



WORKSHEET_ Numerical Applications

1. A man rows 15 km upstream and 25 km downstream in 5 hours each time. What is the speed of the current?
2. A person can row a boat 5 km an hour in still water. It takes him thrice as long to row upstream as to row downstream. Find the rate at which the stream is flowing.
3. Find the speed of the boat, if a boat moves downstream at the rate of 16 km/hr and upstream at the rate of 10 km/hr.
4. A boat goes 8 km upstream and then returns. Total time taken is 4 hours 16 minutes. If the speed of current is 1 km/hr, find the actual speed of the boat.
5. A boat covers 32 km upstream and 36 km downstream in 7 hours. Also, it covers 40 km upstream and 48 km downstream in 9 hours. Find the speed of the boat in still water and that of the stream.
6. The speed of a motor boat and that of the current of water is 36:5. The boat goes along with the current in 5 hours 10 minutes. How much time will it take to come back?
7. Pipe A can fill a tank in 30 hours and pipe B in 45 hours. If both the pipes are opened in an empty tank, how much time will it take to fill the tank?
8. A pipe can fill a cistern in 6 hours. Due to a leakage in the tank the cistern is just full in 9 hours. How much time the leakage will take to empty the tank?
9. A cistern can be filled by pipes A and B in 4 hours and 6 hours respectively. When full, the cistern can be emptied by pipe C in 8 hours. If all the pipes were turned on at the same time, in how much time will the cistern be filled?
10. A cistern can be filled in 8 hours but due to a leakage in its bottom, it takes 2 hours more to fill the tank. If the cistern is full, how much time will the leakage take to empty it?

11. Two pipes A and B can fill a tank in 24 minutes and 32 minutes respectively. If both the pipes are opened simultaneously, after how much time B should be closed so that the tank is full in 18 minutes?
12. A cistern can be filled by two pipes A and B in 12 minutes and 15 minutes respectively. Another tap C can empty the full tank in 20 minutes. If the tap C opened 5 minutes after the pipes A and B are opened, find when the cistern becomes full?
13. What is the remainder when 2015^{2015} is divided by 2014?
14. Find the last digit of 7^{100} .
15. A dishonest milkman professes to sell milk at cost price but he mixes it with water and consequently gains 25%. Find the percentage of water in the mixture.

ANSWER

Q1	1km/h	Q2	2.5km/h	Q3	13km/h	Q4	4km/h
Q5	10km/h, 2km/h		Q6	6hrs 50mnts		Q7	18hrs
Q8	18hrs	Q9	24/7 hrs	Q10	40hrs	Q11	8minutes
Q12	7 ½ minutes	Q13	1	Q14	1	Q15	20%
