

Quiz Date: 28th August 2020

Q1. A can do a piece of work in 12 days whereas A and B together can-do same work in 8 days. find out the time taken by B to complete 2 times more the work?

- (a) 60 days
- (b) 55 days
- (c) 72 days
- (d) 65 days
- (e) 45 days

Q2. If the population of a city is increases by $11\frac{1}{9}\%$ per annum. In 2013, the population of the city is 10530. Find out the difference between the population of city in 2015 and 2014.

- (a) 1800
- (b) 1700
- (c) 1400
- (d) 1300
- (e) 2300

Q3. The ratio of saving and expenditure is 3:5. The income increases by $12\frac{1}{2}\%$ and expenditure increases by 10% and saving increases to 4585. Find out the initial income?

- (a) 10480
- (b) 12450
- (c) 9870
- (d) 9260
- (e) 11260

Q4. A pump can fill a tank with water in 2 hours. Because of a leak in the tank it was taking $2\frac{1}{3}$ hours to fill the tank. The leak can drain all the water off the tank in:

- (a) 8 hours
- (b) 7 hours
- (c) $4\frac{1}{3}$ hours
- (d) 14 hours
- (e) 12 hours

Q5. Speed of a boat in still water is 30 km/h. It takes 7 hours to go upstream and 5 hours to go downstream between two points. What is the speed of stream?

- (a) 7 km/h
- (b) 5 km/h
- (c) 6 km/h
- (d) 3 km/h
- (e) 4 km/h

Q6. Speed of train is 160 km/h. It crosses a platform and a pole in 27 seconds and 9 seconds respectively. Find the length of platform?

- (a) 540m
- (b) 680 m
- (c) 750m
- (d) 800m
- (e) 650m

Q7. A train travels $\frac{7}{5}$ as fast as a car. Both start from point A at the same time and reach point B, which is 280 km away from the point A. If on the way the train stop for 45 minutes at station, then find the speed (in km/hr) of the train?

- (a) 147.67
- (b) 152.5
- (c) 157.67
- (d) 149.33
- (e) 160



Q8. At simple interest, a sum becomes 3 times in 16 years. Find the time in which the sum will be 6 times at the same rate of interest.

- (a) 36 years
- (b) 44 years
- (c) 38 years
- (d) 40 years
- (e) 35 years

Q9. find the difference between simple interest and compound interest on Rs 12000 for $1\frac{1}{2}$ years at 10% per year but interest is calculated on half yearly basis.

- (a) Rs 91
- (b) Rs 91.5
- (c) Rs 93.5
- (d) Rs 95.5
- (e) Rs 96

Q10. Fresh grapes contain 75% of water by weight while dried grapes contain 40% of pulp by weight. Find the weight of dry grapes obtained from 24 kg of fresh grapes?

- (a) 10 kg
- (b) 12 kg

- (c) 15 kg
- (d) 18 kg
- (e) 20 kg

Q11. The average age of a husband and wife was 34 years when they were married 7 years ago. The average age of the husband, the wife and a child who was born during the interval, is 23 years now. How old is the child now?

- (a) 7 years
- (b) 11 years
- (c) 13 years
- (d) 9 years
- (e) 15 years

Q12. In a calculation Ram found that the average of 10 numbers is 45 and on rechecking Shyam noticed that the some numbers 18, 34, 63 is wrongly taken as 81, 43 and 36. Find the correct average.

- (a) 39.5
- (b) 40.5
- (c) 45.5
- (d) 42.5
- (e) 43.5

Q13. Two partners A and B enter into a partnership with their initial sum Rs 50,000 and Rs 40,000 respectively. After 8 months, B left the partnership. If total profit after a year is Rs 6900, find profit share of A.

- (a) Rs. 5,000
- (b) Rs 6,500
- (c) Rs 4,500
- (d) Rs 3,500
- (e) Rs 5,500

Q14. Pawan and Ankit enter into a business by investing in ratio 2 : 3 and the ratio of time period for which they invested is 4 : 5 respectively. If profit earned by Ankit is Rs. 420 more than the profit earned by Pawan, then find the total profit earned by Pawan and Ankit both ?

