

XI Applied Mathematics

MCQ Worksheet

Topic: Time & Work, Time & Distance

Date: 12/ 06/ 2025

**Q1.** The speed of a train going from Lucknow to New Delhi is 100 km/hour, while when coming back from New Delhi to Lucknow, its speed is 150 km/hour, the average speed of the train in the whole journey is –

|     |             |     |             |     |             |     |             |
|-----|-------------|-----|-------------|-----|-------------|-----|-------------|
| (a) | 125 km/hour | (b) | 75 km/ hour | (c) | 135 km/hour | (d) | 120 km/hour |
|-----|-------------|-----|-------------|-----|-------------|-----|-------------|

**Q2.** A train covers first 10 km at a speed of 20 km/hour, next 20 km at 40 km/hour and last 10km at 15 km/hour. The average speed of the train in entire journey is-

|     |            |     |            |     |            |     |            |
|-----|------------|-----|------------|-----|------------|-----|------------|
| (a) | 24 km/hour | (b) | 26 km/hour | (c) | 27 km/hour | (d) | 28 km/hour |
|-----|------------|-----|------------|-----|------------|-----|------------|

**Q3.** A train is running at 54 km/hour crosses a tree in 12 seconds. The length of the train is –

|     |       |     |       |     |       |     |       |
|-----|-------|-----|-------|-----|-------|-----|-------|
| (a) | 120 m | (b) | 180 m | (c) | 240 m | (d) | 150 m |
|-----|-------|-----|-------|-----|-------|-----|-------|

**Q4.** Two trains running in opposite directions at speed 36 km/h and 54 km/h cross each other in 8 seconds. If the length of the first train is 80 m, then the length of the second train is-

|     |      |     |       |     |       |     |       |
|-----|------|-----|-------|-----|-------|-----|-------|
| (a) | 90 m | (b) | 100 m | (c) | 110 m | (d) | 120 m |
|-----|------|-----|-------|-----|-------|-----|-------|

**Q5.** A 250 m long train is running at 100 km/h. In what time will it pass a man running at 10 km/h in the same direction in which the train is going?

|     |      |     |      |     |      |     |      |
|-----|------|-----|------|-----|------|-----|------|
| (a) | 13 s | (b) | 11 s | (c) | 12 s | (d) | 10 s |
|-----|------|-----|------|-----|------|-----|------|

**Q6.** A 220 m long train is running at 120 km/h. In what time will it pass a man running in the opposite directions to that of the train at 12 km/h?

|     |     |     |     |     |      |     |      |
|-----|-----|-----|-----|-----|------|-----|------|
| (a) | 6 s | (b) | 5 s | (c) | 12 s | (d) | 10 s |
|-----|-----|-----|-----|-----|------|-----|------|

**Q7.** A works twice as fast as B. If A can complete a work in 6 days independently, then number of days in which A and B together can finish the work is –

|     |        |     |        |     |        |     |         |
|-----|--------|-----|--------|-----|--------|-----|---------|
| (a) | 4 days | (b) | 6 days | (c) | 8 days | (d) | 10 days |
|-----|--------|-----|--------|-----|--------|-----|---------|

**Q8.** Ramu is twice efficient as Komal. They together can finish a work in 50 days, In how many days Komal can finish the work alone?

|     |         |     |          |     |          |     |          |
|-----|---------|-----|----------|-----|----------|-----|----------|
| (a) | 75 days | (b) | 150 days | (c) | 160 days | (d) | 180 days |
|-----|---------|-----|----------|-----|----------|-----|----------|

**Q9.** 20 workers working together for 5 hours per day complete a work in 10 days. If 25 workers are employed to work 10 hours per day, what is the time required to complete the work?

|     |       |     |        |     |        |     |        |
|-----|-------|-----|--------|-----|--------|-----|--------|
| (a) | 1 day | (b) | 2 days | (c) | 3 days | (d) | 4 days |
|-----|-------|-----|--------|-----|--------|-----|--------|

**Q10.** Through an inlet, a tank takes 8 hours to get filled up. Due to leak in bathroom, it takes 2 hours more to get it filled completely. If the tank is full, then how much time will the leak take to empty it?

|     |          |     |          |     |          |     |          |
|-----|----------|-----|----------|-----|----------|-----|----------|
| (a) | 16 hours | (b) | 20 hours | (c) | 32 hours | (d) | 40 hours |
|-----|----------|-----|----------|-----|----------|-----|----------|

**Q11.** 20 men can make 30 toys in 6 hours. If 5 men leave the job, then how many toys can be made in 12 hours?

|     |    |     |    |     |    |     |    |
|-----|----|-----|----|-----|----|-----|----|
| (a) | 25 | (b) | 35 | (c) | 45 | (d) | 50 |
|-----|----|-----|----|-----|----|-----|----|

**Q12.** A can do a piece of work in 10 days and B in 20 days. They begin together but A leaves 2 days before the completion of the work. The whole work is done in-

|     |        |     |        |     |        |     |        |
|-----|--------|-----|--------|-----|--------|-----|--------|
| (a) | 8 days | (b) | 6 days | (c) | 7 days | (d) | 9 days |
|-----|--------|-----|--------|-----|--------|-----|--------|

**Q13.** 3 men or 5 women take 40 hours to do a certain piece of work, then number of hours taken by 6 men and 10 women together to complete the work is-

|     |          |     |          |     |          |     |          |
|-----|----------|-----|----------|-----|----------|-----|----------|
| (a) | 10 hours | (b) | 20 hours | (c) | 15 hours | (d) | 30 hours |
|-----|----------|-----|----------|-----|----------|-----|----------|

**Q14.** Two cars A and B start simultaneously from the same place at the speed of 30 km/h and 45 km/h respectively. The car B reaches the destination 2 hour earlier than A. What is the distance between the starting point and destination?

|     |        |     |        |     |        |     |        |
|-----|--------|-----|--------|-----|--------|-----|--------|
| (a) | 160 km | (b) | 150 km | (c) | 180 km | (d) | 188 km |
|-----|--------|-----|--------|-----|--------|-----|--------|

**Q15.** 4 men and 6 women finish a job in 8 days, while 3 men and 7 women finish it in 10 days. In how many days can 10 women finish it?

|     |         |     |         |     |         |     |         |
|-----|---------|-----|---------|-----|---------|-----|---------|
| (a) | 35 days | (b) | 25 days | (c) | 30 days | (d) | 40 days |
|-----|---------|-----|---------|-----|---------|-----|---------|