13 Time and Work

EXERCISE 13A

For SSC GD & MTS Exams

1. 15 men can do a job in 12 days and 18 women can do it in 15 days. How many days will 5 men and 3 women take to complete the job? **SSC MTS 7/10/2021 (Shift-2)**

(a) $28\frac{5}{7}$ (b) $25\frac{5}{7}$ (c) $23\frac{5}{7}$ (d) $27\frac{5}{7}$

2. A and B can do a work in 15 days and 25 days, respectively. They worked together for 5 days, after which B was replaced by C and the remaining work was completed by A and C in the next 4 days. In how many days will C alone complete the same work? **SSC MTS 7/10/2021 (Shift-1)**

(a) 24 days (b) 20 days (c) 15 days (d) 25 days

3. A certain number of persons can complete a piece of work in 46 days, if there were 8 persons more, the work could be finished in 16 days less. How many persons were originally there? **SSC MTS 7/10/2021 (Shift-1)**

(a) 25 (b) 18 (c) 15 (d) 20

4. 84 persons take 56 days to complete a certain task. When one-fourth of the task was completed, one-seventh of the workers left. How many days in all does it take to complete the entire task? **SSC MTS 6/10/2021 (Shift-3)**

(a) 60 (b) 64 (c) 66 (d) 63

5. A labourer was engaged for a certain number of days for ₹8,500, but due to his absence for some days, he was paid ₹ 6,050 only. Find the number of days that he was absent. **SSC MTS 6/10/2021 (Shift-1)**

(a) 49 (b) 45 (c) 44 (d) 42

6. 14 men complete a work in 18 days. If 21 men are employed, then the time required to complete the same work will be: **SSC MTS 6/10/2021 (Shift-1)**

(a) 14 (b) 10 (c) 15 (d) 12

7. A can do a piece of work in 8 days. The efficiency of B is half the efficiency of A, and the efficiency of C, is 50% more than the efficiency of B. If all the three work together, what part of the work will they finish in 2 days? **SSC MTS 8/10/2021 (Shift-3)**

(a) $\frac{3}{8}$ (b) $\frac{3}{4}$ (c) $\frac{9}{32}$ (d) $\frac{9}{16}$

8. A and B can do a certain work in 12 and 18 days respectively. They work together for 5 days. The remaining work was completed by C alone in $27\frac{1}{2}$ days. What part of the same work can be completed by A, B and C together in 6 days? **SSC MTS 08/10/2021 (Shift-2)**

(a) $\frac{5}{6}$ (b) $\frac{9}{10}$ (c) $\frac{14}{15}$ (d) $\frac{29}{30}$

9. A fort had provision for 400 men for 60 days. After 35 days, 100 more men came. For how many days would the provisions last, assuming all men consumed food equally? **SSC MTS 8/10/2021 (Shift-1)**

(a) 30 (b) 35 (c) 20 (d) 28

10. 8 women and 8 girls can finish a piece of work in 6 days, whereas 4 women and 10 girls can finish it in 8 days. In how many days will one girl finish working alone? **SSC MTS 8/10/2021 (Shift-1)**

(a) 120 (b) 144 (c) 72 (d) 84

11. 'A' can complete a work in 15 days and 'B' can complete the same work in 20 days. Working together, in how many days will they complete 70% of the same work? **SSC MTS 7/10/2021 (Shift-3)**

(a) 7 (b) 6 (c) 5 (d) 8

12. 4 men and 5 women can earn ₹8,800 in 8 days. 7 men and 10 women can earn ₹10,250 in 5 days. In how many days will 8 men and 12 women earn ₹21,600? **SSC MTS 11/10/2021 (Shift-3)**

(a) 8 days (b) 9 days (c) 12 days (d) 10 days

13. A can do a piece of work in 12 days for 6 hours per day, and B can do it in 8 days for 7 hours per day. How long will they take to do the work, working together, for 9 hours a day? **SSC MTS 11/10/2021 (Shift-2)**

(a) 4 days (b) $\frac{5}{2}$ days

(c) $\frac{9}{2}$ days (d) $\frac{7}{2}$ days

14. Varun can do a work in 28 days. In how many days can the work be completed by Sarvesh, if the efficiency of Sarvesh is 40% more than that of Varun? **SSC MTS 11/10/2021 (Shift-2)**

(a) 18 days (b) 16 days (c) 20 days (d) 15 days

15. A is 30% more efficient than B. If B finishes a work in 13 days, then in how many days will A finish the same work? **SSC MTS 11/10/2021 (Shift-1)**

