

Arithmetic (Level 2)**MCQ Test, Set 05**

Time: 30 minutes

Maximum marks: 25

Name: _____ Class: _____ Date: _____

1. There are 25 questions. Each has exactly one correct answer: choose A, B, C or D.
2. Each correct answer carries 1 mark. There is no negative marking.
3. The key sheet and worked solutions are at the end of this test.

1. A is twice as good a workman as B. If B can finish a piece of work in 58 days, in how many days can A finish it?
A. 116 days **B.** $19\frac{1}{3}$ days **C.** 29 days **D.** $38\frac{2}{3}$ days
2. A can finish a piece of work in 56 days. What part of the work does A finish in 6 days?
A. $\frac{1}{56}$ **B.** $\frac{3}{28}$ **C.** $\frac{25}{28}$ **D.** $\frac{28}{3}$
3. 12 men can do a piece of work in 7 days. How many men are needed to finish it in 14 days?
A. 6 men **B.** 5 men **C.** 24 men **D.** 19 men
4. A can do a piece of work in 32 days and B alone can do it in 64 days. How much time will both take to finish the work?
A. 32 days **B.** $21\frac{1}{3}$ days **C.** 96 days **D.** 48 days
5. A and B together can do a piece of work in 16 days. B alone can finish it in 80 days. In how many days can A alone finish the work?
A. 48 days **B.** 20 days **C.** $13\frac{1}{3}$ days **D.** 64 days
6. A and B can do a piece of work in 112 days; B and C in 42 days; C and A in 48 days. In how many days can A alone finish it?
A. 336 days **B.** $37\frac{1}{3}$ days **C.** 56 days **D.** 168 days
7. A can do a piece of work in 11 days and B can finish it in 44 days. They work together for 5 days and then A goes away. In how many days will B finish the remaining work?
A. 39 days **B.** $4\frac{3}{4}$ days **C.** $19\frac{1}{2}$ days **D.** 19 days
8. A can do a piece of work in 24 days while B alone can do it in 30 days. With the help of C they can finish it in 6 days. If they are paid ₹9000 for the whole work, what is B's share?
A. ₹2250 **B.** ₹3000 **C.** ₹4950 **D.** ₹1800
9. A is twice as good a workman as B and is therefore able to finish a piece of work in 56 days less than B. In how many days can they do it working together?
A. 84 days **B.** 112 days **C.** $37\frac{1}{3}$ days **D.** 56 days

10. A and B can do a piece of work in 64 and 32 days respectively. They began the work together, but A leaves after some days and B finishes the remaining work in 5 days. After how many days did A leave?
- A. 18 days B. 54 days C. 23 days D. 27 days
-
11. A can do a piece of work in 208 days and B can do it in 104 days. They work together for 14 days. Then B leaves and A alone continues the work. 5 days after that, C joins A and the work is completed in 69 days more. In how many days can C do the work alone?
- A. 87 days B. 624 days C. $89\frac{1}{7}$ days D. 156 days
-
12. A and B together can do a piece of work in 9 days. B and C together can do it in 12 days. If A is twice as good a workman as C, B alone can do it in
- A. 72 days B. 3 days C. 36 days D. 18 days
-
13. A and B working alone can finish a piece of work in 11 and 24 days respectively. If they work at it alternately for a day, B beginning, in how many days will the work be finished?
- A. $15\frac{1}{3}$ days B. 15 days C. $16\frac{1}{3}$ days D. 16 days
-
14. A certain number of men complete a piece of work in 26 days. If there were 2 men more, the work could be finished in 2 days less. How many men were there originally?
- A. 22 B. 26 C. 24 D. 28
-
15. If 8 men or 12 boys can finish a piece of work in 38 days, in how many days can 12 men and 6 boys finish it?
- A. 19 days B. $32\frac{4}{7}$ days C. 76 days D. $25\frac{1}{3}$ days
-
16. 8 men and 4 women working 3 hours a day finish a piece of work in 8 days; 4 men and 8 women working 6 hours a day do the same work in 5 days. Find the number of days in which the work is done by 4 men only, working 4 hours a day.
- A. 15 days B. 20 days C. 18 days D. 24 days
-
17. If 4 men with 5 boys can earn ₹8155 in 7 days and 12 men with 3 boys can earn ₹19950 in 10 days, in what time will 7 men with 5 boys earn ₹18840?
- A. 10 days B. 14 days C. 6 days D. 12 days
-
18. 48 men are employed to do a piece of work which they could finish in 9 days, but the men drop off by 6 at the end of every 3 days. In what time will the work be completed?
- A. $10\frac{2}{7}$ days B. 12 days C. $10\frac{4}{5}$ days D. 9 days
-
19. A can do half as much again as B can do in the same time. B alone can do a piece of work in 54 days. In how many days can A alone finish it?
- A. 81 days B. 18 days C. 27 days D. 36 days
-
20. A man can row downstream at the rate of 22 km/hr and upstream at 16 km/hr. The man's rate in still water is
- A. 3 km/hr B. 19 km/hr C. 6 km/hr D. 38 km/hr
-

