Time & Work - Solved Examples

Q 1 - 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 2 - 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 3 - 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 4 - 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 5 - 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 6 - 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
```