(a) 11 (b) 9 (c) 10 (d) 12

16. 12 men can complete a painting work in 8 days. However, 16 women can complete the same painting work in 12 days. 8 men started painting the house. After 6 days of painting, 2 men were replaced by 4 women. Now how many days will they take to complete the remaining painting? **SSC MTS 11/10/2021 (Shift-1)**

(a) 4 (b) 6 (c) 8 (d) 5

17. A and B can do a certain amount of work in 25 days and 40 days, respectively. They work together for 8 days. C alone completes the remaining work in 24 days. A and C together will complete 60% of the same work in: **SSC MTS 08/10/2021 (Shift-3)**

(a) 8 days (b) 9 days (c) 10 days (d) 12 days

18. A Alone can complete a piece of work for ₹4,800 in 16 days, but by engaging an assistant, the work Is completed in 12 days. Find the share to be received by the assistant. **SSC MTS 12/10/2021 (Shift-3)**
(a) ₹1500 (b) ₹1300 (c) ₹1400 (d) ₹1200

19. If 24 men can do a work in 15 days by working 12 hours daily, then in how many days will 36 men be able to do double the quantum of work, by working 10 hours daily? **SSC MTS 12/10/2021 (Shift-2)**
(a) 30 (b) 32 (c) 24 (d) 12

20. Four persons, P, Q, R, S were engaged for doing a task, with the condition that P; Q; R; S work, respectively, on (Mondays, Thursdays); (Tuesdays, Fridays); (Wednesdays, Saturdays). (Sundays). The task was begun on a Monday, and got completed on the 15th day, which was also a Monday. If the efficiencies of P, Q, R, S in respect of doing this task were in the proportion 1 : 2 : 3 : 4, then in how many days could R complete the task, working alone without break? **SSC MTS 12/10/2021 (Shift-2)**
(a) 13 (b) 10 (c) 11 (d) 12

21. If A and B can do a piece of work in 20 days, and A alone can do the same work in 30 days, then in how many days can B alone complete the same work? **SSC MTS 12/10/2021 (Shift-1)**
(a) 60 (b) 40 (c) 75 (d) 50

22. A, B and C can do a piece of work in 10, 15 and 30 days, respectively. If B and C both assist A on every third day, then in how many days can the work be completed? **SSC MTS 12/10/2021 (Shift-1)**
(a) $8\frac{1}{2}$ (b) 5 (c) 8 (d) $7\frac{1}{2}$

23. If 4 men can reap a field in 5 days working 9 hours a day, in how many hours can 10 men reap the same field working 3 days? **SSC MTS 14/10/2021 (Shift-1)**
(a) 5 (b) 4 (c) 6 (d) 3

24. The daily wages of men and women are in the ratio of 4 : 3. 15 men and 25 women together earn ₹5,400. Find the total wages of one man and 5 women? **SSC MTS 13/10/2021 (Shift-3)**
(a) ₹740 (b) ₹680 (c) ₹860 (d) ₹760

25. 'A' alone can complete a work for ₹6,500 in 15 days. With the help of 'B', the work is completed in 12 days. The share of 'B' is: **SSC MTS 13/10/2021 (Shift-3)**
(a) ₹1500 (b) ₹1200 (c) ₹2300 (d) ₹1300

26. A and B together can do a piece of work in 24 days. B and C together can do it in 36 days. If A is thrice as good a workman as C. In how many days can B alone do the work? **SSC MTS 13/10/2021 (Shift-3)**
(a) 48 days (b) 36 days (c) 45 days (d) 40 days

27. For a 14-day camp, sufficient supplies are available for 300 people. 50 more people arrive on day 1 itself. For how many days will these supplies be sufficient for all these people? **SSC MTS 13/10/2021 (Shift-2)**
(a) 12 (b) 11 (c) 10 (d) 13

28. If 4 men can reap a field in 5 days working 9 hours a day. In how many days can 10 men reap the same field working 6 hours a day? **SSC MTS 13/10/2021 (Shift-1)**
(a) 5 (b) 4 (c) 3 (d) 2

29. 'A' is 3 times as good a workman as 'B' and therefore is able to complete a job in 36 days less than 'B'. In how many days will they finish it working together? **SSC MTS 13/10/2021 (Shift-1)**
(a) $12\frac{1}{2}$ (b) $15\frac{1}{2}$ (c) $14\frac{1}{2}$ (d) $13\frac{1}{2}$

30. Jack takes thrice as much time as Peter and twice as much as Justin to finish a work; working together they can finish the work in 15 days. The lime (In days) Justin will take to finish the work alone is: **SSC MTS 18/10/2021 (Shift-2)**
(a) 60 (b) 90 (c) 75 (d) 45

