

(a) 2 s

(c) $2\sqrt{3} s$

Q 1.

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15 m/s The time of crossing is: -



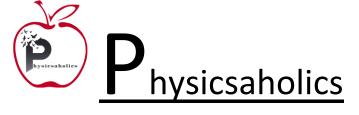
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(b) 4 s

(d) $4\sqrt{3} s$

Two trains, each 50m long are travelling in opposite direction with velocity 10 m/s and

Q 2.	A police jeep is chasing with, v velocity 153 km/h. Police fires it will strike the car of the thief (a) 150 m/s (c) 450 m/s	a bullet with muzzle vel	ocity of 180 m/s. The velocity
Q 3.	An observer moves with a const He will observe the two object (1) the two objects have the sam (2) the two objects have the sam (3) the two objects move in the sam (4) the two objects Move in opp	ets. Then which of the line speed ne velocity same direction	
		0) 2, 3, 4	
Q 4.			lative speed of B with respect
(
Q 5.	When a man stands on a moving 50 sec. and when he walks up th 30 sec. Then the man walks up to (a) 60 s (b) 75 s	ne moving escalator (with	constant speed) he goes up in
Q 6.	The distance between two particle travel with same speeds and in rate of 4 m/sec. The particle have (a) 5 m/s, 1 m/s (c) 4 m/s, 2 m/s	the same direction, then we speed as	<u>=</u>
Q 7.	Two trains start a distance of 20 of 30m/s directly towards train 2 acceleration of $5m/s^2$ directly to (a) 22.9 s (c) 30 s	2 which starts from rest a	and accelerates with a constant





- A train starts from rest with constant acceleration $a = 1 m/s^2$. A passenger at a Q 8. distance S (behind the train) from the train runs at this maximum velocity of 10 m/s to catch the train at the same moment at which the train starts. If S = 25.5 m and passenger keeps running, find the time in which he will catch the train:
 - (a) 5 s

(b) 4 s

(c) 3 s

(d) $2\sqrt{2}$ s

An express train is moving with a velocity V_1 . Its driver finds another train is moving Q 9. on the same track in the same direction with velocity V_2 . To escape collision, driver applies retardation a on the train. The minimum time of escaping collision will be:

(a)
$$t = \frac{V_1 - V_2}{a}$$

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$$t = \frac{V_1 - V_2}{a}$$

(c) $t = \frac{V_1^2 + V_2^2}{a}$

- Q 10. A train 100m long travelling at 40 m/s starts overtaking another train 200m long travelling at 30 m/s. The time taken by the first train to pass the second train completely
 - (a) $30 \, s$

(b) 40 s

(c) 50 s

(d) 60 s

Solution on Website:-

https://physicsaholics.com/home/courseDetails/41

Solution on YouTube

https://youtu.be/8 MuHpKh088

Answer Key

Q.1) b	Q.2) a	Q.3) d	Q.4) b	Q.5) b
Q.6) a	Q.7) a	Q.8) c	Q.9) a	Q.10) a