

HOLIDAY HOMEWORK

CLASS-8TH

SUBJECT- MATHEMATICS

"The only way to learn mathematics is to do mathematics." – Paul Halmos.

INSTRUCTIONS:

- All questions are compulsory.
- Work should be neat and clean.
- Write tables from 2 to 20 (10 times).

Q.1 Simplify:

1. $-\frac{2}{5} - \{ -\frac{3}{10} \} - \{ -\frac{4}{15} \}$

2. $\frac{5}{3} - \{ \frac{7}{6} \} + \{ -\frac{2}{3} \}$

3. $-\frac{3}{2} - \{ \frac{5}{4} - \frac{7}{4} \}$

4. $-\frac{4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \{ -\frac{14}{9} \}$

Q.2 Write any 3 rational numbers between -2 and 0 .

Q.3 Find any ten rational numbers between $-\frac{5}{6}$ and $-\frac{5}{8}$

Q.4 Find three rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$

Q.5 The additive inverse of $\frac{7}{5}$

- (a) 1
- (b) 0
- (c) $-\frac{7}{5}$
- (d) $\frac{7}{5}$

Q.6 Represent these numbers on the number line.

(i) $\frac{7}{4}$ (ii) $-\frac{5}{6}$ (iii) $\frac{4}{7}$ (iv) $\frac{9}{4}$

Q.7 Find five rational numbers between.

(i) $\frac{2}{3}$ and $\frac{4}{5}$ (ii) $-\frac{3}{2}$ and $\frac{5}{3}$ (iii) $\frac{1}{4}$ and $\frac{1}{2}$

Q.8. Verify that $a+b = b+a$, when $a = 6$ and $b = -\frac{3}{7}$

Q.9 Write five rational numbers greater than -2 .

Q.10 What number should be subtracted from $-\frac{2}{3}$ to get $-\frac{1}{2}$?

Q.11 Find the square of 12.

Q.12 Find the square root of 144.

Q.13 What is the square of 25?

Q.14 Find the square root of 169.

Q.15 Simplify: $\sqrt{64 + 36}$.

Q.16 What is the value of $\sqrt{81} - \sqrt{9}$?

Q.17 If the area of a square is 100 square centimetres, what is the length of each side?

Q.18 What is the value of $15^2 - 10^2$?

Q.19 If the side of a square is 5 centimetres, what is the area of the square?

Q.20 Simplify: $\sqrt{25} + \sqrt{16}$.

MENTAL MATHS

1. Rahim has Rs 2000 . If he spends $\frac{1}{4}$ of his money on groceries and $\frac{2}{5}$ th of his money on traveling. How much money is left?
2. If $\frac{3}{5}$ th of a number is 6, then what is that number?
3. The product of two fractions is $\frac{39}{77}$ and one of the numbers is $\frac{13}{7}$. Then find the other number.
4. A bus covers 57 km in one hour. What distance it will cover in $\frac{5}{3}$ hours?
5. Find out if 200 is a perfect square or not.
6. Express 36 as the sum of 6 odd numbers.
7. Find a Pythagorean triplet whose greatest member is 17.
8. Find a Pythagorean triplet whose smallest member is 22.
9. Estimate the square root of 360.
10. Find the least number of three digits which is a perfect square.
11. Find the smallest square number, which is divisible by each of the numbers 4, 8 and 12.
12. Find the reciprocal of $-\frac{5}{9}$.
13. Solve for x . $5^2x \div 5^7 = 5^3$
14. Find the value of m for which $x^m \div x = 1$.
15. If $x = 3$, $y = 2$, $z = 1$, compute $x^y + y^z + z^x$.

CASE STUDY BASED QUESTIONS

Q.1 Aditya who is working in a multinational company earns ₹150000 per month. Out of his earnings he spend $\frac{1}{10}$ th on food items, $\frac{1}{4}$ th on shopping with family, $\frac{1}{5}$ th of remaining on education of his two kids and rest of his money he puts in his savings.

On basis of this information given in passage answer the following questions.

A. How much money he spends on food items?

B. How much money he spend on shopping?

C. How much money was left with him after spending on food and shopping?

D. Calculate the amount spend by Aditya on education of children?

E. How much money he saved?

Q.2 In a class science teacher gives some information to all students about Solar system in following manner.

Distance of earth from sun = 149600000 km

Mass of earth = 5970000000000000000000000 kg

Mass of Mars = 6420000000000000000000000000 kg

Mass of sun = 1990000000000000000000000000000 kg

Mass of moon = 7350000000000000000000000 kg

Now asked them to answer some question.

A. Write distance of earth from sun in standard form?

B. Write mass of sun in standard notation?

C. Mass of earth in standard notation:

D. Calculate the total mass of earth and moon.*

E. Calculate difference of mass of mars from mass of sun?

Q.3 During dance practice in school 6570 students of different schools are arranged in rows such that the number of students in each row is equal to the number of rows. In doing so, the instructor finds out that 9 children are left out. Find the number of children in each row of the square. What is the value depicted from the exercise?

Q. 1. How many students were left out in arrangement?

Q. 2. What is the number of students forming a square?

Q. 3. When arranged for dance, number of students are equal to.

Q. 4. Find the number of children in each row of the square.

LET'S HAVE SOME FUN WITH MATHEMATICS

1. Which is the missing section?

3	9	1	2	8	3
9	?	?	2	1	9
1	?	?	3	9	1
2	1	9	3	8	2
8	3	9	1	2	8
3	8	2	1	9	3

8	3
8	2

A

3	8
2	8

B

8	2
8	3

C

2	8
3	8

D

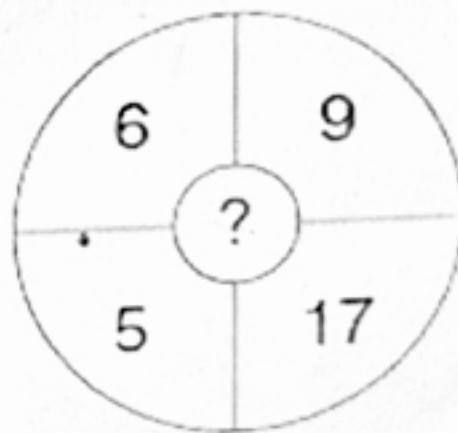
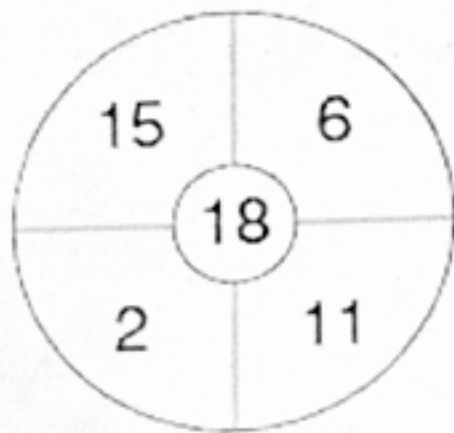
2. What two numbers should replace the question marks?

0, 1, 2, 5, 20, 25, ?, ?

3. What number should replace the question mark?

16, 23, 19, 19, 22, 15, 25, ?

4. What number should replace the question mark?



5. What number should replace the question mark?

36 1216 48

24 824 72

42 ? 51

ART INTEGRATED PROJECT

Prepare a project on undiscovered monuments of your state. (ANY ONE)