SOLUTIONS

1. (b) 15 M × 12 = 18 W × 15
2M = 3W

$$5 \text{ men and } 3 \text{ women} = \frac{15 \times 12}{5 + 3 \times \frac{2}{3}}$$

$$= \frac{180}{7} = 25\frac{5}{7} \text{ days}$$

2. (b)
A 15
B 25 > 75 < 5 + 3] 8 × 5 = 40
C □ −40
35

A + C = 4 days = 35

$$1 = \frac{35}{4}$$

$$\text{Efficiency of C} = \frac{35}{4} - 5 = \frac{15}{4}$$

$$C = \frac{75}{\frac{15}{4}} = 20 \text{ days}$$

3. (c) 46 − 16 = 30 days

46 days
30 days] 16 = 30 × 8

Person = 15

4. (d) Total Works = 84 × 56 = 4704

$$\frac{1}{4}\text{th works} = 56 \times \frac{1}{4} = 14 \text{ days}$$

$$\text{Remaining works} = 4704 \times \frac{3}{4} = 3528$$

$$\text{Remaining works} = \frac{3528}{72} = 49 \text{ days}$$

$$\text{Total days} = 14 + 49 = 63$$

5. (a) 8500 : 6050
170 : 121
⊖
= 49
49 days

6. (d) $\frac{14 \times 18}{21} = 12$ days

7. (d)
A 8 24
B 32 2 +] 9 × 2 = 18
C 3

$\frac{18}{32} = \frac{9}{16}$ Part

8. (b) A 12, B 18 → 36 ; 3, 2, $\boxed{\frac{2}{5}}$; $\frac{-25}{11}$; +] $5 \times 5 = 25$

$\frac{55}{2} = 11$

$\Rightarrow 1 = \frac{2}{5}$

$A + B + C = 8 + 2 + \frac{2}{5} = \frac{27}{5} \Rightarrow$

6 days of work of $(A + B + C)$

$\frac{27}{5} \times 6 = \frac{162}{5}$ units

Parts $= \frac{162}{5 \times 36} = \frac{9}{10}$ Part

9. (c) 60 ⊖ 35

$\frac{25 \times 400}{500} = 20$ days

10. (b) (8 w + 8 g) 6 = (4 w + 10 g) 8

1 w = 2 g

1 girl $= \frac{(8 \times 2 + 8)6}{1} = 24 \times 6 = 144$ days

11. (b) A 15, B 20 → 60 ; 4, 3 ; +] 7

$\frac{60}{7} \times \frac{70}{100} = 6$ days

12. (b) $(4m + 5w)\frac{8}{8800} = (7m + 10w)\frac{5}{10250}$

2m = 3w

$8m, 12w \Rightarrow \frac{\left(4 \times \frac{3}{2} + 5\right)\frac{8}{8800}}{\left(8 \times \frac{3}{2} + 12\right) \times \frac{1}{21600}}$

$= 11 \times \frac{8}{8800} \times \frac{21600}{24} = 9$ days

13. (d) A 12 × 6 = 72, B 8 × 7 = 56 → 504 ; 7, 9 ; +] 16

$\frac{504}{16 \times 9} = \frac{7}{2}$ days

14. (c) Varun 28 → x → 140 ; 5, 7 ; Sarvesh □

40% $= \frac{2}{5} \Rightarrow \frac{7 \to S}{5 \to V}$

$\frac{140}{7} = 20$ days

15. (c) A □, B 13 → 130 ; 13, 10 ; x

30% $= \frac{3}{10} \Rightarrow \frac{13 \to A}{10 \to B}$

$A = \frac{130}{13} = 10$ days

16. (b) 12 m × 8 = 16 w × 12

1 m = 2 w

$8m \Rightarrow \frac{12 \times 8}{8} = 12$ days

$8m \times 6 = 48$

2m = 4w $\Rightarrow 4 \times 2 = 8$

$\frac{96 - 48}{8} = 6$ days

17. (c) A 25, B 40 → 200 ; 8, 5 ; $\frac{-104}{96}$; $\boxed{4}$; +] $13 \times 8 = 104$

C □

$c \Rightarrow 24 = 96$

1 = 4

$A + C = 8 + 4 = 12$

60% work $\Rightarrow \frac{200}{12} \times \frac{60}{100} = 10$ days

18. (d) A 16, A + B 12 → 48 ; 3, 4 ; ⊖] ①

48 = 4800

1 = 100

B = 12 × 1 × 100 = ₹1,200

19. (d) $\frac{24 \times 15 \times 12}{1} = \frac{36 \times 0 \times 10}{2}$

D = 12 days

20. (c) P → 1 × 5 = 5

Q → 2 × 4 = 8

R → 3 × 4 = 12

S → $4 \times 2 = \frac{8}{33}$

R completes the task $= \frac{33}{3} = 11$ days

21. (a) A + B 20, A 30 → 60 ; 3, 2 ; ⊖] ①

$B = \frac{60}{1} = 60$ days

22. (c) A 10, B 15, C 30 → 30 ; 3, 2, 1 ; $\frac{-24}{6}$; +] $6 \times 1 = 6$; × 2 = 6 ; 12