21. A man rows upstream 12 km and downstream 21 km, taking 2 hours each time. The man's speed in still water is
- A. 10.5 km/hr B. 2.25 km/hr C. 8.25 km/hr D. 16.5 km/hr
-
22. A man can row 2 km/hr in still water and he finds that it takes him thrice as long to row up as to row down the river. The rate of the stream is
- A. 1.5 km/hr B. 1 km/hr C. 0.5 km/hr D. 2 km/hr
-
23. A man can row 8 km/hr in still water. If the river is running at 4 km/hr, it takes him 2 hours to row to a place and back. The place is at a distance of
- A. 6 km B. 12 km C. 7 km D. 8 km
-
24. The current of a stream runs at the rate of 5 km/hr. A motor boat goes 40 km upstream and back again to the starting point in 3 hours 20 minutes. The speed of the motor boat in still water is
- A. 35 km/hr B. 30 km/hr C. 25 km/hr D. 20 km/hr
-
25. A man can row 30 km upstream and 84 km downstream in 9 hours, while he can row 70 km upstream and 14 km downstream in 8 hours. The speed of the man in still water is
- A. 10 km/hr B. 12 km/hr C. 2 km/hr D. 14 km/hr
-

Key sheet

1. C	2. B	3. A	4. B	5. B
6. A	7. D	8. D	9. C	10. A
11. D	12. D	13. A	14. C	15. A
16. A	17. D	18. C	19. D	20. B
21. C	22. B	23. A	24. C	25. B

Solutions

1. A is twice as good a workman as B. If B can finish a piece of work in 58 days, in how many days can A finish it?

$$\begin{aligned}\text{Time taken by A} &= \frac{1}{2} \times (\text{Time taken by B}) \\ &= \frac{1}{2} \times 58 = 29 \text{ days}\end{aligned}$$

Ans: (C) 29 days

2. A can finish a piece of work in 56 days. What part of the work does A finish in 6 days?

$$\begin{aligned}\text{A's 1 day's work} &= \frac{1}{56} \\ \text{A's 6 days' work} &= 6 \times \frac{1}{56} = \frac{6}{56} = \frac{3}{28}\end{aligned}$$

Ans: (B) $\frac{3}{28}$

3. 12 men can do a piece of work in 7 days. How many men are needed to finish it in 14 days?

$$\begin{aligned}\text{No. of men} &\propto \frac{1}{\text{No. of days}} \\ 12 \times 7 &= x \times 14 \\ x &= \frac{12 \times 7}{14} = 6 \text{ men}\end{aligned}$$

Ans: (A) 6 men

4. A can do a piece of work in 32 days and B alone can do it in 64 days. How much time will both take to finish the work?

$$\begin{aligned}\text{A's 1 day's work} &= \frac{1}{32} \\ \text{B's 1 day's work} &= \frac{1}{64} \\ \therefore (\text{A} + \text{B})\text{'s 1 day's work} &= \frac{1}{32} + \frac{1}{64} = \frac{2+1}{64} = \frac{3}{64} \\ \therefore \text{Both together can finish the work in } &\frac{64}{3} \text{ days} = 21\frac{1}{3} \text{ days}\end{aligned}$$

Ans: (B) $21\frac{1}{3}$ days

5. A and B together can do a piece of work in 16 days. B alone can finish it in 80 days. In how many days can A alone finish the work?

$$\begin{aligned}(\text{A} + \text{B})\text{'s 1 day's work} &= \frac{1}{16} \\ \text{B's 1 day's work} &= \frac{1}{80} \\ \Rightarrow \text{A's 1 day's work} &= \frac{1}{16} - \frac{1}{80} = \frac{5-1}{80} = \frac{4}{80} = \frac{1}{20} \\ \therefore \text{A alone can finish the work in } &20 \text{ days.}\end{aligned}$$

