

49 days = _____ weeks.

240 seconds = _____ minutes.

96 hours = _____ days.

10 weeks = _____ days.

23 - Write the days of the week in correct order.

Sunday	1
Friday	2
Saturday	3
Monday	4
Tuesday	5
Wednesday	6
Thursday	7

24 - True or False

a) There are 13 months in a year. ( )

b)February has 29 days every year. ( )

c) December is the last month of the year. (

d) There are 52 weeks in one year. ( )

e) A leap year comes every 4 years. ( )

25 - Fill in the blanks.

a) There are ____ months in a year.

b) The shortest month of the year is ____.

c) A leap year has ____ days.

d) The year comes after ____ and before ____.

26 - Add the following:

a) ₹25.50 + ₹13.25 = ?

b) ₹10.75 + ₹9.50 = ?

27 - Subtract:

a) ₹50.00 − ₹25.75 = ?

b) ₹100.00 − ₹75.25 = ?

28 - Word problems?

a) Riya bought a pencil for ₹8.50 and an eraser for ₹4.25. How much did she spend in total?

b) Arun had ₹100. He bought a pen for ₹25.75 and a notebook for ₹35.50. How much money is left?

Team INTERVAL
Foundation Course
MATHS
Level - Advance

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1-Answer the following questions?

a) What is a prime number?
b) What is a composite number?
c) Write the first five prime numbers.
d) Write the first five composite numbers.

2 - List all the prime factors for all each numbers?

72 ....

35 ....

54 ....

48 ....

14 ....

50 ....

3 - Find the prime factorisation of 60 using the division method.

4 - Draw a factor tree to find the prime factors of 36.

5 - Define LCM (Least Common Multiple).

6 - Find the LCM of 4, 6, and 8.

7 - Find the LCM of 12 and 18 using prime factorisation.

8 - Define HCF (Highest Common Factor).

9 - Find the HCF of 9 and 15.

10 - Find the HCF of 36 and 48 by prime factorisation.

11 - Express the ratio 8:4 in its simplest form.

12 - There are 12 boys and 8 girls in a class. Find the ratio of boys to girls.

13 - Fill in the blank: If 4 : 6 = 10 : x, find x.

14 - State whether the following are in proportion:

a) 2, 4, 6, 12

b) 3, 9, 6, 18

14 - Solve equations.

$12^2 + 9 =$ $2^3 - 10 =$

$8^2 - 6 =$ $5^2 + 25 =$

$5^2 + 5 =$ $2^3 - 12 =$

$10^2 - 10 =$ $3^3 + 3 =$

15 - Express 5^4 in expanded form.

16 - Write the following in exponential form:
a) 10 × 10 × 10
b) 6 × 6

17 - Convert:
a) 450 cm to metres
b) 7.5 m to centimetres

18 - Solve.

a) 3 m 45 cm + 2 m 55 cm
b) 125 cm + 3 m 20 cm

19 - Word problems.

a) Riya bought 2 kg 750 g of apples and 1 kg 250 g of oranges. Find the total weight of fruits she bought.

b) A bag of rice weighs 25 kg. If 8 kg 500 g of rice is used, how much rice is left in the bag?

c) A shopkeeper has 5 bags of flour, each weighing 10 kg. What is the total weight of all the bags?

d) A watermelon weighs 3 kg 750 g and a papaya weighs 2 kg 250 g. Find their total weight.

e) A baby's weight increased from 2 kg 900 g to 3 kg 600 g. How much weight did the baby gain?

20 - Convert:

a) 2 L = ___ mL

b) 2500 mL = ___ L ___ mL

c) 1.5 L = ___ mL

d) 5000 mL = ___ L

21 - Answer the following questions.

a) What is the formula for the perimeter of a square?

b) Find the perimeter of a rectangle whose length = 12 cm and breadth = 8 cm.

c) A triangle has sides 5 cm, 6 cm, and 7 cm. Find its perimeter.

d) Find the area of a square whose side = 12 cm.

e) Find the area of a rectangle whose length = 15 m and breadth = 8 m.

f) Find the area of a triangle whose base = 10 cm and height = 6 cm.

22 - Add the following:
   a) ₹25.50 + ₹13.25 = ?
   b) ₹10.75 + ₹9.50 = ?

23 - Subtract:
   a) ₹50.00 – ₹25.75 = ?
   b) ₹100.00 – ₹75.25 = ?