3 days = 12 work

6 days = 24 work

$A \Rightarrow \frac{6}{3} = 2$ days

Total time = 6 + 2 = 8 days

23. (c) 4 × 5 × 9 = 10 × 3 × H

H = 6 hours

24. (d) 4 × 15 + 3 × 25 = ₹5400
1 = ₹40
1 m and 5 w = 1 × 4 × 40 + 5 × 3 × 40
= ₹760

25. (d) A 15 / A + B 12 > 60 < 4 / 5] 1
60 = ₹6,500
$1 = ₹\frac{325}{3}$
$B = 12 \times 1 \times \frac{325}{3} = ₹1300$

26. (a) $\frac{A}{C} = \frac{3}{1}$
A + B 24 / B + C 36 > 72 × 2 / 144 < $3_{x2} = 6 = {}^{A}3 + {}^{B}3$ / $2_{x2} = 4 = {}^{B}3 + {}^{C}1$
$B = \frac{144}{3} = 48$ days

27. (a) $\frac{14 \times 300}{350 \times 1} = 12$ days

28. (c) 10 × D × 6 = 4 × 5 × 9
D = 3 days

29. (d)
A [1 / B [3 > 3 (× 18 = 54) < 3 / 1] 4
2 = 36
1 = 18
$A + B = \frac{54}{4} = 13\frac{1}{2}$ days

30. (d)
Justin 3 / Jack 6 / Peter 2 > 6 (×15 = 90) < 2 / 1 / 3] 6
$\frac{6}{6} = 1$
1 = 15 days
$\text{Justin} = \frac{90}{2} = 45$ days

EXERCISE 13B

For SSC CHSL Exam

1. 45 people can repair a road in 10 days, working 6 hours a day. In how many days can 30 people, working 6 hours a day, complete the same work?
SSC CHSL 10/06/2022 (Shift-3)
(a) 12 (b) 10 (c) 18 (d) 15

2. A and B together can finish a job in 40 days. A can do the same job on her own in 60 days. How long will B take to do the three-fourth of the same work all alone?
SSC CHSL 10/06/2022 (Shift-2)
(a) 90 days (b) 100 days
(c) 80 days (d) 120 days

3. 40 men can complete a piece of work in 18 days. 9 days after they start working together, 5 more men join them. How many days will they now take to complete the remaining work?
SSC CHSL 10/06/2022 (Shift-1)
(a) 9 days (b) 8 days (c) 6 days (d) 7 days

4. 3 men and 7 women can complete a task in 10 days. On the other hand, 4 men and 6 women, take 8 days to complete the same task. How long will it take 10 women to complete the same task?
SSC CHSL 09/06/2022 (Shift-3)
(a) 36 days (b) 43 days (c) 48 days (d) 40 days

5. If 15 boys earn ₹900 in 5 days, then how much will 20 boys earn in 7 days?
SSC CHSL 09/06/2022 (Shift-2)
(a) ₹1580 (b) ₹1680 (c) ₹1540 (d) ₹1650

6. If 15 people take 5 days to complete a job, in how many days can 25 people finish that work?
SSC CHSL 09/06/2022 (Shift-1)
(a) 2 (b) 4 (c) 3 (d) 1

7. If Priya and Renu can do a job in 12 hours (working together at their respective constant speeds) and Priya can do the job alone in 18 hours, in how many hours can Renu do the job alone?
SSC CHSL 08/06/2022 (Shift-3)
(a) 36 (b) 24 (c) 27 (d) 21

8. A, B and C can do a work in 5 days, 6 days and 10 days, respectively. Working together in how many days they finish the same work?
SSC CHSL 08/06/2022 (Shift-2)
(a) $2\frac{1}{7}$ (b) $4\frac{1}{7}$ (c) $3\frac{1}{7}$ (d) $1\frac{1}{7}$

9. X does a work in 6 days, while Y does it in 12 days. If they work alternatively and X begins, in how many days will the work be finished?
SSC CHSL 08/06/2022 (Shift-1)
(a) 7 (b) 5 (c) 8 (d) 6

10. Pranjal takes twice as much time as Vikram or thrice as much time as Ashwin to finish a piece of work. Working together, they can finish the work in 6 days. Vikram can do the work alone in:
SSC CHSL 07/06/2022 (Shift-3)
(a) 18 days (b) 9 days (c) 15 days (d) 12 days