Ans: (B) 20 days

6. A and B can do a piece of work in 112 days; B and C in 42 days; C and A in 48 days. In how many days can A alone finish it?

$$(A + B)\text{'s 1 day's work} = \frac{1}{112}$$

$$(B + C)\text{'s 1 day's work} = \frac{1}{42}$$

$$(C + A)\text{'s 1 day's work} = \frac{1}{48}$$

$$\text{Adding, } 2(A + B + C)\text{'s 1 day's work} = \frac{1}{112} + \frac{1}{42} + \frac{1}{48} = \frac{3+8+7}{336} = \frac{18}{336} = \frac{3}{56}$$

$$\Rightarrow (A + B + C)\text{'s 1 day's work} = \frac{3}{112}$$

$\therefore$ A, B, C together can finish the work in $37\frac{1}{3}$ days.

$$A\text{'s 1 day's work} = \frac{3}{112} - \frac{1}{42} = \frac{1}{336}, \text{ so A alone takes 336 days}$$

Ans: (A) 336 days

7. A can do a piece of work in 11 days and B can finish it in 44 days. They work together for 5 days and then A goes away. In how many days will B finish the remaining work?

$$A\text{'s 1 day's work} = \frac{1}{11}$$

$$B\text{'s 1 day's work} = \frac{1}{44}$$

$$(A + B)\text{'s 1 day's work} = \frac{1}{11} + \frac{1}{44} = \frac{4+1}{44} = \frac{5}{44}$$

$$(A + B)\text{'s 5 days' work} = 5 \times \frac{5}{44} = \frac{25}{44}$$

$$\text{Remaining work} = 1 - \frac{25}{44} = \frac{19}{44}$$

$$\text{This work is done by B in } \frac{19}{44} \times 44 = 19 \text{ days}$$

Ans: (D) 19 days

8. A can do a piece of work in 24 days while B alone can do it in 30 days. With the help of C they can finish it in 6 days. If they are paid ₹9000 for the whole work, what is B's share?

$$A\text{'s 1 day's work} = \frac{1}{24}$$

$$B\text{'s 1 day's work} = \frac{1}{30}$$

$$(A + B)\text{'s 1 day's work} = \frac{1}{24} + \frac{1}{30} = \frac{5+4}{120} = \frac{9}{120} = \frac{3}{40}$$

$$\text{Given } (A + B + C)\text{'s 1 day's work} = \frac{1}{6}$$

$$C\text{'s 1 day's work} = \frac{1}{6} - \frac{3}{40} = \frac{20-9}{120} = \frac{11}{120}$$

$$\text{Consider } \frac{1}{24} : \frac{1}{30} : \frac{11}{120} = \frac{5}{120} : \frac{4}{120} : \frac{11}{120} = 5 : 4 : 11$$

$\therefore$ ₹9000 must be divided in the ratio 5 : 4 : 11 ($5 + 4 + 11 = 20$)

$$B\text{'s share} = 9000 \times \frac{4}{20} = 1800, \text{ i.e. ₹1800}$$

Ans: (D) ₹1800

9. A is twice as good a workman as B and is therefore able to finish a piece of work in 56 days less than B. In how many days can they do it working together?

Suppose B finishes the work in x days

$\Rightarrow$ A is able to finish it in $(x - 56)$ days

Time taken by A = $\frac{1}{2}$ (Time taken by B)

$$\therefore x - 56 = \frac{1}{2}x$$

$$\Rightarrow 2x - 112 = x \Rightarrow x = 112$$

$\therefore$ Time taken by B = 112 days, time taken by A = 56 days

A's 1 day's work = $\frac{1}{56}$, B's 1 day's work = $\frac{1}{112}$

$$(A + B)\text{'s 1 day's work} = \frac{1}{56} + \frac{1}{112} = \frac{2+1}{112} = \frac{3}{112}$$

A and B together can finish the work in $37\frac{1}{3}$ days

Ans: (C) $37\frac{1}{3}$ days

10. A and B can do a piece of work in 64 and 32 days respectively. They began the work together, but A leaves after some days and B finishes the remaining work in 5 days. After how many days did A leave?

