



ST. LAWRENCE HIGH SCHOOL



Ajesuit Christian Minority Institution

Subject: Mathematics

Class: X

Date:21.06.2021

Answer key of Worksheet- 2

Chapter- Ratio and proportion

Topic- Proportion

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1. **Choose the correct alternative.** $1 \times 15 = 15$
- a) If $(2x^2 - 5y^2) : xy = 1 : 3$ then $x : y =$ _____ i) 3:5 **ii) 5:3** iii) 1:5 iv) 5:1
- b) Third proportional of 8 and 12 is i) 9 ii) 15 **iii) 18** iv) 21
- c) If a is a positive number and $a : 27/64 = 3/4 : a$ i) 25/16 **ii) 9/16** iii) 16/9 iv) none of these
- d) If $2a = 3b = 4c$ then $a : b : c$ is **i) 6:4:3** ii) 3:4:6 iii) 4:3:6 iv) none of these
- e) If $a/3 = b/4 = c/7$ then $\frac{a+b+c}{c} =$ _____ i) 1 **ii) 2** iii) 0 iv) 5
- f) If $4:5 :: 8:10$ then by componendo we have **i) 9:5 :: 18:10** ii) 8:5 :: 18:2 iii) 32:50 iv) none of these
- g) If $7:3 :: 14:6$ then by componendo dividendo we have i) 4:10 :: 20:8 ii) 10:4 :: 8:20 **iii) 10:4 :: 20:8** iv) none of these
- h) If $a:b=c:d=e:f$ then $(a+c+e) : (b+d+f)$ is **i) a:b** ii) b:a iii) f:e iv) none of these
- i) If $x = \frac{4ab}{a+b}$ then $\frac{x+2a}{x-2a} + \frac{x+2b}{x-2b} =$ _____ **i) 2** ii) 1 iii) 0 iv) 4
- j) Compound ratio of $ab:c^2$, $bc:a^2$ and $ca:b^2$ is i) 2:1 ii) 1:2 **iii) 1:1** iv) none of these

k) If x is the mean proportional of $(x+2)$ and $(x-3)$ then value of x is **i) -6** ii) 6 iii) 1
iv) -2

l) $a/2 = b/3 = c/4 = \frac{2a-3b+4c}{p}$ then p is i) 10 ii) 0 **iii) 11** iv) none of these

m) If $\frac{3x-5y}{3x+5y} = \frac{1}{2}$, then find the value of $\frac{3x^2-5y^2}{3x^2+5y^2}$ **i) 7/8** ii) 8/7 iii) $\frac{1}{2}$ iv) $\frac{3}{4}$

n) $x, 12, y$ and 27 are in continued proportion then value of x and y are respectively

i) 9 and 18 **ii) 8 and 18** iii) 6 and 20 iv) none of these

o) If $\frac{x^3+3x}{3x^2+1} = \frac{341}{91}$, using the properties of proportion solve for x .

i) 10 **ii) 11** iii) 9 iv) none of these

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