11. Tim is thrice as good a workman as Joya and together they finish a piece of work in 75 days. In how many days will Tim alone finish the work?
SSC CHSL 07/06/2022 (Shift-2)
(a) 25 days (b) 100 days (c) 50 days (d) $\frac{1}{100}$ days

12. Raghav and Adltya can complete a work in 3 days. Aditya and Ishaan can complete the same work in 4 days. Ishaan and Raghav can complete it in 6 days. How many days will it take for Raghav, Aditya and Ishaan, combined together, to complete the same amount of work?
SSC CHSL 07/06/2022 (Shift-1)
(a) $2\frac{4}{5}$ (b) $3\frac{2}{3}$ (c) $3\frac{3}{4}$ (d) $2\frac{2}{3}$

13. A can complete a work in 5 days and B can complete the same work in 10 days. If A and B work alternately, starting with A, in how many days will they complete the work?
SSC CHSL 06/06/2022 (Shift-3)
(a) $6\frac{2}{5}$ days (b) $6\frac{1}{2}$ days
(c) $7\frac{2}{5}$ days (d) $7\frac{1}{2}$ days

14. If 30 men can harvest a meadow in 7 days, in how many days can 21 men harvest the same meadow?
SSC CHSL 06/06/2022 (Shift-2)
(a) 10 (b) 14 (c) 12 (d) 15

15. A work is done by P & Q, Q & R and R & P in 12, 15 and 20 days, respectively. How many days will P alone take to complete the work?
SSC CHSL 06/06/2022 (Shift-2)
(a) 35 days (b) 25 days (c) 40 days (d) 30 days

16. A, B and C can complete a piece of work in 5, 20 and 60 days respectively. Working together, they can complete the same work in how many days?
SSC CHSL 05/07/2019 (Shift-1)
(a) $3\frac{1}{4}$ (b) $3\frac{3}{4}$ (c) $5\frac{1}{4}$ (d) $5\frac{3}{4}$

17. A, B and C can complete a piece of work in 4, 28 and 56 days respectively. Working together, they can complete the same work in how many days?
SSC CHSL 04/07/2019 (Shift-3)
(a) $5\frac{5}{17}$ (b) $3\frac{1}{17}$ (c) $5\frac{1}{17}$ (d) $3\frac{5}{17}$

18. A, B and C can complete a piece of work in 10, 20 and 60 days respectively. Working together, they can complete the same work in how many days?
SSC CHSL 04/07/2019 (Shift-2)
(a) 5 (b) 6 (c) 10 (d) 8

19. If 30 persons take 10 days to complete a certain work working 8 hours a day. Then 40 persons should work how many hours a day so that the work is completed in 6 days?
SSC CHSL 02/07/2019 (Shift-1)
(a) 6 (b) 10 (c) 8 (d) 12

SOLUTIONS

1. (d) $30 \times 6 \times D = 45 \times 10 \times 6$
$D = 15$ days

2. (a) A + B 40, A 60 → 120 → 3, 2 → − → 1
B done $\frac{3}{4}$ part $= \frac{120}{1} \times \frac{3}{4} = 90$ days

3. (b) $40 \xrightarrow{+5} = 45$
$18 \xrightarrow{-9} = 9$
Remaining work $= \frac{40 \times 9}{45} = 8$ days

4. (d) (3 m + 7 w) 10 = (4 m + 6 w) 8
1 m = 9 w
$10w \Rightarrow \frac{(3 \times 9 + 7)10}{10} = 40$ days

5. (b) $\frac{20 \times 7}{Rs} = \frac{15 \times 5}{900}$ = ₹1680

6. (c) $D = \frac{15 \times 5}{25} = 3$

7. (a) P + R 12, P 18 → 36 → 3, 2 → − → 1
$R = \frac{36}{1} = 36$ hours

8. (a) A 5, B 6, C 10 → 30 → 6, 5, 3 → − → + 14
$\frac{30}{14} = \frac{15}{7} = 2\frac{1}{7}$ days

9. (c) x 6, y 12 → 12 → 2 × 1 = 2, 1 × 1 = 1 → 3 works = 2 days
$\frac{12}{3} = 4 \times 2 = 8$ days

10. (a) Ashwin 2, Pranjal 6, Vikram 3 → 6 → 3, 1, 2 → + → 6
×6 → 18 days
$\frac{6}{6} = 1$
1 = 6 days

11. (b) Tim 1, Joya 3 → 3 → 3, 1 → + → 4
Tim = 1 × 100
= 100 days
$\frac{3}{4} = 75$ days
1 = 100

12. (d) R + A 3, A + I 4, I + R 6 → 12 → 4, 3, 2 → − → + 9
$A + B + C = \frac{12}{9} \times 2 = 2\frac{2}{3}$ days