A's 1 day's work = $\frac{1}{64}$, B's 1 day's work = $\frac{1}{32}$

$$(A + B)\text{'s 1 day's work} = \frac{1}{64} + \frac{1}{32} = \frac{1+2}{64} = \frac{3}{64}$$

$$\text{B's 5 days' work} = 5 \times \frac{1}{32} = \frac{5}{32}$$

$$\text{Remaining work} = 1 - \frac{5}{32} = \frac{27}{32}$$

$$(A + B)\text{'s } x \text{ days' work} = \frac{27}{32} \Rightarrow \frac{3}{64} \times x = \frac{27}{32}$$

$x = 18$, so A left after 18 days

Ans: (A) 18 days

11. A can do a piece of work in 208 days and B can do it in 104 days. They work together for 14 days. Then B leaves and A alone continues the work. 5 days after that, C joins A and the work is completed in 69 days more. In how many days can C do the work alone?

A's 1 day's work = $\frac{1}{208}$, B's 1 day's work = $\frac{1}{104}$

$$(A + B)\text{'s 1 day's work} = \frac{1}{208} + \frac{1}{104} = \frac{1+2}{208} = \frac{3}{208}$$

$$(A + B)\text{'s 14 days' work} = 14 \times \frac{3}{208} = \frac{21}{104}$$

$$\text{A's 5 days' work} = \frac{5}{208}$$

$$(A + C)\text{'s 69 days' work} = 1 - \left(\frac{21}{104} + \frac{5}{208}\right) = \frac{161}{208}$$

$$\Rightarrow (A + C)\text{'s 1 day's work} = \frac{161}{208} \div 69 = \frac{7}{624}$$

$$\text{C's 1 day's work} = \frac{7}{624} - \frac{1}{208} = \frac{7-3}{624} = \frac{4}{624} = \frac{1}{156}$$

C can finish the work in 156 days

Ans: (D) 156 days

12. A and B together can do a piece of work in 9 days. B and C together can do it in 12 days. If A is twice as good a workman as C, B alone can do it in

$$(A + B)\text{'s 1 day's work} = \frac{1}{9}, (B + C)\text{'s 1 day's work} = \frac{1}{12}$$

$$A\text{'s 1 day's work} = C\text{'s 2 days' work}$$

$$C\text{'s 2 days' work} + B\text{'s 1 day's work} = \frac{1}{9}$$

$$\Rightarrow C\text{'s 1 day's work} + (B + C)\text{'s 1 day's work} = \frac{1}{9}$$

$$\Rightarrow C\text{'s 1 day's work} + \frac{1}{12} = \frac{1}{9}$$

$$C\text{'s 1 day's work} = \frac{1}{9} - \frac{1}{12} = \frac{4-3}{36} = \frac{1}{36}$$

$$B\text{'s 1 day's work} = \frac{1}{12} - \frac{1}{36} = \frac{3-1}{36} = \frac{2}{36} = \frac{1}{18}$$

$\therefore$ B alone can finish the work in 18 days

Ans: (D) 18 days

13. A and B working alone can finish a piece of work in 11 and 24 days respectively. If they work at it alternately for a day, B beginning, in how many days will the work be finished?

$$A\text{'s 1 day's work} = \frac{1}{11}, B\text{'s 1 day's work} = \frac{1}{24}$$

$$\text{Work done in the first 2 days} = \frac{1}{24} + \frac{1}{11} = \frac{11+24}{264} = \frac{35}{264}$$

$$\text{Work done in the first 14 days} = 7 \times \frac{35}{264} = \frac{245}{264}$$

$$\text{On day 15 it is B's turn: work done in the first 15 days} = \frac{245}{264} + \frac{1}{24} = \frac{32}{33}$$

$$\text{Remaining work} = 1 - \frac{32}{33} = \frac{1}{33}$$

$$A \text{ does it in } \frac{1}{33} \div \frac{1}{11} = \frac{1}{3} \text{ day}$$

$$\therefore \text{Total no. of days} = 15 + \frac{1}{3} = 15\frac{1}{3} \text{ days}$$

Ans: (A) $15\frac{1}{3}$ days

14. A certain number of men complete a piece of work in 26 days. If there were 2 men more, the work could be finished in 2 days less. How many men were there originally?

