



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai
Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &
Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)



Races & Chain Rule

1. Direct Proportion:

Two quantities are said to be directly proportional, if on the increase (or decrease) of the one, the other increases (or decreases) to the same extent.

Eg. Cost is directly proportional to the number of articles.
(More Articles, More Cost)

2. Indirect Proportion:

Two quantities are said to be indirectly proportional, if on the increase of the one, the other decreases to the same extent and vice-versa.

Eg. The time taken by a car is covering a certain distance is inversely proportional to the speed of the car. (More speed, Less is the time taken to cover a distance.)

Note: In solving problems by chain rule, we compare every item with the term to be found out

Examples

1. Three pumps, working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?

- a) 9 b) 10 c) 11 **d) 12**

2. Running at the same constant rate, 6 identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could 10 such machines produce in 4 minutes?

- a) 900 b) 1800 **c) 2700** d) 3600

3. A fort had provision of food for 150 men for 45 days. After 10 days, 25 men left the fort. The number of days for which the remaining food will last, is:

- a) 21 days b) 54 days **c) 42 days** d) 45 days

4. 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work?

- a) **11** b) 13 c) 15 d) 17

5. A man completes $\frac{5}{8}$ of a job in 10 days. At this rate, how many more days will it take him to finish the job?

- a) 5 days **b) 6 days** c) 7 days d) 8 days

6. If a 250 gm of potato costs 60 paise, how many paise will 200 gm cost?

- a) 48 paise** b) 54 paise c) 62 paise d) 70 paise

7. A wheel that has 6 cogs is meshed with a larger wheel of 14 cogs. When the smaller wheel has made 21 revolutions, then the number of revolutions made by the larger wheel is:



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a) 4

b) 9

c) 12

d) 16

8. A flagstaff 17.5 m high casts a shadow of length 40.25 m. The height of the building, which casts a shadow of length 28.75 m under similar conditions will be:

a) 10 m

b) 12.5 m

c) 15 m

d) 17.5 m

9. In a camp, there is a meal for 120 men or 200 children. If 150 children have taken the meal, how many men will be catered to with remaining meal?

a) 20 men

b) 30 men

c) 40 men

d) 50 men

10. 36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work?

a) 12 days

b) 18 days

c) 24 days

d) 30 days