13. (b) A 5, B 10 → 10 → −9, 1 → 2 × 1 = 2, 1 × 1 = 1 → +
4 work = 2 days
× 3 ↓ × 3 ↓
9 work = 6 days
Last day A → $\frac{1}{2}$
Total time $= 6 + \frac{1}{2} = 6\frac{1}{2}$ days

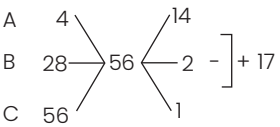
14. (a) $D = \frac{30 \times 7}{21} = 10$ days

15. (d) P + Q 12, Q + R 15, R + P 20 → 60 → 5, 4, 3 → − → + 12
= 2 ⇐ P
P + Q + R 10 6
$P + Q + R = \frac{60}{12} \times 2 = 10$ days
$P = \frac{60}{12} = 30$ days

16. (b) A 5, B 20, C 60 → 60 → 12, 3, 1 → + → 16

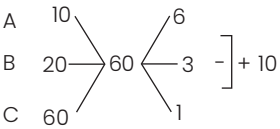
$$\frac{60}{16} = \frac{15}{4} = 3\frac{3}{4} \text{ days}$$

17. (d)



$$\frac{56}{17} = 3\frac{5}{17} \text{ days}$$

18. (b)



$$\frac{60}{10} = 6 \text{ days}$$

19. (b) $40 \times 6 \times H = 30 \times 10 \times 8$

$H = 10$ hours

EXERCISE 13C

For SSC CGL & CPO Exams

1. A can complete a work in $11\frac{1}{2}$ days. B is 25% more efficient than A and C is 50% efficient than B. Working A, B, and C will complete the same work.

SSC CGL 24/08/2021 (Shift-1)

(a) 8 days (b) 4 days (c) 3 days (d) 5 days

2. To do a certain work, the ratio of efficiencies of X and Y is 5 : 7. Working together, X and Y can complete the same work in 70 days. X alone started the work and left after 42 days. Y alone will complete the remaining work in:

SSC CGL 23/08/2021 (Shift-3)

(a) 90 days (b) 96 days (c) 80 days (d) 72 days

3. To do a certain work efficiencies of A and B are in the ratio 7 : 5, Working together, they can complete the work in $17\frac{1}{2}$ days. In how many days, will B alone complete 50% of the same work?

SSC CGL 23/08/2021 (Shift-2)

(a) 15 (b) 30 (c) 42 (d) 21

4. A can do a piece of work in 2 days, and B can do five times the same work in 15 days when they work for ten hours a day. If they work together, then how many hours in addition to a days' work will they require to complete the work?

SSC CGL 20/08/2021 (Shift-3)

(a) 2 (b) 1 (c) 0 (d) 3

5. Five men can complete work in 20 days. Ten women can complete the same work in 15 days. Two men and six women started working together. After 5 days, three women left the work and 9 new men joined the work. The group continued working together till the end of the work. In how many days will they be able to do the remaining work?

SSC CGL 18/08/2021 (Shift-3)

(a) 14 (b) 19 (c) $18\frac{1}{3}$ (d) $16\frac{2}{3}$

6. A can complete a work in 60 days, B is 25% more efficient than A. They work together for 15 days. C alone completes the remaining work in 14 days, B and C together will complete $\frac{5}{8}$ th part of the original work in:

SSC CGL 18/08/2021 (Shift-3)

(a) 18 days (b) 16 days (c) 12 days (d) 15 days

7. A and B together can complete a certain work in 20 days whereas B and C together can complete it in 24 days. If A is twice as good a workman as C, then in what time will B alone can do 40% of the same work?

SSC CGL 18/08/2021 (Shift-1)

(a) 12 days (b) 10 days
(c) 18 days (d) 15 days

8. Two men and 7 women can complete a work in 28 days whereas 6 men and 16 women can do the same work in 11 days. In how many days can 7 men complete the same work?

SSC CGL 17/08/2021 (Shift-1)

(a) 12 (b) 11 (c) 24 (d) 22

9. Samir and Puneet can Complete the same work in 10 days and 15 days respectively. The work was assigned for ₹4500. After working together for 9 days Samir and Puneet involved Ashok. The work was completed in total 5 days. What amount (in ₹) was paid to Ashok?

SSC CGL 16/08/2021 (Shift-3)

(a) 750 (b) 1500 (c) 1071 (d) 800

10. A and B can complete a work 15 days and 10 days respectively. They started doing the work together but after 4 days B had to leave. Then A working with a new worker C completed the remaining work in 3 days. If C works alone, in how many days he can do 40% of the same work?

