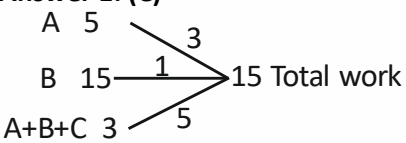
TIME AND WORK-3 CSAT_ANSWER EXPLANTION

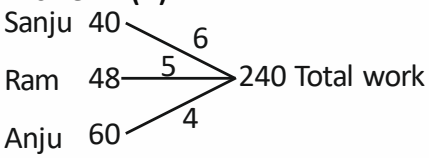
Answer 1: (C)



Efficiency of C = 5 – 3 – 1 = 1 unit

∴ Amount received by C = $\frac{1}{5} \times 5500$ = ₹1100

Answer 2: (D)



Let time taken by them to complete the work be x days.

According to question,

6x + 5(x – 2) + 4(x – 5) = 240

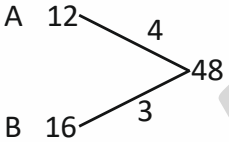
⇒ 15x = 240 + 30 = 270

⇒ x = 18

∴ Work done by Sanju = 6 × 18 = 108

Hence, share of Sanju = $\frac{108}{240} \times 26880 = ₹12096$

Answer 3: (B)



Total work = 48 units

Work done by A and B in 4 hours = (4 + 3) × 4 = 28 units

Remaining work = 48 – 28 = 20 units

Time taken by pipe A to fill the remaining tank = 20/4 = 5 hours

Answer 4: (A)

According to question,

$\frac{12 \times 9}{7200} = \frac{18 \times 7}{x}$

⇒ x = ₹8400

Answer 5: (B)

According to question,

(2M + W) × 14 = (2M + 4W) × 8

⇒ 28M + 14W = 16M + 32W

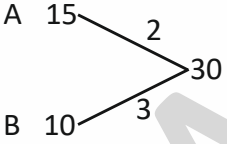
⇒ 12M = 18W

⇒ M : W = 3 : 2

Hence, daily earnings of a woman = $\frac{2}{3} \times 1200$

= ₹800

Answer 6: (A)



∴ Share of B = $\frac{3}{3+2} \times 60000 = ₹36000$

Answer 7: (B)

Part filled in 2 hours = $\frac{2}{6} = \frac{1}{3}$

Remaining part = $\left(1 - \frac{1}{3}\right) = \frac{2}{3}$

(A + B)'s 7 hours' work = $\frac{2}{3}$

(A + B)'s 1 hour's hours' work = $\frac{2}{21}$

∴ C's 1 hour's work = [(A + B + C)'s 1 hour's work – (A + B)'s 1 hour's work] = $\left(\frac{1}{6} - \frac{2}{21}\right) = \frac{1}{14}$

Hence, C alone can fill the tank in 14 hours.

Answer 8: (C)

According to question,

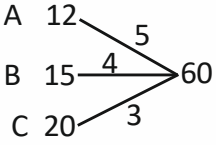
M : B = 2 : 1

Hence, daily earning of the boy = $\frac{1}{1+2} \times \frac{36000}{5}$ = ₹2400

Answer 9: (A)

Maximum possible daily wages = HCF of 7500 and 6900 = 300

Answer 10: (C)



Total work = 60 units

(A + B)'s 1 hour work = 5 + 4 = 9 units

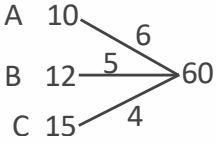
(A + C)'s 1 hour work = 5 + 3 = 8 units
Now, part filled in 2 hours = 9 + 8 = 17 units
Part filled in 6 hours = 17 × 3 = 51 units
Remaining work = 60 – 51 = 9 units
Now, it is the turn of taps A and B.
So, A and B together can fill 9 units in 1 hour.
Hence, total time taken = 6 + 1 = 7 hours

Answer 11: (A)
According to question,

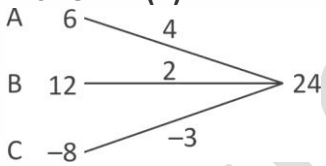
A	:	B	:	C
8 × 3	:	6 × 4	:	12 × 5
4	:	4	:	10

Hence, B's share = $\frac{4}{4+4+10} \times 7200 = ₹1600$

Answer 12: (C)
Work done by C = 1 – 11/13 = 2/13
Hence, C's share= $\frac{2}{13} \times 3250 = ₹500$

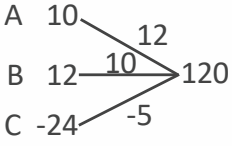
Answer 13: (A)


Difference between the share of B and C = $\frac{5-4}{6+5+4} \times 1500 = ₹100$

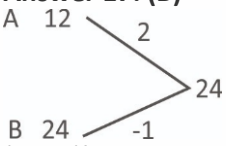
Answer 14: (A)


Total work = 24 units
(A + B + C)'s one minute's work = 4 + 2 – 3 = 3 units
(A + B + C)'s 4 minutes work = 4 × 3 = 12 units
Remaining work = 24 – 12 = 12 units
A and B together fill the remaining tank in = $\frac{12}{6}$
= 2 min.
Hence, total time = 4 + 2 = 6 min.

Answer 15: (C)
Required time = $\frac{ab}{a-b} = \frac{5 \times 4}{5-4}$ = 20 hours

Answer 16: (D)


Required time = $\frac{120}{12+10-5} = \frac{120}{17} = 7\frac{1}{17}$ hours

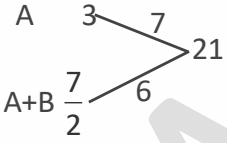
Answer 17: (B)


(A + B)'s one hour work = 2 - 1 = 1 unit
Required time = 24/1 = 24 hours

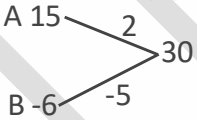
Answer 18: (D)

Tap	:	Leak
2	:	1

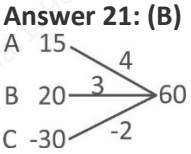
Difference = 2 – 1 = 1 unit
Hence, required time = 36/2 = 18 hours

Answer 19: (C)


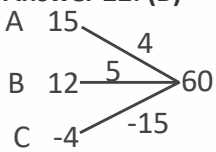
Efficiency of B = 6 – 7 = -1 unit
Hence, required time = 21/1 = 21 hours

Answer 20: (D)


4/5 part of the tank = $\frac{4}{5} \times 30 = 24$
Required time = $\frac{24}{2-5}$ = 8 hours

Answer 21: (B)


Required time = $\frac{60}{4+3-2}$ = 12 hours

Answer 22: (B)


3 hours work of pipe A = 12 units
2 hours work of pipe B = 10 units
Total work = 12 + 10 = 22 units
Required time = $\frac{22}{4+5-15} \times 60$ = 220 min = 3 hours 40 min
Hence, the tank will be empty at 16:00 + 3:40 = 19:40 pm.