Name of the Bundle	Advanced Bundle V1	Subject	Aptitude
Topic	Time and Work, Pipe & Cistern	Last updated on	21 August 2025

TIME AND WORK, PIPE AND CISTERN

1) A can do work in 20 days and B in 30 days. In how many days A and B together can complete a work?

a. 20 days b.10 days c.12 days d.25 days

ANS: c.12 days

METHOD -1 Basic

Speed of A = 1/20

Speed of B = 1/30

Speed of A+B = 1/20+1/30 = (3+2)/60 = 5/60 = 1/12

A & B together will complete the same job in 12 days

METHOD -2(short cut)

A+B= AxB /A+B

=30x20/30+20

=30x20/50

=12 days

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METHOD -3(short cut)

Days	Total Work	Efficient
30		2
	60	
20		3
A+B		5

=60/5

A+B = 12 DAYS

METHOD – 4 (short cut)

	DAYS	EFFICIENT
A=====	20 ------	3
B=====	30 ------	2

5-----60(GOOD EFFICIENT DAYS)

3-----12 (GOOD EFFICIENT)

METHOD – 5 (short cut)

x. (1/20+1/30) = 1 (60)
3x+2x=60

5x=60

x=60/5

X=12 DAYS

Name of the Bundle	Advanced Bundle V1	Subject	Aptitude
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METHOD – 6 (short cut)

Working together, given:

20A=1

30B=1

So:

60A=3

60B=2

60(A+B)=3+2=5

12(A+B)=1

They will finish in 12 days……

2) A and B together can finish a job in 8 days. A alone can finish a job in 12 days. How many days will it take B alone to do the same job?

a. 20 days b.24 days c.18 days d.16 days

ANS: b.24 days

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METHOD -1 Basic

Speed of A+B = 1/8

Speed of A = 1/12

Speed of B = 1/8 - 1/12 = (3-2)/24 = 1/24 = 1/24

A & B together will complete the same job in 24 days

METHOD -2 (short cut)

B= (AxB) x A/A-(A+B)

=12x8/12-8

=12x8/4

=24 days

METHOD -3(short cut)

Days	Total Work	Efficient
8		3
	24	
12		2
B		1

=24/1

B = 24 DAYS

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METHOD – 4 (short cut)

DAYS EFFICIENT

A====== 12------ 2

A+B===== 8 ------ 3

3-----12(GOOD EFFICIENT DAYS)

1-----24 (GOOD EFFICIENT)

3) A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

a.5 b.5 ½ c.6 d.8

ANS: c.6

EXPLANATIONS(Basic)

We know that A can complete a task in 18 days.

So one day work of A,=1/18

=1/18

B can do the identical task in 15 days. So one day work of B,=1/15

=1/15

B quit her job after 10 days on the job. So 10 days work of B,=(1/15×10)

=1/15×10=2/3

=2/3

Whole work can be considered as 1. So, the remaining work=(1−2/3)

=1-2/3

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=1/3

=1/3 Thus, the number of days in which 1/3 work is done by A=(18×1/3)

=18×1/3=6 days

=6 days
So, A can finish the remaining work in 6 days.
Hence, the correct option is 3.

EXPLANATIONS (short cut)

A----▯18 5

90

B----▯ 15 6

B's one daywork =6 units

B's 10 days work =6x10 =60 units

Work left 90-60=30 units

A's one daywork =5 units

A does 30/5=6 units

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4) A does 80% of the work in 20 days. He then calls B and they together finish the remaining work in 3 days. How long B alone would take to do the whole work?

a. 23 days b.37 days c.37.5 days d.40 days

ANS: c.37.5 days

EXPLANATIONS

METHOD – 1 basic

Suppose, there are 100 units of work to be completed.

'A' completes 80% of the work, that is, 80 units of work in 20 days.

A's efficiency = 80/20 = 4 units of work per day

Total time taken by 'A' to complete 100 units of work = 100 / 4 = 25 days

If 'A' was to work alone, it would take him 25 days to complete 100 units of work (4 units per day).