SSC CGL 16/08/2021 (Shift-2)

(a) 9 (b) 8 (c) 10 (d) $8\frac{1}{2}$

11. P and Q together can do a work in 12 days, P alone can do the same work in 36 days, In how many days can Q alone complete two-third part of the same work?

SSC CPO 25/11/2020 (Shift-3)

(a) 12 (b) 18 (c) 15 (d) 21

12. A and B can do a job in 10 days and 5 days, respectively. They worked together for two days, after which B was replaced by C and the work was finished in the next three days. How long will C alone take to finish 40% of the job?

SSC CPO 25/11/2020 (Shift-1)

(a) 18 days (b) 10 days (c) 15 days (d) 12 days

13. A is twice as good as a workman as B, and together they finish a piece of work in 13 days. In how many days will A alone finish the work?

SSC CPO 25/11/2020 (Shift-1)

(a) $9\frac{1}{4}$ (b) 39 (c) $19\frac{1}{2}$ (d) 41

14. P and Q together can do a work in 12 days. P alone can do the same work in 18 days. In how many days can Q alone complete two-third part of the same work?

SSC CPO 24/11/2020 (Shift-3)

(a) 21 (b) 36 (c) 24 (d) 30

15. The efficiencies of A, B and C are in the ratio of 5:3:2. Working together, they can complete a task in 21 hours. In how many hours will B alone complete 40% of that task?

SSC CGL 13/06/2019 (Shift-2)

(a) 28 (b) 24 (c) 35 (d) 21

16. The efficiencies of A, B and C are in the ratio of 2:5:3. Working together, they can complete a task in 12 days. In how many days can A alone complete 30% of that task?

SSC CGL 13/06/2019 (Shift-1)

(a) 15 (b) 16 (c) 20 (d) 18

17. The efficiencies of A, B and C are 2:5:3. Working together, they can complete a task in 9 days. In how many days will C alone complete 40% of that task?
SSC CGL 12/06/2019 (Shift-3)
(a) 14 (b) 16 (c) 15 (d) 12

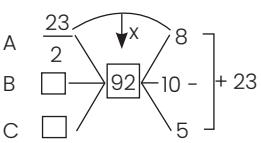
18. A is 50% more efficient than B and C is 40% less efficient than B. Working together, they can complete a task in 10 days. In how many days, will A alone complete 150% of that task?
SSC CGL 11/06/2019 (Shift-3)
(a) 33 (b) 35 (c) 28 (d) 31

19. A is 40% more efficient than B and C is 20% less efficient than B. Working together, they can complete a task in 20 hours. In how many hours, will A alone complete 35% of the task?
SSC CGL 11/06/2019 (Shift-2)
(a) 13 (b) 15 (c) 16 (d) 14

20. A is 40% more efficient than B and C is 20% less efficient than B. Working together, they can finish a task in 15 days. In how many days, will B alone complete 75% of the task?
SSC CGL 11/16/2019 (Shift-1)
(a) 36 (b) 48 (c) 32 (d) 44

SOLUTIONS

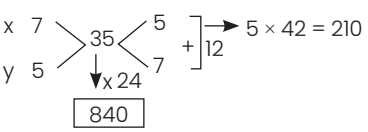
1. (b)



A	B	C
4	5 →	5
2	← 2	1
8	10	5

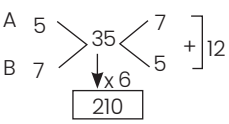
$$A+B+C=\frac{92}{23}=4 \text{ days}$$

2. (a)



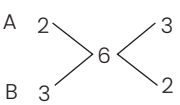
$$\frac{35}{12}=70 \text{ days}$$
$$1=24$$
$$Y=\frac{840-210}{7}=\frac{630}{7}=90 \text{ days}$$

3. (d)



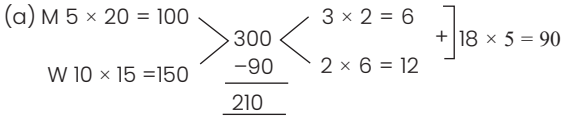
$$\frac{35}{12}=\frac{35}{2} \text{ days}$$
$$1=6$$
$$B=\frac{210}{5}\times\frac{1}{2}=21 \text{ days}$$

4. (a)



$$B=\frac{15}{5}=3 \text{ days}$$
$$A+B=\frac{6\times10}{5}=12h$$
$$12-10=2h$$

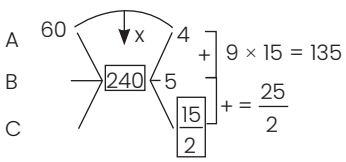
5. (a)



3 W left and 1 M joined the work
M = (2 + 1), W = 6 − 3 = 3

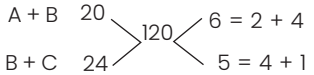
$$3M+3W=\frac{210}{3\times3+3\times2}=\frac{210}{15}=14 \text{ days}$$

