



ST. LAWRENCE HIGH SCHOOL



A Jesuit Christian minority Institution

Subject: Mathematics

Class: X

Date: 19.06.2021

Answer key of Worksheet-1

Chapter -Ratio and proportion

Topic-Ratio and proportion

Choose the correct alternative.

$1 \times 15 = 15$

- a) If $(a^2+b^2)(x^2+y^2)=(ax+by)^2$ then $x:y =$ _____ i) 1:2 **ii) a:b** iii) b:a iv) none of these
- b) If $a/3 = b/4 = c/7 = \frac{2a-2b+c}{p}$, then value of p is i) 2 ii) 7 **iii) 5** iv) none of these
- c) If 2a, 3b, 6ac and 9bc are in proportion then **i) $2a \times 9bc = 3b \times 6ac$** ii) $2a \times 6ac = 3b \times 9bc$ iii) $5b \times 9bc = 18abc$ iv) none of these
- d) The fourth proportional of 6,9, 12 is i) 24 ii) 30 **iii) 18** iv) none of these
- e) what is the number to be added with 2,4,6 and 10 to get the result in proportion ?
i) 2 ii) 5 iii) 10 iv) 8
- f) The third proportional of 9 and 15 is i) 20 **ii) 25** iii) 18 iv) none of these
- g) The third proportional of $2a^2$ and $3ab$ is **i) $\frac{9b^2}{2}$** ii) $\frac{2b}{9}$ iii) $6a^2$ iv) none of these
- h) Mean proportional of $1/12$ and $1/75$ is i) 30 ii) 25 **iii) $\frac{1}{30}$** iv) none of these
- i) If $a:b=4:5$ the find out $(3a-2b): (3a+2b)$.

i) 11:1 ii) 2:9 iii) 7:11 **iv) 1:11**

j) If $p:q:r = 2:3:5$ then $\frac{p+q+r}{r} = \underline{\hspace{2cm}}$ i) 1 **ii) 2** iii) $\frac{1}{2}$ iv) none of these

k) If $\frac{1}{x} : \frac{1}{y} = 3:5$ then $x:y = \underline{\hspace{2cm}}$. **i) 5:3** ii) 5:8 iii) 3:5 iv) none of these

l) If $\frac{a}{b} = \frac{b}{c} = \frac{c}{d} = k$ then $\frac{a}{d} = \underline{\hspace{2cm}}$ i) k^2 **ii) k^3** iii) k iv) none of these

m) If $a + \frac{1}{b} = 1$ and $b + \frac{1}{c} = 1$ then find the value of $c + \frac{1}{a}$.

i) 2 ii) 3 iii) 0 **iv) 1**

n) If $\frac{x}{y+z} = \frac{y}{x+z} = \frac{z}{x+y}$, then each ratio is equal to $\underline{\hspace{2cm}}$ i) 1 ii) 2 **iii) $\frac{1}{2}$** iv) none of these

o) If compound ratio of $p^2 : qr$ and another ratio is $q^2 : pr$, find another ratio.

i) $q^3:p^3$ ii) $p^3 : q^3$ iii) $p:q$ iv) none of these

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