But 'B' pitches in and they complete the remaining 20 units of work in 3 days.

'A' would have worked on his normal efficiency, finishing 12 units of work (4 units per day) in 3 days.

So, remaining 8 units of work would have been completed by 'B' in 3 days.

B's efficiency = 8/3 units of work per day

Total time taken by 'B' to complete 100 units of work = 100 x 3/8 = 37.5 days

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METHOD – 2 (short cut)

A---- 80%== 20

A---- 100%==25

A+B------20%==3

A+B------100%==15

B= 25X15/25-15

B=25x15/10=37.5

METHOD – 3 (short cut)

80% ----- 20x12/8=30

100%--------37.5

5) A can complete a work in 20 days and B in 30 days. A worked alone for 4 days, and then B completed the remaining work along with C in 18 days. In how many days can C working alone complete the work?

a. 30 days b.60 days c.90 days d.40 days

ANS: c.90 days

METHOD – 1 (short cut)

A=4/20 B=18/30 C=18

/--------/----------------/--------/ full work

1/5 3/5 1/5

C==?

1=== 18

5=== 90 TOTAL WORK

Name of the Bundle	Advanced Bundle V1	Subject	Aptitude
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6) A and B can do a piece of work in 12 days, B and C in 15 days and C and A in 20 days, A, B and C can do the work in:

a) 6 b) 8 c) 12 d) 10

ANS: d) 10

EXPLANATIONS (short cut)

A+B----□12 5

B+C----□ 15 60 4

C+A---□20 3

A+B+C ? 60/6 6

A+B+C=10

Name of the Bundle	Advanced Bundle V1	Subject	Aptitude
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7) Twenty women can do work in sixteen days. Sixteen men can complete the same work in fifteen days. What is the ratio between the capacity of a man and a woman?

a. 3 : 4 b.4 : 3 c.5 : 3 d. Data inadequate

ANS: b.4 : 3

EXPLANATIONS (short cut)

20W = 16DAYS

16W = 20 DAYS

16M = 15 DAYS

20W = 15 M

W=3 & M=4

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8) 24 men can complete the work in 16 days. 32 women can complete the same work in 24 days. 16 men and 16 women worked for 12 days. How many more men are required to complete the remaining work in 2 days?

a) 16 b) 48 c) 24 d) 32

ANS: c) 24

EXPLANATIONS (short cut)

24M===== 16 D

Or

16M=====24 D

32W===== 24 D

Or

16W ===== 48 D

16M +16W =?

16M + 8W=24M

M	D
24	16
24	12 Completed
24	4 (remaining days)
)	)
24+24	2 days

Ans: 24

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9) 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?

a.3 b.5 c.7 d. Cannot be determined

ANS: c.7

EXPLANATIONS (short cut)

10w =======7 10c======14

5w=======14

5w + 10 c = 7 days

10) A works twice as fast as B. If B can complete a work in 12 days independently, the number of days in which A and B can together finish the work in:

a. 4 days b.6 days c.8 days d.18 days

ANS: a. 4 days

EXPLANATIONS (short cut)

A	B	A+B (EFFICIENT)
2	1	3
12		4 DAYS (Ans)

11) Sakshi can do a piece of work in 20 days. Tanya is 25% more

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efficient than Sakshi. The number of days taken by Tanya to do the same piece of work is:

a.15 b.16 c.18 d.25

ANS: b.16

EXPLANATIONS (short cut)

T		S	T+S (EFFICIENT)
5	=	4	3
16 DAYS (Ans)		20	

12) A is thrice as good as workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:

a.20 days b.22 ½ c.25 days d.30 days

ANS: b.22 ½

EXPLANATIONS (short cut)

A	B	A+B(EFFICIENT)
3	1	2
30	90	60

A+B= 90 x 30/120 = 22.5

13) Initial A and B together can do a piece of work in 30 days. A

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having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole work alone?

a.20 days b.60 days c.50 days d.100 days

ANS: b.60 days

EXPLANATIONS (short cut)

Total work = efficiency * no.of days

(A+B) * 30 = A * 16 + B * 44

30A - 16A = 44B - 30B

A/B =1/1

Substitute this efficiency values either (A+B) * 30 or (A * 16 + B * 44) for finding total work

T.W = (1+1) * 30 = 60

B alone to complete a work is= 60 days

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14) A garrison of 3000 men has provision for 30 days. If after 10 days, they are reinforced by 1000 men, how long will the provisions last?

a. 10 days b.15 days c.20days d.11 days

ANS: b.15 days

EXPLANATIONS (short cut)

3000 x 20 = 4000 x?