6. (c)



$$25\%=\frac{1}{4}$$
Remaining work = 240 − 135 = 105
(c) 105 = 14 days
$$1=\frac{105}{14}=\frac{15}{2}$$
$$B+C \text{ works } \frac{5}{8} \text{ part}=\frac{240}{\frac{25}{2}}\times\frac{5}{8}=12 \text{ days}$$

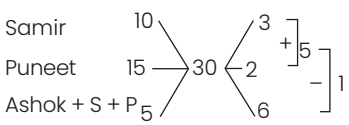
7. (a)



$$\frac{A}{C}=\frac{2}{1}$$
$$40\% \text{ works by B}=\frac{120}{4}\times\frac{2}{5}=12 \text{ days}$$

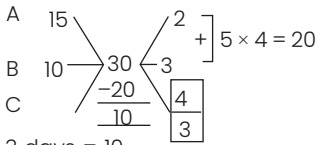
8. (d) (2 M + 7 W) 28 = (6 M + 16 W) 11
1 M = 2 W
$$7M \Rightarrow \frac{\left(2+\frac{7}{2}\right)\times28}{7}=11\times2=22 \text{ days}$$

9. (a)

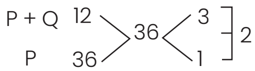


$$A \Rightarrow \frac{4500}{30}\times5\times1=₹750$$

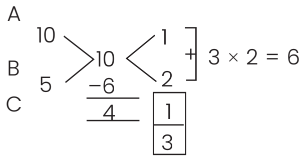
10. (a)



3 days = 10
$$1=\frac{10}{3}(A+C)$$
$$C=\frac{10}{3}-2=\frac{4}{3}$$
$$40\% \text{ works done by C}=\frac{30}{\frac{4}{3}}\times\frac{2}{5}=9 \text{ days}$$

11. (a) 

$Q = \frac{36}{2} \times \frac{2}{3} = 12$ days

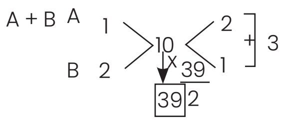
12. (d) 

$(A + C)4 = 3$ days

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

$C = \frac{4}{3} - 1 = \frac{1}{3}$

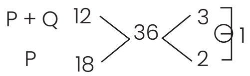
$C = \frac{10}{\frac{1}{3}} \times \frac{2}{5} = 12$ days

13. (c) 

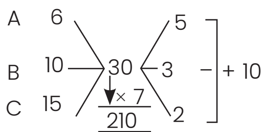
$\frac{2}{3} = 13$ days

$1 = \frac{39}{2}$

$A = \frac{39}{2} = 19\frac{1}{2}$ days

14. (c) 

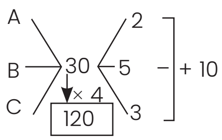
$Q = \frac{36}{1} \times \frac{2}{3} = 24$ days

15. (a) 

$\frac{30}{10} = 21$hours

$1 = 7$

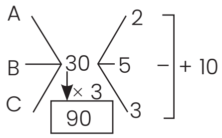
$B = \frac{210}{3} \times \frac{2}{5} = 28$ hours

16. (d) 

$\frac{30}{10} = 12$ days

$1 = 4$

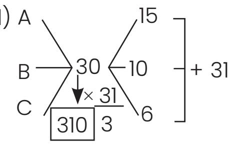
$A = \frac{120}{2} \times \frac{3}{10} = 18$ days

17. (d) 

$\frac{30}{10} = 9$ days

$1 = 3$

$C = \frac{90}{3} \times \frac{2}{5} = 12$ days

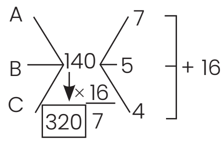
18. (d) 

A	B	C
3	2 →	2
5	← 5	3
15	10	6

$\frac{30}{31} = 10$ days

$1 = \frac{31}{3}$

$A = \frac{310}{15} \times \frac{3}{2} = 31$ days

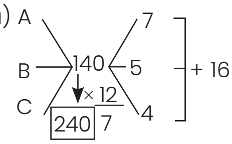
19. (c) 

A	B	C
7	5	
	5	4
7	5	4

$\frac{140}{16} = 20$ hours

$1 = \frac{16}{7}$

$A = \frac{320}{7} \times \frac{35}{100} = 16$ hours

20. (a) 

A	B	C
7	5	
	5	4
7	5	4

$\frac{140}{16} = 15$ days

$1 = \frac{12}{7}$

$B = \frac{240}{5} \times \frac{3}{4} = 36$ days