24 - Word problems?
   a) Riya bought a pencil for ₹8.50 and an eraser for ₹4.25. How much did she spend in total?

b) Arun had ₹100. He bought a pen for ₹25.75 and a notebook for ₹35.50. How much money is left?

25- Prepare a bill for the given items.

4 Tomatoes, each tomato costs Rs.18.
7 Ladies finger, each Ladies finger costs Rs.20
9 cabbage, each cabbage costs Rs.34

26 - Answer the following questions?

a)The weights (in kg) of 5 students are 40, 42, 45, 48, and 50. Find the mean weight.

b) The number of chocolates eaten by 7 children in a week are 3, 5, 2, 4, 6, 4, and 5. Find the mode.

c) The marks obtained by 6 students are 12, 15, 18, 20, 22, and 25. Find the median.

d) The daily wages (in ₹) of workers are 150, 180, 200, 150, 250, 150, 200. Find the mode and mean wages.

27 -

Bar Graphs in Data Handling

The teacher drew a bar graph of the colours that children liked in her class, the vertical column mentions the number of students and the horizontal column mentions the colours.
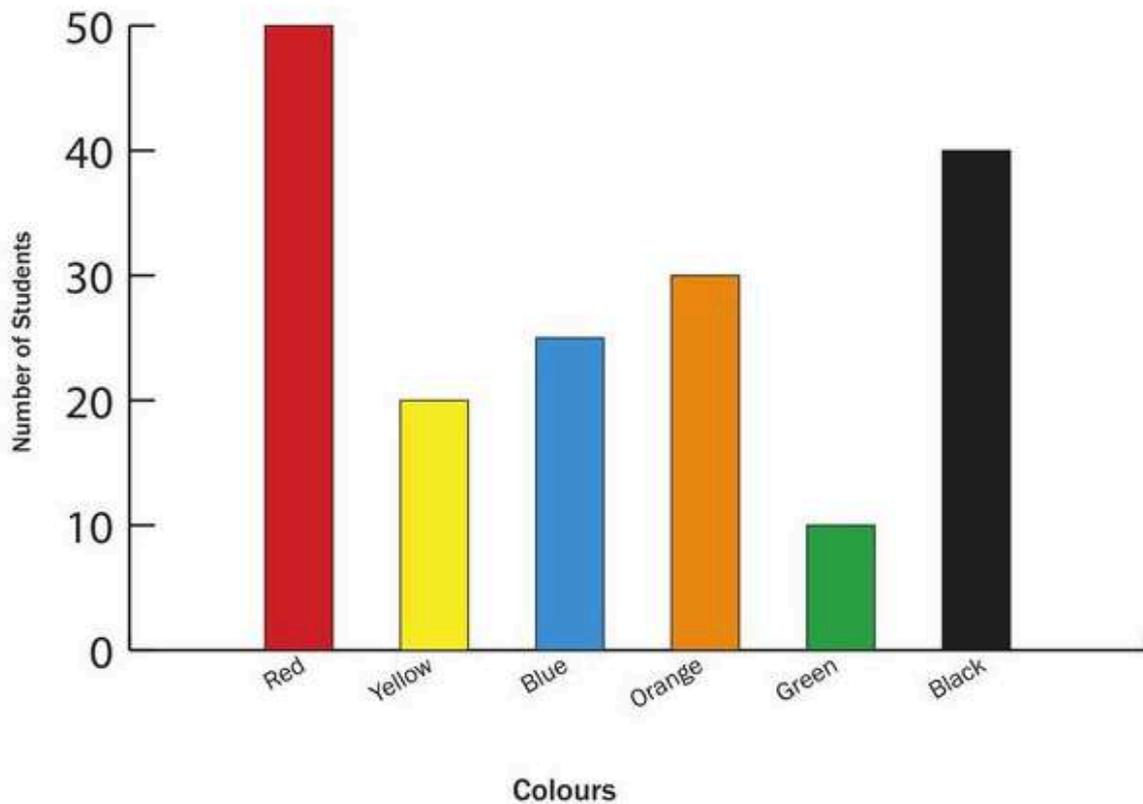
How many students like red? _____

How many students like yellow and blue? _____

How many students are there in the class? _____

How many students like green, orange and black? _____

28 -

Tally the clothes

Count the toys of each kind; draw tally marks to show the count; and write the number.

Clothes	Tally Marks	Number
🎒		
👒		
👕		
👗		
	Total	