VIVEK TUTORIALS

IX (English)

(Special Test)

Mathematics Part - 1-(4 and 6)

DATE: 11-02-19

TIME: 1 hour

MARKS: 20

SEAT NO: | | | | | | | |

Q.1 A) Choose the correct alternative. (4)

1) If 6 : 5 = y : 20 then what will be the value of y ?
A) 15 B) 24 C) 18 D) 22.5

2) What is the mean proportional of 4 and 25 ?
A) 6 B) 8 C) 10 D) 12

3) 24 Bananas were distributed between Shubham and Anil in the ratio 3 : 5, then how many bananas did Shubham get ?
A) 8 B) 15 C) 12 D) 9

4) What is the ratio of 1 mm to 1 cm ?
A) 1 : 100 B) 10 : 1 C) 1 : 10 D) 100 : 1

B) Solve the following questions. (Any one) (2)

1) Write down the following percentage in the simplest form of the ratio.
108 : 100

2) Convert the following ratios into percentage.
47:50

Q.2 A) Complete the following Activities. (Any one) (2)

1) Compare the following pairs of ratios : $\frac{\sqrt{80}}{\sqrt{48}}, \frac{\sqrt{45}}{\sqrt{27}}$

$\sqrt{80} \times \_\_\_\_\_ , \_\_\_\_\_ \times \sqrt{48}$

$\therefore \quad \sqrt{2160} , \sqrt{2160}$

$\therefore \quad \sqrt{2160} \_\_\_\_\_ \sqrt{2160}$

$\therefore \quad \frac{\sqrt{80}}{\sqrt{48}} \_\_\_\_\_ \frac{\sqrt{45}}{\sqrt{27}}$

2) If $\frac{a}{b}=\frac{7}{3}$ then find the values of the following ratios : $\frac{5a+3b}{5a-3b}$

$\therefore \quad \frac{a}{b}=\frac{7}{3}$

$\therefore \quad \frac{5a}{3b}=\_\_\_\_\_$

Using componendo & Dividendo

$\therefore \quad \frac{5a+3b}{5a-3b} = \_\_\_\_\_$

$= \frac{44}{26}$

$= \_\_\_\_\_$

$= \_\_\_\_\_$

B) Solve the following questions. (Any one) (2)

1) Find the ratio of the second quantity with the first in its simplest form.
8 yr. 4 months, 11 yr. 8 month

2) $\frac{a}{3}=\frac{b}{4}=\frac{c}{7}=\frac{.....}{6-8+14}$

Q.3 Solve the following questions. (Any one) (3)

1) Solve the following equations : $\frac{(2x+1)^2+(2x-1)^2}{(2x+1)^2-(2x-1)^2}=\frac{17}{8}$

2) If the ratio of the two numbers is 3 : 5 and their sum is 360 find those numbers.

Q.4 Solve the following questions. (Any one) (4)

1) Nikhil spent 5% of his monthly income on his children's education, invested 14% in shares, deposited 3% in a bank and used 40% for his daily expenses. He was left with a balance of Rs.19,000. What was his income that month?

2) If a, b, c, d are in proportion, then prove that.
$\frac{a^2+ab+b^2}{a^2-ab+b^2}=\frac{c^2+cd+d^2}{c^2-cd+d^2}$

Q.5 Solve the following questions. (Any one) (3)

1) Solve the following equations ($x\geq 0$)
$\frac{10x^2+15x+63}{5x^2-25x+12}=\frac{2x+3}{x-5}$.

2) The measures of the angles of the quadrilateral ABCD are in the ratio 2 : 3 : 4 : 1 Determine the type of the quadrilateral.