IIS RIYADH. WORK SHEET FOR SA1

MATHEMATICS

VIII

1 RATIONAL NUMBERS

1. Represent $2/7$, $2\frac{3}{4}$, $-3\frac{2}{5}$ on numberline.
2. Find the sum of.
   a) $\frac{4}{3} + \frac{3}{5} + \frac{-2}{3} + \frac{-11}{5}$.
   c) $\frac{-13}{20} + \frac{11}{14} + \frac{-5}{7} + 1$
   b) $\left\{\frac{3}{4} + \left(\frac{-2}{5}\right)\right\} + \left(\frac{-7}{10}\right)$
   d) $\frac{4}{7} + \frac{-8}{9} + \frac{-5}{21} + \frac{1}{3}$
3. Find the additive inverse of
   $\left(\frac{-1}{3}\right)$, $\left(\frac{15}{4}\right)$, (-8), $\left(\frac{-42}{-7}\right)$, $\frac{-3}{8}$
4. Substract. 0 from $\frac{4}{7}$ and $\frac{4}{7}$ from 0. are the two results are same.
5. What is the identity of addition & multiplication.
6. What is the multiplicative inverse of 1.
7. Find the reciprocal of
   $\frac{3}{4}$, $\frac{-7}{5}$, -9, 1, -1, 0.
8. Find 5 Rational numbers between
   $-\frac{1}{3}$ and $\frac{2}{5}$ (ii) $\frac{1}{4}$ and $\frac{1}{3}$ (iii) $\frac{1}{2}$ and $\frac{1}{4}$
9. Write five Rational numbers greater than -2, less than 2
10. Verify each of the following for $x=-2/7$, $y=3/5$, $z=-4/9$
    (a) $x \times (y+z) = x \times y + x \times z$
    (b) $(x+y) \times z = x \times z + y \times z$
    (c) $x \times (y-z) = x \times y - x \times z$
    (d) $(x+y) + z = (x+z) + y$.

BY. Razi. A. Siddiqui

SQUARE & SQUAREROOT.

1. Find the sum of first 18 odd numbers.
2. What is the Ones digit of the following numbers (a) 17^2 (b) 56^2 (c) 214^2 (d) 188^2 (e) 160^2
3. Which of the following numbers are not perfect squares (a) 625 (b) 367 (c) 9108 (d) 3163 (e) 21572 (f) 2401
4) Find the Smallest Square number that is exactly divisible by 4, 9, 10
5. Find the Smallest number by which 3645 must be divided so that the quotient is a perfect Square.
6. For each of the following numbers find the smallest whole number by which it should be multiplied so as to get a perfect square (a) 252 (b) 396 (c) 1620 (d) 2800
7. Find the least number that must be subtracted from 5367 so as to get a perfect square.
8. Find the least number that must be added to 3475 to get a perfect square. Also, find the square root of the perfect square.
9. Find the greatest 4-digit number which is a perfect Square.
10. Find the Smallest 4-digit number which is a perfect Square.

Find the Square root by Division Method

(1) 2304

(2) 5776

(3) 7921

(4) 3136

(5) 390625

How many non Square numbers lie between (a) 12^2 and 13^2 (b) 25^2 and 26^2 (c) 99^2 and 100^2

Find the other members of the Pythagorean triplet if one of the numbers is

(a) 18 (b) 12 (c) 10 (d) 8 (e) 24.

Express the following as the sum of two Consecutive integers

(a) 21^2 (b) 13^2 (c) 19^2

Write the digit which is in the ones place of the following.

(a) 87^2 (b) 209^2 (c) 132^2 (d) 72^2

By. Razi. A. Siddiqui

UNDERSTANDING QUADRILATERALS.

1. The sum of the exterior angles of a polygon is _____
2. A Polygon in which whose sum of interior angles is half the sum of its ~~exte~~ sum of exterior angle is _____
3. A polygon in which sum of the interior angles is twice the sum of its exterior angle _____
4. A polygon in which sum of the interior angles is equal to its sum of exterior angle.
5. A quadrilateral in which a pair of opposite sides are parallel _____
6. _____ angles of a parallelogram are equal.
7. One of the angle of a Concave quadrilateral is _____
8. The quadrilateral which is equilateral but not equiangular is _____
9. The quadrilateral which is equiangular but not equilateral.
10. The quadrilateral which is equilateral and equiangular is _____
11. Adjacent angles of a parallelogram are _____
12. Opposite angles of a parallelogram are _____
13. In an Isosceles trapezium the _____ sides are equal.
14. The sum of the interior angles of a polygon of "n" sides is _____
15. Three angles of a quadrilateral are 34°, 70°, 126° find the measure of the fourth angle
16. The measures of two angles of a quadrilateral are 105° and 45° and the other two angles are equal. Find the measure of the each of the equal angles.
17. The diagonals of Rhombus bisect each other at _____

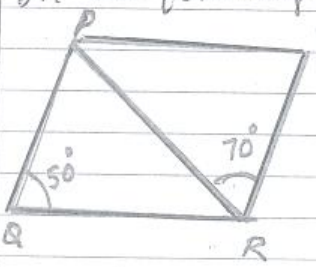
II. SOLVE THE FOLLOWING.