? = 15

15) A and B can finish a work together in 12 days, and B and C together in 16 days. If A alone works for 5 days and then B alone continues for 7 days, then the remaining work is done by C in 13 days. In how many days can C alone finish the complete work?

a. 20 days b.24 days c.20days d.22 days

ANS: b.24 days

EXPLANATIONS (short cut)

5a + 7b + 13c = Total Work [LCM(12,16)]

5(a+b) +2(b+c)+ 11c = lcm

5x4+2x3+11 x = 48

11x=22

X= 2

Full work 48/2=24

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16) 4 persons work 4 hours per day and complete a job in 4 days. If 8 people work 8 hours per day. In how many days the job will be completed?

a. 8 days b.1 day c.2 days d.4 days

ANS: b.1 day

EXPLANATIONS

Chain rule

(M1 × D1 × T1 × W2) = (M2 × D2 × T2 × W1)

4x4x4=8x8xd

d = 1

17) If 7 spiders make 7 webs in 7 days, then 1 spider will make 1 web in how many days?

A) 1 B) 1/7 C) 7 D) 49

ANS: C) 7

Chain rule

EXPLANATIONS

7x7 = 1x7xd

D=7

Name of the Bundle	Advanced Bundle V1	Subject	Aptitude
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18) A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?

a. Rs. 375 b. Rs. 400 c. Rs. 600 d. Rs. 800

ANS: b. Rs. 400

EXPLANATIONS:

METHOD 1

Work done by A in one day = 1/6.

Work done by B in one day = 1/8

Work done by C in one day = 1/3 - (1/6+1/8)

= 1/3 -7/24

= (8-7)/24 = 1/24.

A's wage : B's wage : C's wage = 1/6 : 1/8 : 1/24 = 4: 3: 1

Therefore, C's share = (1/8) * 3200 = Rs 400.

METHOD 2

Ratio of A:B:C = 1/6 : 1/8 : 1/24

LCM of 6, 8, 24 = 24

A:B:C = 4:3:1

Total = 4 + 3 + 1 = 8 parts = 3200

C's share = (1/8) × 3200 = Rs. 400.

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EXPLANATIONS (short cut)

A= 6 DAYS

B=8 DAYS

A+B+C= 3 DAYS

A	A	A	A
B	B	B	C

Full work =4800

8 → 4800

1 → 400 ANS

19) M did a piece of work in 5 days, N did the same work in 9 days. Total wages Rs. 4200. Find N's share.

A) 1500 B) 2000 C) 1000 D) 1200

Ans: A) 1500

Explanation:

Work ratio M:N = 1/5 : 1/9 = 9:5
Total = 14 parts → N's share = 5/14 × 4200 = 1500.

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20) If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

a.4 days b.5 days c.6 days d.7 days

ANS: a.4 days

EXPLANATIONS

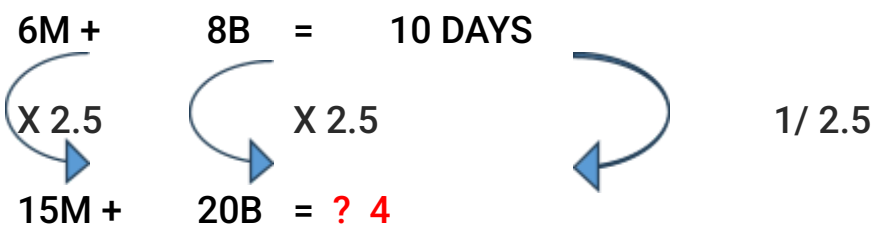
Given that
6 men and 8 boys can do a piece of work in 10 days
26 men and 48 boys can do the same in 2 days

As the work done is equal,
10(6M + 8B) = 2(26M + 48B)
60M + 80B = 52M + 96B
=> M = 2B
=> B = M/2 ……(1)

Now Put (1) in 15M + 20B
=> 15M + 10M = 25M
Now, 6M + 8B in 10 days
=> (6M + 4M) 10 = 100M
Then D(25M) = 100M

=> D = 4 days.

