

Arithmetic (Level 2)

MCQ Test, Set 03

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. If A can finish a piece of work in 34 days, then A's 1 day's work is
A. $\frac{1}{33}$ **B.** 34 **C.** $\frac{1}{34}$ **D.** $\frac{33}{34}$
2. 18 men can do a piece of work in 14 days. How many men are needed to finish it in 21 days?
A. 12 men **B.** 25 men **C.** 27 men **D.** 11 men
3. If the number of men to do a work is changed in the ratio 5 : 4, the time taken by them to finish the work changes in the ratio
A. 25 : 16 **B.** 5 : 4 **C.** 16 : 25 **D.** 4 : 5
4. A can do a piece of work in 21 days and B alone can do it in 24 days. How much time will both take to finish the work?
A. 45 days **B.** $11\frac{1}{5}$ days **C.** $22\frac{1}{2}$ days **D.** 3 days
5. A and B together can finish a piece of work in 18 days. A alone can do it in 54 days. In how many days can B alone do it?
A. 27 days **B.** $13\frac{1}{2}$ days **C.** 72 days **D.** 36 days
6. A and B can do a piece of work in 70 days; B and C in 84 days; C and A in 105 days. In how many days can C alone finish it?
A. 280 days **B.** 168 days **C.** 56 days **D.** 120 days
7. A can do a piece of work in 18 days and B can finish it in 12 days. They work together for 4 days and then B goes away. In how many days will A finish the remaining work?
A. $15\frac{1}{2}$ days **B.** 14 days **C.** 8 days **D.** $5\frac{1}{3}$ days
8. A can do a piece of work in 7 days while B alone can do it in 42 days. With the help of C they can finish it in 3 days. If they are paid ₹3780 for the whole work, what is C's share?
A. ₹270 **B.** ₹1260 **C.** ₹1890 **D.** ₹1620
9. A is twice as good a workman as B and is therefore able to finish a piece of work in 23 days less than B. In how many days can they do it working together?
A. 46 days **B.** 23 days **C.** $34\frac{1}{2}$ days **D.** $15\frac{1}{3}$ days

10. A and B can do a piece of work in 12 and 56 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. 9 days B. $25\frac{1}{2}$ days C. 51 days D. 14 days
-
11. A can do a piece of work in 120 days and B can do it in 30 days. They work together for 5 days. Then B leaves and A alone continues the work. 7 days after that, C joins A and the work is completed in 56 days more. In how many days can C do the work alone?
- A. $76\frac{4}{11}$ days B. 330 days C. 210 days D. 154 days
-
12. A and B together can do a piece of work in 15 days. B and C together can do it in 24 days. If A is twice as good a workman as C, B alone can do it in
- A. 40 days B. 20 days C. 80 days D. 60 days
-
13. A and B working alone can finish a piece of work in 7 and 20 days respectively. If they work at it alternately for a day, B beginning, in how many days will the work be finished?
- A. 10 days B. $11\frac{5}{7}$ days C. 11 days D. $10\frac{5}{7}$ days
-
14. A certain number of men complete a piece of work in 63 days. If there were 5 men more, the work could be finished in 7 days less. How many men were there originally?
- A. 45 B. 40 C. 50 D. 35
-
15. If 2 men or 10 boys can finish a piece of work in 26 days, in how many days can 4 men and 6 boys finish it?
- A. 10 days B. 26 days C. $67\frac{3}{5}$ days D. $5\frac{1}{5}$ days
-
16. 8 men and 8 women working 3 hours a day finish a piece of work in 12 days; 7 men and 2 women working 6 hours a day do the same work in 12 days. Find the number of days in which the work is done by 8 men only, working 5 hours a day.
- A. $14\frac{2}{5}$ days B. 18 days C. 30 days D. 12 days
-
17. If 2 men with 3 boys can earn ₹1715 in 7 days and 6 men with 5 boys can earn ₹4760 in 8 days, how much does 1 man earn in a day?
- A. ₹49 B. ₹70 C. ₹35 D. ₹105
-
18. 14 men are employed to do a piece of work which they could finish in 15 days, but the men drop off by 2 at the end of every 6 days. In what time will the work be completed?
- A. $17\frac{1}{2}$ days B. 15 days C. 18 days D. $17\frac{2}{5}$ days
-
19. A can do half as much again as B can do in the same time. A alone can do a piece of work in 42 days. In how many days can B alone finish it?
- A. 63 days B. 84 days C. 28 days D. 21 days
-
20. A man can row downstream at the rate of 24 km/hr and upstream at 13 km/hr. The rate of the current is
- A. 37 km/hr B. 11 km/hr C. 5.5 km/hr D. 18.5 km/hr
-

