

Class test

Class X

Time : 35 minutes.

Total marks : 16

Answer all questions.

1. Two people are 16 km apart on a straight road. They start walking at the same time. If they walk towards each other with different speeds, they will meet in 2 hours. Had they walked in the same direction with same speeds as before, they would have met in 8 hours. Find their walking speeds. **[4]**
2. ₹9,000 were divided equally among a certain number of persons. Had there been 20 more persons, each would have got 160 less. Find the original number of persons. **[4]**
3. Solve for x : $\frac{1}{2a+b+2x} = \frac{1}{2a} + \frac{1}{b} + \frac{1}{2x}$. **[4]**
4. Find the values of α and β for which the following system of linear equations has no solution. **[2]**
$$2x + 3y = 7$$
$$2\alpha x + (\alpha + \beta)y = 28 .$$
5. In a pack of 52 playing cards one card is lost. From the remaining cards, a card is drawn at random. Find the probability that the drawn card is queen of heart, if the lost card is a black card. **[2]**