EXPLANATIONS (short cut)



21) If 3 men or 6 boys can do a job in 20 days, how many days

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would it take 6 men and 8 boys to do it?

a.4 days b.5 days c.6 days d.7 days

ANS: c.6 days

EXPLANATIONS

3 men = 6 boys, or

1 man = 2 boys

Given: 3 men = 1 job = 20 days, or

Question:

6 men and 8 boys, or

6 men and 4 men = 10 men

Answer:

3 men = 1 job = 20 days, or

1 man = 1 job = (20x3=60) days

10 men = 1 job = (60/10) = 6 days

Alternate:

Given:

6 boys = 1 job = 20 days, or

Question:

6 men and 8 boys, or

12 boys and 8 boys = 20 boys

Answer:

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6 boys = 1 job = 20 days, or

1 boy = 1 job = 20x6 = 120 days

20 boys = 1 job = 120/20 = 6 days

EXPLANATIONS (short cut)

6B x 20 = (12B+8B) x d

6 DAYS=ANS

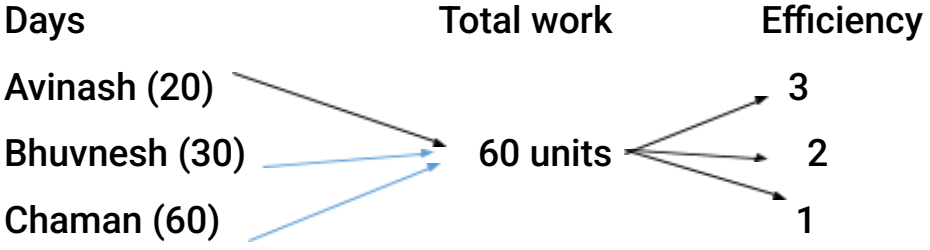
22) Avinash, Bhuvnesh and Chaman can complete a piece of work in 20, 30 and 60 days respectively. In how many days can Avinash complete the work if he is assisted by Bhuvnesh and Chaman on every third day?

a. 15 b. 18 c. 16 d. 12

ANS: a. 15

EXPLANATIONS (short cut)

Calculation:



On first day Avinash will work alone and on third day Avinash will work

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with Bhuvnesh and Chaman.

Day 1 = Avinash = 3 units

Day 2 = Avinash = 3 units

Day 3 = Avinash + Bhuvnesh + Chaman = 3 + 2 + 1 = 6 units

Hence, Work done in 3 days = 3 + 3 + 6 = 12 units

⇒ 3 days × 5 = 12 units × 5 ⇒ 15 days = 60 units

∴ The required no of days required = 15 days

23) A alone can complete a work in 16 days and B alone in 12 days. Starting with A, they work on alternate days. The total work will be completed in:

a) 12 b) 13 c) 13 3/4 d) 13 5/7

ANS: c) 13 3/4

EXPLANATIONS (short cut)

A==16 3 (1DAY)

48

B==12 4 (1DAY)

A+B 7

48=42 + 3 + 3

= 42/7 + 3/3 + ¾

= 6+6+1+3/4

= 13 3/4

24) Two pipes A and B can fill a tank in 20 and 30 minutes

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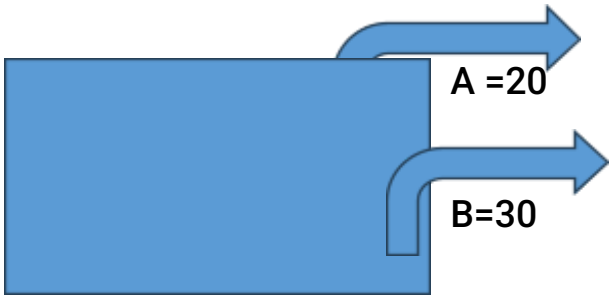
respectively. If both the pipes are used together, then how long will it take to fill the tank?

