ALL BRANCH (English)

General Aptitude

Quantitative Aptitude

DPP 09 Discussion Notes

Time & Distance

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MCQ

The ratio between rates of walking of two persons is 3:4. If the time taken by 2nd person to cover a certain distance is 36 minutes, then what would be the time taken by the first person to cover the same distance?

A 36 minutes

B 48 minutes

C 27 minutes

D None

Speed = 3 : 4

Time = 4 : 3

(× 12)

48 : 36

48 min

MCQ

A car driver makes his journey by the speed of 75 km/hr and returns to initial place with 50 km/hr. What is his average speed of the journey?

A. 30 km/hr

B. 40 km/hr

C. 50 km/hr

D. 60 km/hr ✓

$\frac{2xy}{x+y}$

$= \frac{2 \times 75 \times 50}{125}$

$= 60 \text{ km/hr}$

MCQ

$55 \times 65 = 3575$

A car travels 715 km at a uniform speed. If the speed of the car is 10 kmph more, it takes 2 hours less to cover the same distance. What was the original speed of the vehicle?

A. 45 km/hr

B. 65 km/hr

C. 55 km/hr

D. 75 km/hr

$$\frac{715}{x} - \frac{715}{x+10} = 2$$

$$\Rightarrow \frac{715x + 7150 - 715x}{x^2 + 10x} = 2$$

$$\Rightarrow 7150 = 2x^2 + 20x$$

$$2x^2 + 20x - 7150 = 0$$

$$\Rightarrow x^2 + 10x - 3575 = 0$$

$$\Rightarrow x^2 + 65x - 55x - 3575 = 0$$

$$\Rightarrow x(x+65) - 55(x+65) = 0$$

$$\Rightarrow (x+65)(x-55) = 0$$

$x \neq -65$

$x = 55$

MCQ

Manish goes to office at a speed of 7 km/hr and returns to his home at a speed of 4 km/hr. If he takes 22 hours in total, what is the distance between his office and home?

A) 74 km

B) 45 km

C) 56 km

D) 49 km

$$\frac{x}{7} + \frac{x}{4} = 22$$

$$\Rightarrow \frac{4x + 7x}{28} = 22$$

$$\Rightarrow \frac{11x}{28} = 22$$

$$x = 2 \times 28$$

$$= 56$$

MCQ

A thief spotted by a policeman from a distance of 200m. When the policeman starts the chase, the thief also starts running. Assuming that the speed of the thief be 10 km/hr and that of the policeman be 12 km/hr. How far the thief ran before he is caught?

A 1.5 km

B 3.8 km

C 1 km

D 4 km

$D = 0.2$ km R.S. $= 2$ km/hr

$\text{Time} = \frac{0.2}{2} = 0.1$ hr

Distance covered by thief $= 0.1 \times 10$

$= 1$ km

MCQ

$2R = 3.5$

Rahul takes 6 hours in walking to a certain place and riding back. However, he would have gained 2½ hours if he rides both the ways. How long would he take in walking both the ways?

$2(W + R = 6 \text{ hours}) \times 2$

$2W + 2R = 12 \text{ hours}$

$2R = 3.5$

$2W = 8.5 \text{ hours}$

A. 6 hrs 45 min

B. 8 hrs 30 min

C. 7 hrs 30 min

D. 9 hrs 30 min

MCQ

$1\frac{20}{360} =$

A man misses a train by 40 minutes if he travels at 30 kmph. If he travels at 40 kmph, then also he misses the train by 10minutes. What is the minimum speed required to catch the train on time?

A. 44 kmph

B. 45 kmph

C. 48 kmph

D. 49 kmph

$$\frac{x}{30} - \frac{x}{40} = \frac{1}{2}$$

$$\Rightarrow \frac{x}{120} = \frac{1}{2}$$

$$x = 60 \text{ km}$$

Time = 30 min

$= \frac{1}{2}$ hr

$\frac{60}{30} = 2$ hr

Real Time taken $= 1$ hr 20 min

$= 1\frac{1}{3}$ hr $= \frac{4}{3}$ hr

15

Speed $= 60 \times \frac{3}{4}$

$= 45$ km/hr

MCQ

~~$x = -400$~~

$x = 600$ km/hr ✓

In a flight of 600km, an aircraft was slowed down due to bad weather. It's average speed for the trip was reduced by 200km/hr and the time of the flight increased by 30 minutes. What is the original duration of the flight?

(A) 1 hour

(B) 1.5 hours

(C) 8 hours

(D) 6 hours

x' km/hr

$\Rightarrow 240000 = x^2 - 200x$

$\Rightarrow x^2 - 200x - 240000 = 0$

$\Rightarrow x^2 - 600x + 400x - 240,000 = 0$

$\Rightarrow x(x-600) + 400(x-600) = 0$

$\Rightarrow (x-600)(x+400) = 0$

$\frac{600}{x-200} - \frac{600}{x} = \frac{30}{60}$

$\frac{600x - 600x + 120000}{x^2 - 200x} = \frac{1}{2}$

$T = \frac{600}{600}$

$= 1$ hr

MCQ

Traveling at a speed of 8 kmph a student reaches school from his house 10 minutes early. If he travels at 6 kmph, he is late by 20 minutes. Find the distance between the school and the house.

A 12 km

B 1 km

C 10 km

D 13 km

$$\frac{x}{8} \sim \frac{x}{6} = 30\text{min}$$

$$\frac{x}{6} - \frac{x}{8} = \frac{30}{60} \Rightarrow \frac{x}{24} = \frac{1}{2}$$

$x = 12$

MCQ

A bus between two towns reaches its destination 10 minutes early when it moves at 25 km/hr and 15 minutes early when it moves at 30km/hr. What is the distance between the two towns?

A. 75 km

B. 98 km

C. 14 km

D. 12.5 km ✓

x km

$$\frac{x}{25} - \frac{x}{30} = \frac{5}{60}$$

$$\Rightarrow \frac{6x - 5x}{150} = \frac{1}{12}$$

$$\Rightarrow x = \frac{150}{12}$$

$$= 12.5 \text{ km}$$

Thank You!

GW Soldiers