1. The adjacent sides of a parallelogram differ by 30 cm if its perimeter is 160 cm find its sides.

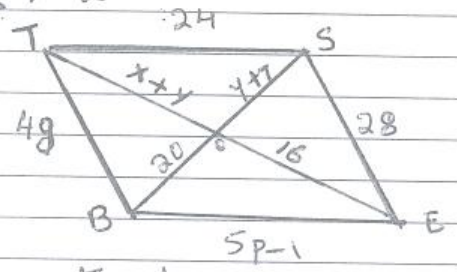
2. The measures of two adjacent angles of a parallelogram are in the ratio of 4:5 find their measure.

3. The ratio of two sides of a parallelogram is 2:5 and its perimeter is 70 cm. Find the sides of parallelogram.

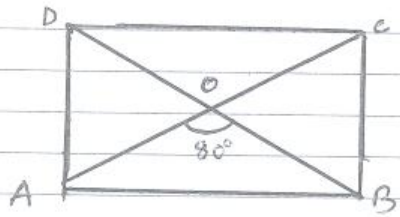
4. In the following parallelograms Find.



$\angle Q = 50^\circ$
$\angle PRS = 70^\circ$
Find $\angle QRP$
$\angle SPR$



Find x, y, g, p.



ABCD is a Rectangle
$\angle AOB = 80^\circ$
Find $\angle ADO$, DCO

5. Three angles of a quadrilateral are in the ratio of 1:2:3. The sum of the smallest and the greatest of these angles is equal to 180°. Find all the angles.

6. One of the diagonals of Rhombus is equal to its sides. Find the angles of the Rhombus.

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Linear Equations in One Variable

I Solve the following equations.

(i) $\frac{x}{x+15} = \frac{4}{9}$

(ii) $\frac{7y+4}{y+2} = \frac{-4}{3}$

(iii) $\frac{x-8}{3} = \frac{7-5x}{7}$

(iv) $\frac{x-5}{2x+1} = \frac{1}{13}$

(v) $\frac{x-5}{3} = \frac{x-3}{5}$

(vi) $\frac{x}{2} - \frac{1}{5} = \frac{x}{3} + \frac{1}{4}$

(vii) $\frac{6x+1}{3} + 1 = \frac{x-3}{6}$

(viii) $0.5x + 7.5 = 0.25x - 15$

(ix) $\frac{8x-3}{3x} = 2$

(x) $2x - 3 = 9(x+7) - 3$

II 1. The number of boys and girls are in the ratio 7:5 The number of boys is 8 more than number of girls. What is the total number of children in the class.

2. The ages of Hari and Ram are in the ratio of 5:7 four years from now, the ratio of their ages will be 3:4. Find their present ages.

3. The numerator of a rational number 6 less than its denominator. If 3 added to the numerator the fraction is equal to $\frac{2}{3}$. Find the orignal fraction

4. The length of a rectangular room is six metres longer than its width. If each dimension is increased by 2 m. the are of the floor increases by 64 sq.m find the orignal dimension of the room.
6m.

5. The digits of a two digit number differ by 3. If the digits are interchanged and the resulting number is added to the orignal number we get 143. What is the Orignal number.

6. A positive number is 5 times another number. If 21 is added to both the numbers, then one of the new numbers becomes twice the other new number What are the numbers.

7. Fifteen years from now Ravi's age is will be 4 times his present age. What is Ravi's present age.

8. If two complementary angles differ by 20° find the measure of each angle.

9. A Kiddy bank contains Rs 370. If the number of 10 Rs notes is one more than that of Rs 50 notes Find the number of notes of each type.

10. The sum of three consecutive multiples of 5 is 180 find these multiples.

11. In a class there are 49 students. If the number of girls is $\frac{2}{5}$ the number of boys. Find the number of boys and girls.

12. The difference of two numbers is 50. If the smaller number is divided by the greater number the fraction obtained is $\frac{3}{8}$. Find the numbers

13. Amina thinks of a number and subtract $\frac{5}{2}$ from it. She multiplies the result by 8. The result now obtained is 3 times the same number she thought. What is the number.

14. Lakshmi is a cashier in a bank. She has a currency notes of Rs 100, Rs 50, Rs 10 respectively. The ratio of the number of notes is 2:3:5. The total cash with Lakshmi is Rs 400000. How many notes of each denomination does she have.?

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