a)12 min b)15 min c)25 min d)50 min

ANS: a)12 min

EXPLANATIONS (short cut)



METHOD -1 Basic

Fill tank A = 1/20

Fill tank B = 1/30

Speed of A+B = 1/20+1/30 = (3+2)/60 = 5/60 = 1/12

A & B together will complete the same job in 12 mins.

METHOD -2(short cut)

A+B= AxB /A+B

=30x20/30+20

=30x20/50

=12 min

25) If 2 men and 3 boys can do a piece of work in 10 days, while 3

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men and 2 boys can do the same work in 8 days, then in how many days can 2 men and 1 boy do the work?

a)12 b)10 c)25 d)12.5

ANS: d)12.5

EXPLANATIONS (short cut)
Man*Days

(2m+3b) 10 = (3m+2b) 8
7b = 2m
So 2m = 7b

Now
(2m+3b) 10 = (2m+1b) d
(7b+3b) 10 = (7b+1b) d
10*10 = 8*d
X = 100/8
X = 12.5 days

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26) 8 men & 12 boys can finish a piece of work in 10 days while 6 men & 8 boys can finish it in 14 days. Find the time taken by one man alone & that by one boy alone to finish the work?

a)120&240 b)140&280 c)150&300 d)200&400

ANS: b)140&280

EXPLANATIONS (short cut)

10 (8m + 12 b) = 14 (6m + 8b)

2b = m

Therefore,

10 (8m + 6m) = 1

140 m = 1

10 (16w + 12w) = 1

280 b = 1

1 man needs 140 days

1 boy needs 280 days

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27) If drum of water is 3/4 full when 9 litres were drawn from it, it is half full then capacity of drum is

a.36 litres b.37 litres c.27 litres d.30 litres

ANS: a.36 litres

EXPLANATIONS (short cut)

3/4 - 1/2 = 1/4

This is equal to 9 liters of water which is drawn.

Capacity of drum =9 x 4 = 36 litres.

28) A pool has 3 taps. The first tap takes 3 days, the second tap takes 2 days, and the third tap takes 12 hours to fill the pool. How long will it take to fill the pool using all the three taps?

a) 6 ½ hr b) 6 hr c) 8 8/11 hr d)1 1/11 hr

ANS: c) 8 8/11 hr

EXPLANATIONS (short cut)

4days	96hrs		1
2days	48hrs	96	2
3rd day	12hrs		8
			11

96/11= 8 8/11 hrs.

29) A tank has two inlets, a and b, which can fill it in 15 hours and

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20 hours, respectively. An outlet C can empty the full tank in 12 hours. If A,B and C are opened together when the tank is empty, then in how many hours will the tank be filled?

a) 35 hours b) 30 hours c) 40hours d) 27 hours

ANS: b) 30hours

EXPLANATIONS (short cut)

A(+)	15hrs		4
B(+)	20hrs	60	3
C(-)	12hrs		5
			2

60/2 = 30 hours

30) An inlet pipe can fill the tank in 4 hours and an outlet pipe can empty the tank in 6 hours. By mistake, both the pipes are kept open. find the number of pipes that are kept and the tank will be half- full.

a) 8 h b) 6 h c) 12 h d) 10 h

ANS: b) 6 h

EXPLANATIONS (short cut)

4 x 6/6-4

=4 x 6/ 2

=12 full tank

=6 half tank

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31) A troop has provisions for 276 soldiers for 20 days. How many soldiers leave the troop so that the provisions may last for 46 days?

a)156 b)170 c)206 d)138

ANS: a)156

EXPLANATIONS (short cut)

276 x 20 = 46 x m

120 = m

276-120

Ans = 156