21. A man rows upstream 31 km and downstream 62 km, taking 5 hours each time. The man's speed in still water is
- A. 3.1 km/hr B. 9.3 km/hr C. 12.4 km/hr D. 18.6 km/hr
-
22. A man can row 13 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. 9.75 km/hr B. 3.25 km/hr C. 10 km/hr D. 6.5 km/hr
-
23. A man can row 18 km/hr in still water. If the river is running at 6 km/hr, it takes him 3 hours to row to a place and back. The place is at a distance of
- A. 36 km B. 24 km C. 27 km D. 48 km
-
24. The current of a stream runs at the rate of 4 km/hr. A motor boat goes 24 km upstream and back again to the starting point in 1 hour 45 minutes. The speed of the motor boat in still water is
- A. 24 km/hr B. 32 km/hr C. 36 km/hr D. 28 km/hr
-
25. A man can row 15 km upstream and 7 km downstream in 4 hours, while he can row 25 km upstream and 7 km downstream in 6 hours. The rate of the current is
- A. 2 km/hr B. 6 km/hr C. 1 km/hr D. 5 km/hr
-

Key sheet

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

Solutions

1. If A can finish a piece of work in 34 days, then A's 1 day's work is

A finishes the whole work in 34 days.

$$\therefore \text{A's 1 day's work} = \frac{1}{34}$$

Ans: (C) $\frac{1}{34}$

2. 18 men can do a piece of work in 14 days. How many men are needed to finish it in 21 days?

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

$$18 \times 14 = x \times 21$$

$$x = \frac{18 \times 14}{21} = 12 \text{ men}$$

Ans: (A) 12 men

3. If the number of men to do a work is changed in the ratio 5 : 4, the time taken by them to finish the work changes in the ratio

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

$$\frac{T_1}{T_2} = \frac{M_2}{M_1} = \frac{4}{5}$$

$$\therefore T_1 : T_2 = 4 : 5$$

Ans: (D) 4 : 5

4. A can do a piece of work in 21 days and B alone can do it in 24 days. How much time will both take to finish the work?

$$\text{A's 1 day's work} = \frac{1}{21}$$

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

$$\therefore (\text{A} + \text{B})\text{'s 1 day's work} = \frac{1}{21} + \frac{1}{24} = \frac{8+7}{168} = \frac{15}{168} = \frac{5}{56}$$

$$\therefore \text{Both together can finish the work in } \frac{56}{5} \text{ days} = 11\frac{1}{5} \text{ days}$$

Ans: (B) $11\frac{1}{5}$ days

5. A and B together can finish a piece of work in 18 days. A alone can do it in 54 days. In how many days can B alone do it?

$$(\text{A} + \text{B})\text{'s 1 day's work} = \frac{1}{18}$$

$$\text{A's 1 day's work} = \frac{1}{54}$$

$$\Rightarrow \text{B's 1 day's work} = \frac{1}{18} - \frac{1}{54} = \frac{3-1}{54} = \frac{2}{54} = \frac{1}{27}$$

$$\therefore \text{B alone can finish the work in 27 days.}$$

Ans: (A) 27 days

6. A and B can do a piece of work in 70 days; B and C in 84 days; C and A in 105 days. In how many days can C alone finish it?

