



# ST. LAWRENCE HIGH SCHOOL



## Ajesuit Christian minority Institution

Subject: Mathematics

Class: X

Date: 24.04.2020

### Chapter - Variation

#### Topic-Concept of variation Answer key of Worksheet-16

**1. Choose the correct alternative.**

**1x15=15**

- a) If  $x \propto y$ , then which of the following is true    Ans iii)  $y \propto x$
- b) If  $x \propto 1/y$ , then which one of the following is true    Ans iv)  $xy = \text{non zero constants}$
- c) If  $x \propto y$  then which one of the following is true    Ans iii)  $x^2 \propto y^2$
- d) If  $x \propto y$  and  $y=8$  when  $x=2$ . Now if  $y=16$  then value of  $x$  is    Ans ii) 4
- e) If  $x \propto y^2$  and  $y=4$  when  $x=8$ . Now  $x=32$  then positive value of  $y$  is    Ans ii) 8
- f)  $y-z \propto 1/x$ ,  $z-x \propto 1/y$  and  $x-y \propto 1/z$  then sum of the variation constants is  
Ans ii) 0
- g) If  $x \propto 1/y$  and  $y \propto 1/z$  then  $x \propto$  \_\_\_\_\_    Ans ii)  $z$
- h) If  $x \propto y$  then  $x^n \propto$  \_\_\_\_\_    Ans i)  $y^n$
- i) If  $x \propto y^2$  and  $y=2a$  when  $x=a$ , now  $x=16a$  then positive value of  $y$  is    Ans ii)  $8a$
- j) If  $x \propto y$ ,  $y \propto z$  and  $z \propto x$  then product of the variation constants is    Ans i) 1
- k) If  $x^2 \propto yz$ ,  $y^2 \propto zx$  and  $z^2 \propto xy$  then product of the variation constant is  
Ans ii) 1
- l) 50 villagers took 18 days for digging a pond. How many people are needed to dig the pond in 15 days? use method of variation.    Ans i) 60
- m) If  $x+y \propto x-y$  then which of the following is true    Ans ii)  $x \propto y$
- n) 42 machines are required to make some other machines in 63 days. To make same numbers of machines in 54 days, how many machines are required?  
Ans iii) 49
- o) If  $x \propto y$  and  $x \propto z$  then  $(y+z) \propto$  \_\_\_\_\_    Ans i)  $x$

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