TIME AND WORK APTITUDE QUESTIONS AND ANSWERS WITH EXPLAINATION

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Q.1.In the beginning, Ram works at a rate such that he can finish a piece of work in 24 hrs, but he only works at this rate for 16 hrs. After that, he works at a rate such that he can do the whole work in 18 hrs. If Ram is to finish this work at a stretch, how many hours will he take to finish this work?

1) 12 hrs

2) 18 hrs

3) 11½ hrs

4) 15 hrs

5) 22 hrs

Answer & Explanation

Sol : Option 5

Explanation:Ram's 16 hr work = 16/24 = 2/3. Remaining work = 1 – 2/3 = 1/3.

Using work and time formula: This will be completed in 1/3×18 i.e. 6 hrs.

So, total time taken to complete work = 16 + 6= 22 hrs.

Q.2. A can do a piece of work in 10 days, and B can do the same work in 20 days. With the help of C, they finished the work in 4 days. C can do the work in how many days, working alone?

1. 5 days2. 10 days3. 15 days4. 20 days5. 25 days

Answer & Explanation

Sol : Option 2

Explanation:Their combined 4 day work = 4(1/10 + 1/15) = 12/20 = 3/5.

Remaining work = 1 – 3/5 = ⅖.

This means C did 2/5 work in 4 days, hence he can finish the complete work in 5/2 × 4 = 10 days.

Q.3. A can do a piece of work in 12 days. B can do this work in 16 days. A started the work alone. After how many days should B join him, so that the work is finished in 9 days?

1. 2 days2. 3 days3. 4 days4. 5 days5. 1 days

Answer & Explanation

Sol : Option 4

Explanation:A's work in 9 days = 9/12 = 3/4. Remaining work = 1/4.

This work was done by B in 1/4 × 16 = 4 days.

∴ B would have joined A after 9 – 4 = 5 days.

Q.4.A and B can do a piece of work in 4 days, while C and D can do the same work in 12 days. In how many days will A, B, C and D do it together?

1. 12 days2. 4 days3. 3 days4. 2 days5. None of these

Answer & Explanation

Sol : Option 3

Explanation:A, B, C and D will together take ¼ + 1/12 = 4/12 = 1/3 ⇒ 3 days to complete the work.

Q.5.A and B can do a piece of work in 40 days, B and C can do it in 120 days. If B alone can do it in 180 days, in how many days will A and C do it together?

1. 45 days2. 22.5 days3. 25 days4. 18 days5. 12 days

Answer & Explanation

Sol : Option 1

Explanation: A + B take 40 days. B alone takes 180 days.

∴ A will take 1/40 – 1/180 = 7/360 ⇒ 360/7 days.

B + C take 120 days. ∴ C alone will take 1/120 – 1/180 = 1/360

i.e. 360 days. ∴ A & C together will take 7/360 + 1/360

= 8/360 ⇒ 360/8 = 45 days to complete the work.

Q.6.A, B, C, and D can do a piece of work in 20 days. If A and B can do it together in 50 days, and C alone in 60 days, find the time in which D alone can do it.

1. 120 days2. 200 days3. 150 days4. 90 days5. 75 days

Answer & Explanation

Sol : Option 5

Explanation: D alone will take 1/20 – 1/50 – 1/60 = 4/300 = 1/75

⇒ 75 days to complete the work.

Q7.A, B, and C can do a piece of work in 8 days. B and C together do it in 24 days. B alone can do it in 40 days. In what time will it be done by C working alone?

1. 25 days2. 24 days3. 60 days4. 20 days5. 30 days

Answer & Explanation

Sol : Option 3

Explanation: B & C do this work in 24 days. B alone does this work in 40 days. C alone will take 1/24 – 1/40 = 2/120=1/60 ⇒ 60 days to finish the work.

Q8.A and B undertake to do a piece of work for Rs. 450. A can do it in 20 days and B can do it in 40 days. With the help of C, they finish it in 8 days. How much should C be paid for his contribution?

1. Rs. 1802. Rs. 403. Rs. 1204. Rs. 605. Rs. 50

Answer & Explanation

Sol : Option 1

Explanation:A & B would have done 8/20 & 8/40 of the work respectively in 8 days. Together they have done 3/5th of the work. This implies that C has done 2/5th of the work. Thus, C should be paid 2/5th of the amount i.e. 450 × 2/5 = Rs. 180.

Q9.Daku and Tamatar can do a piece of work in 70 and 60 days respectively. They began the work together, but Daku leaves after some days and Tamatar finished the remaining work in 47 days. After how many days did Daku leave?