$$(A + B)\text{'s 1 day's work} = \frac{1}{70}$$

$$(B + C)\text{'s 1 day's work} = \frac{1}{84}$$

$$(C + A)\text{'s 1 day's work} = \frac{1}{105}$$

$$\text{Adding, } 2(A + B + C)\text{'s 1 day's work} = \frac{1}{70} + \frac{1}{84} + \frac{1}{105} = \frac{6+5+4}{420} = \frac{15}{420} = \frac{1}{28}$$

$$\Rightarrow (A + B + C)\text{'s 1 day's work} = \frac{1}{56}$$

$\therefore$ A, B, C together can finish the work in 56 days.

$$C\text{'s 1 day's work} = \frac{1}{56} - \frac{1}{70} = \frac{1}{280}, \text{ so C alone takes 280 days}$$

Ans: (A) 280 days

7. A can do a piece of work in 18 days and B can finish it in 12 days. They work together for 4 days and then B goes away. In how many days will A finish the remaining work?

$$A\text{'s 1 day's work} = \frac{1}{18}$$

$$B\text{'s 1 day's work} = \frac{1}{12}$$

$$(A + B)\text{'s 1 day's work} = \frac{1}{18} + \frac{1}{12} = \frac{2+3}{36} = \frac{5}{36}$$

$$(A + B)\text{'s 4 days' work} = 4 \times \frac{5}{36} = \frac{5}{9}$$

$$\text{Remaining work} = 1 - \frac{5}{9} = \frac{4}{9}$$

$$\text{This work is done by A in } \frac{4}{9} \times 18 = 8 \text{ days}$$

Ans: (C) 8 days

8. A can do a piece of work in 7 days while B alone can do it in 42 days. With the help of C they can finish it in 3 days. If they are paid ₹3780 for the whole work, what is C's share?

$$A\text{'s 1 day's work} = \frac{1}{7}$$

$$B\text{'s 1 day's work} = \frac{1}{42}$$

$$(A + B)\text{'s 1 day's work} = \frac{1}{7} + \frac{1}{42} = \frac{6+1}{42} = \frac{7}{42} = \frac{1}{6}$$

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

$$C\text{'s 1 day's work} = \frac{1}{3} - \frac{1}{6} = \frac{2-1}{6} = \frac{1}{6}$$

$$\text{Consider } \frac{1}{7} : \frac{1}{42} : \frac{1}{6} = \frac{6}{42} : \frac{1}{42} : \frac{7}{42} = 6 : 1 : 7$$

$\therefore$ ₹3780 must be divided in the ratio 6 : 1 : 7 ($6 + 1 + 7 = 14$)

$$C\text{'s share} = 3780 \times \frac{7}{14} = 1890, \text{ i.e. ₹1890}$$

Ans: (C) ₹1890

9. A is twice as good a workman as B and is therefore able to finish a piece of work in 23 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 $(x - 23)$ days

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

$$\therefore x - 23 = \frac{1}{2}x$$

$$\Rightarrow 2x - 46 = x \Rightarrow x = 46$$

$\therefore$ Time taken by B = 46 days, time taken by A = 23 days

A's 1 day's work = $\frac{1}{23}$, B's 1 day's work = $\frac{1}{46}$

$$(A + B)\text{'s 1 day's work} = \frac{1}{23} + \frac{1}{46} = \frac{2+1}{46} = \frac{3}{46}$$

A and B together can finish the work in $15\frac{1}{3}$ days

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

10. A and B can do a piece of work in 12 and 56 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 = $\frac{1}{12}$, B's 1 day's work = $\frac{1}{56}$

$$(A + B)\text{'s 1 day's work} = \frac{1}{12} + \frac{1}{56} = \frac{14+3}{168} = \frac{17}{168}$$

$$\text{B's 5 days' work} = 5 \times \frac{1}{56} = \frac{5}{56}$$

$$\text{Remaining work} = 1 - \frac{5}{56} = \frac{51}{56}$$

$$(A + B)\text{'s } x \text{ days' work} = \frac{51}{56} \Rightarrow \frac{17}{168} \times x = \frac{51}{56}$$

