Name : Relative Speed Concepts

Chapter: Time and Distance

Grade: ICSE Grade VIII

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In how much time will a train A of length 499.57 m travelling at a speed of 32.91 m/sec will cross another train B of length 363.15 m travelling in the same direction at a speed of 9.71 m/sec?

- (i) 36.19 sec (ii) 37.19 sec (iii) 38.19 sec (iv) 39.19 sec (v) 35.19 sec
- 2. In how much time will a train A of length 411.76 m travelling at a speed of 17.44 m/sec will cross another train B of length 290.06 m travelling in the opposite direction at a speed of 7.70 m/sec?
 - (i) 28.92 sec (ii) 25.92 sec (iii) 26.92 sec (iv) 27.92 sec (v) 29.92 sec
- In how much time will a train of length 162.20 m travelling at a speed of 12.15 m/sec crosses a man riding a cycle in the same direction at a speed of 8.51 m/sec?
 - (i) 45.56 sec (ii) 46.56 sec (iii) 42.56 sec (iv) 43.56 sec (v) 44.56 sec
- In how much time will a train of length 182.50 m travelling at a speed of 7.35 m/sec crosses a man riding a cycle in the opposite direction at a speed of 6.50 m/sec?
 - (i) 11.18 sec (ii) 15.18 sec (iii) 14.18 sec (iv) 12.18 sec (v) 13.18 sec
- A motor boat can move at a speed of 14.25 m/sec in still water. If it goes upstream for 495.17 sec, it travels a distance of 4823.00 m. What is the speed of the stream?
 - (i) 5.51 m/sec (ii) 2.51 m/sec (iii) 6.51 m/sec (iv) 4.51 m/sec (v) 3.51 m/sec
- A motor boat can move at a speed of 33.11 m/sec in still water. If it goes downstream for 90.75 sec, it travels a distance of 3563.00 m. What is the speed of the stream?
 - (i) 7.15 m/sec (ii) 6.15 m/sec (iii) 5.15 m/sec (iv) 8.15 m/sec (v) 4.15 m/sec
- 7. A motor boat can travel at a speed of 22.75 m/sec downstream and 2.09 m/sec upstream. What is the speed of the motor boat in still water?
 - (i) 11.42 m/sec (ii) 14.42 m/sec (iii) 13.42 m/sec (iv) 10.42 m/sec (v) 12.42 m/sec
- A motor boat can travel at a speed of 15.54 m/sec downstream and 1.40 m/sec upstream. What is the speed of the stream?
 - (i) 7.07 m/sec (ii) 8.07 m/sec (iii) 6.07 m/sec (iv) 9.07 m/sec (v) 5.07 m/sec
- 9. A motor boat can travel at a speed of 25.43 m/sec downstream and 2.51 m/sec upstream. How much distance can the boat travel in 33.94 sec in still water?
 - (i) 474.14 m (ii) 476.14 m (iii) 472.14 m (iv) 473.14 m (v) 475.14 m
- 10. A motor boat can travel at a speed of 27.58 m/sec downstream and 14.34 m/sec upstream. How much time will it take to cross a distance of 428.63 m in still water?
 - (i) 22.45 sec (ii) 19.45 sec (iii) 18.45 sec (iv) 21.45 sec (v) 20.45 sec
- The speed of a motor boat is 16.90 m/sec and the speed of a stream is 7.35 m/sec. A & B are two location 11. adjacent to a stream. If it takes 558.84 sec to go from point A to B and come back, What is the distance between A and B?
 - (i) 3828.00 m (ii) 3829.00 m (iii) 3831.00 m (iv) 3830.00 m (v) 3827.00 m

- The speed of a motor boat is 11.07 m/sec and the speed of a stream is 3.07 m/sec. A & B are two location 12. adjacent to a stream. If the distance between A and B is 1524.00 m, how much time will it take to go from A to B and back to A?
 - (i) 297.28 sec (ii) 300.28 sec (iii) 299.28 sec (iv) 296.28 sec (v) 298.28 sec
- The distance between two places X and Y is 291.52 m. Two persons A and B start simultaneously at X and Y at 13. speeds of 10.57 m/sec and 9.09 m/sec respectively. Find when they meet each other if they are travelling in same direction.
 - (i) 198.97 sec (ii) 197.97 sec (iii) 196.97 sec (iv) 194.97 sec (v) 195.97 sec
- The distance between two places X and Y is 350.75 m. Two persons A and B start simultaneously at X and Y at 14. speeds of 15.23 m/sec and 11.28 m/sec respectively. Find when they meet each other if they are travelling in opposite direction.
 - (i) 14.23 sec (ii) 11.23 sec (iii) 12.23 sec (iv) 13.23 sec (v) 15.23 sec
- The distance between two places X and Y is 493.36 m. Two persons A and B start simultaneously at X and Y at 15. speeds of 36.25 m/sec and 14.66 m/sec respectively. Find the meeting point away from X where they meet each other if they are travelling in same direction.
 - (i) 829.36 m (ii) 827.36 m (iii) 830.36 m (iv) 826.36 m (v) 828.36 m
- The distance between two places X and Y is 469.75 m. Two persons A and B start simultaneously at X and Y at 16. speeds of 10.72 m/sec and 10.31 m/sec respectively. Find the meeting point away from X where they meet each other if they are travelling in opposite direction.
 - (i) 239.45 m (ii) 238.45 m (iii) 241.45 m (iv) 237.45 m (v) 240.45 m
- 17. In a 1400 m race, A beats B by 612.52 m and C by 840.04 m. In a 3600 m race, by how much distance does B beat C?
 - (i) 587.03 m (ii) 586.03 m (iii) 583.03 m (iv) 584.03 m (v) 585.03 m
- 'P' and 'Q' are at a distance of 470.00 km apart. 'A' starts from 'P' at 07:52 AM and reaches 'Q' at 01:27 PM. 'B' 18. starts from 'Q' at 00:10 PM and reaches 'P' at 08:05 PM. Find the distance between point P and the point where they overtake each other.
 - (i) 427.12 km (ii) 426.12 km (iii) 424.12 km (iv) 423.12 km (v) 425.12 km
- 19. 'P' and 'Q' are at a distance of 520.00 km apart. 'A' starts from 'P' at 07:09 AM and reaches 'Q' at 02:50 PM. 'B' starts from 'Q' at 00:33 PM and reaches 'P' at 08:17 PM. At what time they overtake each other?
 - (i) 02:11 PM (ii) 01:11 PM (iii) 01:41 PM (iv) 02:41 PM (v) 00:41 PM

Assignment Key					
1) (ii)	2) (iv)	3) (v)	4) (v)	5) (iv)	6) (ii)
7) (v)	8) (i)	9) (i)	10) (v)	11) (ii)	12) (v)
13) (iii)	14) (iv)	15) (v)	16) (i)	17) (v)	18) (v)
19) (iii)					

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