

### Question

Whenever two quantities are directly proportional to each other, the ratio between the two quantities is a constant. In our case let's take that first variable -  $X_1$  and second is  $Y_1$ . In some moment of time we will

have that:  $\frac{X_1}{Y_1} = C_1$ . And if our first variable changes in time let's take that in some moment of time (which is

different from our first moment of time) it will be equal to  $X_2$  while the second variable still stay the same -

$Y_1$ . Now we will have:  $\frac{X_2}{Y_1} = C_2$  and  $X_1 \neq X_2$ . So, we easily can see that  $C_1 \neq C_2$ . And that's why such case

can not be a proportional relationship.

Answer: it can't be a proportional relationship.