$x = 9$, so A left after 9 days

Ans: (A) 9 days

11. A can do a piece of work in 120 days and B can do it in 30 days. They work together for 5 days. Then B leaves and A alone continues the work. 7 days after that, C joins A and the work is completed in 56 days more. In how many days can C do the work alone?

A's 1 day's work = $\frac{1}{120}$, B's 1 day's work = $\frac{1}{30}$

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

$$(A + B)\text{'s 5 days' work} = 5 \times \frac{1}{24} = \frac{5}{24}$$

$$\text{A's 7 days' work} = \frac{7}{120}$$

$$(A + C)\text{'s 56 days' work} = 1 - \left(\frac{5}{24} + \frac{7}{120}\right) = \frac{11}{15}$$

$$\Rightarrow (A + C)\text{'s 1 day's work} = \frac{11}{15} \div 56 = \frac{11}{840}$$

$$\text{C's 1 day's work} = \frac{11}{840} - \frac{1}{120} = \frac{11-7}{840} = \frac{4}{840} = \frac{1}{210}$$

C can finish the work in 210 days

Ans: (C) 210 days

12. A and B together can do a piece of work in 15 days. B and C together can do it in 24 days. If A is twice as good a workman as C, B alone can do it in

$$(A + B)\text{'s 1 day's work} = \frac{1}{15}, (B + C)\text{'s 1 day's work} = \frac{1}{24}$$

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

$$C\text{'s 2 days' work} + B\text{'s 1 day's work} = \frac{1}{15}$$

$$\Rightarrow C\text{'s 1 day's work} + (B + C)\text{'s 1 day's work} = \frac{1}{15}$$

$$\Rightarrow C\text{'s 1 day's work} + \frac{1}{24} = \frac{1}{15}$$

$$C\text{'s 1 day's work} = \frac{1}{15} - \frac{1}{24} = \frac{8-5}{120} = \frac{3}{120} = \frac{1}{40}$$

$$B\text{'s 1 day's work} = \frac{1}{24} - \frac{1}{40} = \frac{5-3}{120} = \frac{2}{120} = \frac{1}{60}$$

$\therefore$ B alone can finish the work in 60 days

Ans: (D) 60 days

13. A and B working alone can finish a piece of work in 7 and 20 days respectively. If they work at it alternately for a day, B beginning, in how many days will the work be finished?

$$A\text{'s 1 day's work} = \frac{1}{7}, B\text{'s 1 day's work} = \frac{1}{20}$$

$$\text{Work done in the first 2 days} = \frac{1}{20} + \frac{1}{7} = \frac{7+20}{140} = \frac{27}{140}$$

$$\text{Work done in the first 10 days} = 5 \times \frac{27}{140} = \frac{27}{28}$$

$$\text{Remaining work} = 1 - \frac{27}{28} = \frac{1}{28}$$

$$\text{On day 11 it is B's turn; B does } \frac{1}{28} \text{ in } \frac{1}{28} \div \frac{1}{20} = \frac{5}{7} \text{ day}$$

$$\therefore \text{Total no. of days} = 10 + \frac{5}{7} = 10\frac{5}{7} \text{ days}$$

Ans: (D) $10\frac{5}{7}$ days

14. A certain number of men complete a piece of work in 63 days. If there were 5 men more, the work could be finished in 7 days less. How many men were there originally?