1. 14 days2. 16 days3. 18 days4. 10 days5. 7 days

Answer & Explanation

Sol : Option 5

Tamatar would have done 47/60 work in 47 days. The remaining work i.e. 13/60 must have been done by Daku and Tamatar together. They can do the whole work in 60 × 70 / (60 + 70) = 60 × 70/130 = 420/13 days.

So, they would have done 13/60 work in 420/13 × 13/60 = 7 days. Therefore, Daku left the work after 7 days.

Q10.Ajay and Vijay undertake to do a piece of work for Rs. 480. Ajay alone can do it in 75 days while Vijay alone can do it in 40 days. With the help of Pradeep, they finish the work in 25 days. How much should Pradeep get for his work?

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1. Rs. 402. Rs. 203. Rs. 3604. Rs. 1005. Rs. 60

Answer & Explanation

Sol : Option 2

Explanation: In 24 days, they would have done 1/3 and 5/8 of the work.

The remaining work is 1 – (1/3 + 5/8) = 1/24.

This means Pradeep has done 1/24th of the work, so he should be paid 1/24th of the amount i.e. 480 × 1/24 = Rs. 20 is the answer.

Q 11- A can do a bit of work in 8 days, which B alone can do in 10 days in how long . In how long both cooperating can do it?

A - 40/9 days

B - 41/9 days

C - 42/9 days

D - 43/9 days

Answer - A

Explanation

A's 1 day work= 1/8, B`s 1 day work = 1/10

∴ (A+B) 1 day work = (1/8+1/10) = 9/40

Both cooperating can complete it in 40/9 days.

Q 12 - A and B together can dive a trench in 12 days, which an alone can dive in 30 days. In how long B alone can burrow it?

A - 18 days

B - 19 days

C - 20 days

D - 21 days

Answer - C

Explanation

(A+B)'s 1 day work = 1/12, A's 1 day work =1/30

∴ B's 1 day work = (1/12-1/30) = 3/60 = 1/20

Henceforth, B alone can dive the trench in 20 days.

Q 13 - A can do a bit of work in 25 days which B can complete in 20 days. Both together labor for 5 days and afterward A leaves off. How long will B take to complete the remaining work?

A - 7 days

B - 8 days

C - 9 days

D - 11 days

Answer - D

Explanation

(A+B)'s 5 days work = 5(1/25+1/20) = (5*9/100) = 9/20

Remaining work = (1-9/20) = 11/20

1/20 work is finished by B in 1 day

11/20 work is finished by B in (1*20*11/20) = 11 days

Q 14 - A and B can do a bit of work in 12 days. B and C can do it in 15 days while C and A can do it in 20 days. In how long will they complete it cooperating? Additionally, in how long can A alone do it?

A - 10 days, 30 days.

B - 15 days, 20 days.

C - 20 days, 40 days.

D - 10 days, 50 days.

Answer - A

Explanation

(A+B)'s 1 day work = 1/12,

(B+C)'s 1 day work = 1/15,

(C+A)'S 1 day work = 1/20

Including: 2(A+B+C)'s 1 day work = (1/12+ 1/15+ 1/20)= 12/60 = 1/5

∴ (A+B+C) `s 1 day work = (1/2 *1/5) = 1/10

∴ working together they can complete the work in 10 days.

A's 1 day work = (1/10-1/15) = 1/30, B`s 1 day work = (1/10-1/20) = 1/20

C's 1 day work = (1/10-1/12) = 1/60

∴ A alone can take the necessary steps in 30 days.

Q 15 - A can fabricate a divider in 30 days , while B alone can assemble it in 40 days, If they construct it together and get an installment of RS. 7000, what B's offer?

A - 2000

B - 3000

C - 4000

D - 6500

Answer - B

Explanation

A's 1 days work = 1/30,

B's 1 day work = 1/40,

Proportion of their shares = 1/30:1/40 = 4:3

B's offer = (7000*3/7) = Rs. 3000

Q 16 - A can do a bit of work in 10 days while B alone can do it in 15 days. They cooperate for 5 days and whatever remains of the work is finished by C in 2 days. On the off chance that they get Rs. 4500 for the entire work, by what means if they partition the cash?

A - Rs 1250, Rs 1200, Rs 550

B - Rs 2250, Rs 1500, Rs 750

C - Rs 1050, Rs 1000, Rs 500

D - Rs 650, Rs 700, Rs 500

Answer - B

Explanation

(A+B)'s 5 days work = 5(1/10+ 1/15)= (5* 1/6)= 5/6

Remaining work = (1-5/6) = 1/6

C's 2 days work = 1/6

(A's 5 day work): (B's 5 day work): (C's 2 days work)

= 5/10: 5/15: 1/6

= 15: 10:5 = 3:2:1

A's offer = (4500*3/6) = Rs. 2250

B's offer = (4500*2/6) = Rs. 1500

C's share= (4500*1/6) = Rs. 750