Let the original number of men be x

$$\text{No. of men} \propto \frac{1}{\text{No. of days}}$$

$$x \times 26 = (x + 2) \times 24$$

$$26x = 24x + 48$$

$$2x = 48 \Rightarrow x = 24$$

Ans: (C) 24

15. If 8 men or 12 boys can finish a piece of work in 38 days, in how many days can 12 men and 6 boys finish it?

$$8 \text{ men} = 12 \text{ boys}$$

$$12 \text{ men} = \frac{12}{8} \times 12 = 18 \text{ boys}$$

$$12 \text{ men} + 6 \text{ boys} = 18 \text{ boys} + 6 \text{ boys} = 24 \text{ boys}$$

$$\text{No. of boys} \propto \frac{1}{\text{No. of days}}$$

$$12 \times 38 = 24 \times x \Rightarrow x = 19 \text{ days}$$

Ans: (A) 19 days

16. 8 men and 4 women working 3 hours a day finish a piece of work in 8 days; 4 men and 8 women working 6 hours a day do the same work in 5 days. Find the number of days in which the work is done by 4 men only, working 4 hours a day.

Let 1 man do m and 1 woman do w units of work in 1 hour.

$$\text{Case (i): } (8m + 4w) \times 3 \times 8 = 192m + 96w$$

$$\text{Case (ii): } (4m + 8w) \times 6 \times 5 = 120m + 240w$$

$$\text{Same work: } 192m + 96w = 120m + 240w$$

$$\Rightarrow 144w = 72m \Rightarrow 2w = m$$

So 4 women = 2 men, and $8m + 4w = 10$ men

10 men working 3 hours a day for 8 days do the same work as 4 men working 4 hours a day for x days

$$10 \times 3 \times 8 = 4 \times 4 \times x \Rightarrow x = 15 \text{ days}$$

Ans: (A) 15 days

17. If 4 men with 5 boys can earn ₹8155 in 7 days and 12 men with 3 boys can earn ₹19950 in 10 days, in what time will 7 men with 5 boys earn ₹18840?

Let 1 man earn ₹ x and 1 boy earn ₹ y in 1 day.

$$(4x + 5y) \times 7 = 8155 \Rightarrow 4x + 5y = 1165 \quad \dots (1)$$

$$(12x + 3y) \times 10 = 19950 \Rightarrow 12x + 3y = 1995 \quad \dots (2)$$

$$(1) \times 3 \Rightarrow 12x + 15y = 3495$$

$$(1) \times 3 - (2) \Rightarrow 12y = 1500 \Rightarrow y = 125$$

$$\text{From (1): } 4x = 1165 - 625 = 540 \Rightarrow x = 135$$

$$(7x + 5y)n = 18840$$

$$\Rightarrow (945 + 625)n = 18840 \Rightarrow 1570n = 18840$$

$$\Rightarrow n = 12 \text{ days}$$

Ans: (D) 12 days

18. 48 men are employed to do a piece of work which they could finish in 9 days, but the men drop off by 6 at the end of every 3 days. In what time will the work be completed?

$$\text{Work done by 48 men in 3 days} = 3 \times \frac{1}{9} = \frac{1}{3}$$

$$\text{So 1 man's work in 3 days} = \frac{1}{3} \div 48 = \frac{1}{144}$$

$$\text{Remaining work} = \frac{2}{3}, \text{ remaining men} = 42; \text{ work done by 42 men in 3 days} = 42 \times \frac{1}{144} = \frac{7}{24}$$

$$\text{Remaining work} = \frac{3}{8}, \text{ remaining men} = 36; \text{ work done by 36 men in 3 days} = 36 \times \frac{1}{144} = \frac{1}{4}$$

$$\text{Remaining work} = \frac{1}{8}, \text{ remaining men} = 30; \text{ work done by 30 men in 3 days} = \frac{5}{24}$$

$$\frac{1}{8} \text{ work is done by 30 men in } \frac{1}{8} \div \frac{5}{24} \times 3 = 1\frac{4}{5} \text{ days}$$

$$\text{Total time} = 3 + 3 + 3 + 1\frac{4}{5} = 10\frac{4}{5} \text{ days}$$

Ans: (C) $10\frac{4}{5}$ days

19. A can do half as much again as B can do in the same time. B alone can do a piece of work in 54 days. In how many days can A alone finish it?