Let the original number of men be x

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

$$x \times 63 = (x + 5) \times 56$$

$$63x = 56x + 280$$

$$7x = 280 \Rightarrow x = 40$$

Ans: (B) 40

15. If 2 men or 10 boys can finish a piece of work in 26 days, in how many days can 4 men and 6 boys finish it?

$$2 \text{ men} = 10 \text{ boys}$$

$$4 \text{ men} = \frac{10}{2} \times 4 = 20 \text{ boys}$$

$$4 \text{ men} + 6 \text{ boys} = 20 \text{ boys} + 6 \text{ boys} = 26 \text{ boys}$$

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

$$10 \times 26 = 26 \times x \Rightarrow x = 10 \text{ days}$$

Ans: (A) 10 days

16. 8 men and 8 women working 3 hours a day finish a piece of work in 12 days; 7 men and 2 women working 6 hours a day do the same work in 12 days. Find the number of days in which the work is done by 8 men only, working 5 hours a day.

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

$$\text{Case (i): } (8m + 8w) \times 3 \times 12 = 288m + 288w$$

$$\text{Case (ii): } (7m + 2w) \times 6 \times 12 = 504m + 144w$$

$$\text{Same work: } 288m + 288w = 504m + 144w$$

$$\Rightarrow 144w = 216m \Rightarrow 2w = 3m$$

So 8 women = 12 men, and $8m + 8w = 20$ men

20 men working 3 hours a day for 12 days do the same work as 8 men working 5 hours a day for x days

$$20 \times 3 \times 12 = 8 \times 5 \times x \Rightarrow x = 18 \text{ days}$$

Ans: (B) 18 days

17. If 2 men with 3 boys can earn ₹1715 in 7 days and 6 men with 5 boys can earn ₹4760 in 8 days, how much does 1 man earn in a day?

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

$$(2x + 3y) \times 7 = 1715 \Rightarrow 2x + 3y = 245 \quad \dots (1)$$

$$(6x + 5y) \times 8 = 4760 \Rightarrow 6x + 5y = 595 \quad \dots (2)$$

$$(1) \times 3 \Rightarrow 6x + 9y = 735$$

$$(1) \times 3 - (2) \Rightarrow 4y = 140 \Rightarrow y = 35$$

$$\text{From (1): } 2x = 245 - 105 = 140 \Rightarrow x = 70$$

Ans: (B) ₹70

18. 14 men are employed to do a piece of work which they could finish in 15 days, but the men drop off by 2 at the end of every 6 days. In what time will the work be completed?

$$\text{Work done by 14 men in 6 days} = 6 \times \frac{1}{15} = \frac{2}{5}$$

$$\text{So 1 man's work in 6 days} = \frac{2}{5} \div 14 = \frac{1}{35}$$

$$\text{Remaining work} = \frac{3}{5}, \text{ remaining men} = 12; \text{ work done by 12 men in 6 days} = 12 \times \frac{1}{35} = \frac{12}{35}$$

$$\text{Remaining work} = \frac{9}{35}, \text{ remaining men} = 10; \text{ work done by 10 men in 6 days} = \frac{2}{7}$$

$$\frac{9}{35} \text{ work is done by 10 men in } \frac{9}{35} \div \frac{2}{7} \times 6 = 5\frac{2}{5} \text{ days}$$

$$\text{Total time} = 6 + 6 + 5\frac{2}{5} = 17\frac{2}{5} \text{ days}$$

Ans: (D) $17\frac{2}{5}$ days

19. A can do half as much again as B can do in the same time. A alone can do a piece of work in 42 days. In how many days can B alone finish it?

