| | | | VIVEK TUTORIALS IX (English) (Special Test) | | | | | DATI | DATE: 23-02-19 | | | |
|-----|--|---|---|---------------|-------------------------|------------------------------------|--------|-----------|----------------|---|---|---|
| | | | | | | | | | TIME: 1 Hr | | | |
| | | | Mathematics Part - 1-(4) | | | | | MARKS: 40 | | | | |
| | | \sim I | | | | | | | | | | |
| | | | | | | | | SEAT NO | | | | |
| Q.1 | | Multiple Choice Questions 24 Bananas were distributed between Shubham and Anil in the ratio 3 : 5, then how many bananas did Shubham get ? | | | | | | | | | 2 | |
| | 1 | | | | | | | | | | t | |
| | | A) 8 B) 15 | C) 12 | D) 9 | | | | | | | | |
| | 2 | The ages of Jatin, Nitin and Mohasin are 16, 24 and 36 years respectively. What is the ratio of Nitin's age to Mohasin's age ? A) 3 : 2 B) 2 : 3 C) 4 : 3 D) 3 : 4 | | | | | | | | | | |
| Q.2 | | Solve the follow | ing | | | | | | | | | 8 |
| | 1 | If 4 a ² b, 8 ab ² , p | are in continued pr | oportion th | ien find th | ne value of p | | | | | | |
| | If ^a/_b = ⁵/₈, find the value of the following ratios : ^{a+b}/_{a-b} Write the ratio of first quantity to second quantity in the reduced form. 1024 MB, 1.2 GB [(1024 MB = 1 GB)] | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | 4 | Check whether the following numbers are in continued proportion. 3, 5, 8 | | | | | | | | | | |
| Q.3 | | Attempt the following | | | | | | | | 4 | | |
| | 1 | Find the reduced | form of the ratio of | f the first c | luantity to | second qua | ntity. | | | | | |
| | | 5 litre, 2500 ml 5 litre = 5×1000 | 0 | | | | | | | | | |
| | | = | · | | | | | | | | | |
| | | $\therefore \frac{5000}{2500}$ | | | | | | | | | | |
| | | $=\frac{50}{25}$ | | | | | | | | | | |
| | | = | | | | | | | | | | |
| | | ۰ | | | | | | | | | | |
| | 2 | Using the property $\frac{a}{b} = \frac{ak}{bk}$, fill in the blanks substituting proper numbers in the following. | | | | | | | | | | |
| | | $\frac{9}{14} = \frac{4.5}{} = {42} = {3.5}$ $\frac{9}{14} = \frac{4.5}{7} = {14}$ | .= | | | | | | | | | |
| Q.4 | | Answer the follo | wing | | | | | | | | | 6 |
| | 1 | Find the ratio of 3 min. 54 sec., 2 | the first quantity wi min. 6 sec. | ith the seco | ond in its s | simplest for | n. | | | | | |
| | 2 | If a : b = 3 : 1 an | d b : c = 5 : 1 then f | find the va | lue of : $\frac{a}{7l}$ | $\frac{2}{\overline{\mathbf{bc}}}$ | | | | | | |

$$3 \qquad \frac{a}{3} = \frac{b}{4} = \frac{c}{7} = \frac{\dots}{6 - 8 + 14}$$

Q.5 Solve the following

1 If
$$\frac{y}{b+c-a} = \frac{z}{c+a-b} = \frac{x}{a+b-c}$$
 then prove that $\frac{a}{z+x} = \frac{b}{x+y} = \frac{c}{y+z}$.

² Solve the following equations :
$$\frac{x^2+12x-20}{3x-5} = \frac{x^2+8x+12}{2x+3}$$

Q.6 Solve the following

1

Solve the following equations :
$$\frac{(4x+1)^2+(2x+3)^2}{4x^2+12x+9} = \frac{61}{36}$$

- 2 If a, b, c, d and in proportion, then prove that. $\frac{11a^2+9ac}{11b^2+9bd} = \frac{a^2+3ac}{b^2+3bd}$
- Q.7 Answer the following

¹ Solve the following equations :
$$\frac{(3x-4)^3-(x+1)^3}{(3x-4)^3+(x+1)^3} = \frac{61}{189}$$

² If
$$\frac{7a^2+2b^2}{7a^2-2b^2} = \frac{113}{13}$$
, find the value of $\frac{a}{b}$

8

6