If B does x , A does $\frac{x}{2} + x = \frac{3x}{2}$ in the same time

Ratio of working of A and B = $\frac{3}{2} : 1 = 3 : 2$

Ratio of time taken for the same work = $2 : 3$

Time taken by B = $3k = 54 \Rightarrow k = 18$

Time taken by A = $2k = 36$ days

Ans: (D) 36 days

20. A man can row downstream at the rate of 22 km/hr and upstream at 16 km/hr. The man's rate in still water is

Given $x + y = 22$ and $x - y = 16$

Adding, $2x = 38 \Rightarrow x = 19$ km/hr

Ans: (B) 19 km/hr

21. A man rows upstream 12 km and downstream 21 km, taking 2 hours each time. The man's speed in still water is

Speed downstream: $x + y = \frac{21}{2}$ km/hr

Speed upstream: $x - y = \frac{12}{2}$ km/hr

Adding, $2x = \frac{21}{2} + \frac{12}{2} = \frac{33}{2}$

$x = \frac{33}{4} = 8.25$ km/hr

Ans: (C) 8.25 km/hr

22. A man can row 2 km/hr in still water and he finds that it takes him thrice as long to row up as to row down the river. The rate of the stream is

Let the rate of the stream be y km/hr

Same distance, thrice the time, so speed down = $3 \times$ speed up

Given $3(2 - y) = 2 + y$

$\Rightarrow 6 - 3y = 2 + y \Rightarrow 4y = 4$

$\Rightarrow y = 1$ km/hr

Ans: (B) 1 km/hr

23. A man can row 8 km/hr in still water. If the river is running at 4 km/hr, it takes him 2 hours to row to a place and back. The place is at a distance of

Let the required distance be d km

Speed downstream = $8 + 4 = 12$ km/hr

Speed upstream = $8 - 4 = 4$ km/hr

Time = $\frac{\text{Distance}}{\text{Speed}}$, so $\frac{d}{12} + \frac{d}{4} = 2$

$\Rightarrow d \left(\frac{1}{12} + \frac{1}{4} \right) = 2$

$\Rightarrow d \times \frac{1}{3} = 2$

$\Rightarrow d = 6$ km

Ans: (A) 6 km

24. The current of a stream runs at the rate of 5 km/hr. A motor boat goes 40 km upstream and back again to the starting point in 3 hours 20 minutes. The speed of the motor boat in still water is

Let the speed of the boat in still water be x km/hr

Speed upstream = $(x - 5)$ km/hr, speed downstream = $(x + 5)$ km/hr

Total time = 200 min = $\frac{200}{60}$ hr = $\frac{10}{3}$ hr

$$\frac{40}{x-5} + \frac{40}{x+5} = \frac{10}{3}$$

$$\Rightarrow 40 \left(\frac{(x+5)+(x-5)}{(x-5)(x+5)} \right) = \frac{10}{3}$$

$$\Rightarrow \frac{80x}{x^2-25} = \frac{10}{3}$$

$$\Rightarrow 240x = 10x^2 - 250$$

$$\Rightarrow x^2 - 24x - 25 = 0$$

$$\Rightarrow (x - 25)(x + 1) = 0$$

$$\Rightarrow x = 25 \text{ (or) } x = -1 \text{ (rejected, a speed cannot be negative)}$$

$\therefore$ Speed of the boat in still water = 25 km/hr

Ans: (C) 25 km/hr

25. A man can row 30 km upstream and 84 km downstream in 9 hours, while he can row 70 km upstream and 14 km downstream in 8 hours. The speed of the man in still water is

Let the speed of the man in still water be x km/hr and the rate of the current y km/hr.

Speed upstream = $(x - y)$ km/hr, speed downstream = $(x + y)$ km/hr. Put $p = \frac{1}{x-y}$, $q = \frac{1}{x+y}$

$$\frac{30}{x-y} + \frac{84}{x+y} = 9 \Rightarrow 30p + 84q = 9 \quad \dots (1)$$

$$\frac{70}{x-y} + \frac{14}{x+y} = 8 \Rightarrow 70p + 14q = 8 \quad \dots (2)$$

$$(1) \times 7 \Rightarrow 210p + 588q = 63; (2) \times 3 \Rightarrow 210p + 42q = 24$$

$$(1) \times 7 - (2) \times 3 \Rightarrow 546q = 39 \Rightarrow q = \frac{1}{14}$$

$$\text{From (1): } 30p + 6 = 9 \Rightarrow 30p = 3 \Rightarrow p = \frac{1}{10}$$

$$\text{So } x - y = 10 \text{ and } x + y = 14$$

$$\text{Adding, } 2x = 24 \Rightarrow x = 12; \text{ then } y = 14 - 12 = 2$$

Ans: (B) 12 km/hr