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

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

$$\text{Ratio of time taken for the same work} = 2 : 3$$

$$\text{Time taken by A} = 2k = 42 \Rightarrow k = 21$$

$$\text{Time taken by B} = 3k = 63 \text{ days}$$

Ans: (A) 63 days

20. A man can row downstream at the rate of 24 km/hr and upstream at 13 km/hr. The rate of the current is

$$\text{Given } x + y = 24 \text{ and } x - y = 13$$

$$\text{Subtracting, } 2y = 11 \Rightarrow y = 5.5 \text{ km/hr}$$

Ans: (C) 5.5 km/hr

21. A man rows upstream 31 km and downstream 62 km, taking 5 hours each time. The man's speed in still water is

$$\text{Speed downstream: } x + y = \frac{62}{5} \text{ km/hr}$$

$$\text{Speed upstream: } x - y = \frac{31}{5} \text{ km/hr}$$

$$\text{Adding, } 2x = \frac{62}{5} + \frac{31}{5} = \frac{93}{5}$$

$$x = \frac{93}{10} = 9.3 \text{ km/hr}$$

Ans: (B) 9.3 km/hr

22. A man can row 13 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

$$\text{Given } 3(13 - y) = 13 + y$$

$$\Rightarrow 39 - 3y = 13 + y \Rightarrow 4y = 26$$

$$\Rightarrow y = 6.5 \text{ km/hr}$$

Ans: (D) 6.5 km/hr

23. A man can row 18 km/hr in still water. If the river is running at 6 km/hr, it takes him 3 hours to row to a place and back. The place is at a distance of

Let the required distance be d km

$$\text{Speed downstream} = 18 + 6 = 24 \text{ km/hr}$$

$$\text{Speed upstream} = 18 - 6 = 12 \text{ km/hr}$$

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}, \text{ so } \frac{d}{24} + \frac{d}{12} = 3$$

$$\Rightarrow d \left(\frac{1}{24} + \frac{1}{12} \right) = 3$$

$$\Rightarrow d \times \frac{1}{8} = 3$$

$$\Rightarrow d = 24 \text{ km}$$

Ans: (B) 24 km

24. The current of a stream runs at the rate of 4 km/hr. A motor boat goes 24 km upstream and back again to the starting point in 1 hour 45 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 = $(x - 4)$ km/hr, speed downstream = $(x + 4)$ km/hr

Total time = 105 min = $\frac{105}{60}$ hr = $\frac{7}{4}$ hr

$$\frac{24}{x-4} + \frac{24}{x+4} = \frac{7}{4}$$

$$\Rightarrow 24 \left(\frac{(x+4)+(x-4)}{(x-4)(x+4)} \right) = \frac{7}{4}$$

$$\Rightarrow \frac{48x}{x^2-16} = \frac{7}{4}$$

$$\Rightarrow 192x = 7x^2 - 112$$

$$\Rightarrow 7x^2 - 192x - 112 = 0$$

$$\Rightarrow (x - 28)(7x + 4) = 0$$

$$\Rightarrow x = 28 \text{ (or) } x = -\frac{4}{7} \text{ (rejected, a speed cannot be negative)}$$

$\therefore$ Speed of the boat in still water = 28 km/hr

Ans: (D) 28 km/hr

25. A man can row 15 km upstream and 7 km downstream in 4 hours, while he can row 25 km upstream and 7 km downstream in 6 hours. The rate of the current 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 $p = \frac{1}{x-y}$, $q = \frac{1}{x+y}$

$$\frac{15}{x-y} + \frac{7}{x+y} = 4 \Rightarrow 15p + 7q = 4 \quad \dots (1)$$

$$\frac{25}{x-y} + \frac{7}{x+y} = 6 \Rightarrow 25p + 7q = 6 \quad \dots (2)$$

$$(1) \times 5 \Rightarrow 75p + 35q = 20; (2) \times 3 \Rightarrow 75p + 21q = 18$$

$$(1) \times 5 - (2) \times 3 \Rightarrow 14q = 2 \Rightarrow q = \frac{1}{7}$$

$$\text{From (1): } 15p + 1 = 4 \Rightarrow 15p = 3 \Rightarrow p = \frac{1}{5}$$

$$\text{So } x - y = 5 \text{ and } x + y = 7$$

$$\text{Adding, } 2x = 12 \Rightarrow x = 6; \text{ then } y = 7 - 6 = 1$$

Ans: (C) 1 km/hr