- (a) Rs. 1320
- (b) Rs. 1380
- (c) Rs. 1440
- (d) Rs. 1280
- (e) Rs. 1460

Q15. In how many ways can 5 prizes be distributed to 8 students if each student can get any number of prizes ?

- (a) 40
- (b) 5^8
- (c) 8^5

- (d) 120
(e) 140

Solutions

S1. Ans. (c)

Sol.

1- day work of A = $\frac{1}{12}$ unit

1 day work of A+B = $\frac{1}{8}$ unit

So, 1 day work of B = $\frac{1}{8} - \frac{1}{12} = \frac{1}{24}$

So, time taken by B to complete 2 times more work = $\frac{3}{\left(\frac{1}{24}\right)}$

= 72 days.

S2. Ans. (d)

Sol.

Population of the city in 2014 = $10530 \left(1 + \frac{11\frac{1}{9}}{100}\right)^1 = 10530 \times \frac{10}{9}$
= 11700

Population of the city in 2015 = $10530 \left(1 + \frac{11\frac{1}{9}}{100}\right)^2 = 10530 \times \frac{100}{81}$
= 13000

So, difference = 13000 - 11700 = 1300

S3. Ans (a)

Sol.

Let saving and expenditure is Rs.30x and Rs.50x respectively

So, income = Rs.80x

Income increases by $12\frac{1}{2}\% = 80x \times \frac{112\frac{1}{2}}{100} = Rs. 90x$

Expenditure increases by $10\% = 50x \times \frac{110}{100} = Rs. 55x$

So, saving = $90x - 55x = 35x$

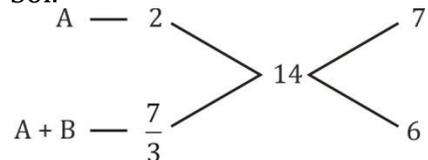
$$35x = 4585$$

$$x = 131$$

So initial income = $80x = Rs.10480$

S4. Ans.(d)

Sol.



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leak can drain all the water in = $\frac{14}{1} = 14$ hours

S5. Ans.(b)

Sol.

Let speed of stream = x km/h

ATQ,

$$(30 - x) \times 7 = (30 + x) \times 5$$

$$\Rightarrow 210 - 7x = 150 + 5x$$

$$\Rightarrow x = \frac{60}{12} = 5 \text{ km/h}$$

S6 Ans.(d)

Sol.

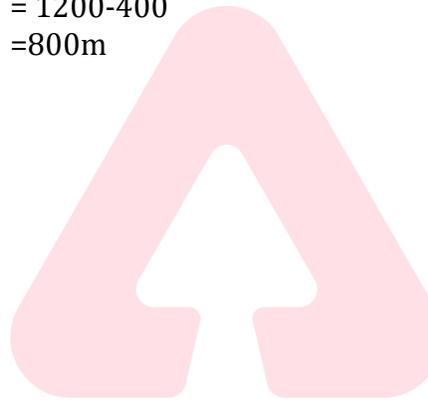
$$\text{Length of train} = 160 \times \frac{5}{18} \times 9$$

$$= 400 \text{ m}$$

$$\therefore \text{length of platform} = \frac{5}{18} \times 160 \times 27 - 400$$

$$= 1200 - 400$$

$$= 800 \text{ m}$$



S7. Ans. (d)

Sol.

let the speed of train = $140x$ km/hr

Let the speed of car = $100x$ km/hr

$$\frac{280}{140x} + \frac{45}{60} = \frac{280}{100x}$$

$$\frac{2}{x} + \frac{3}{4} = \frac{5x}{14-10}$$

$$\frac{2}{x} + \frac{3}{4} = \frac{5x}{4}$$

$$\frac{2}{x} = \frac{5x - 3}{4}$$

$$x = \frac{16}{15}$$

$$x = \frac{16}{15}$$

$$\text{Speed of the train} = 140 \times \frac{16}{15}$$

$$= 149.33 \text{ km/hr}$$

S8. Ans.(d)

Sol.

3 times in 16 years

So, interest will be 2 times of principal

Let principal = Rs. P

And rate = $r\%$

$$2p = \frac{p \times r \times 16}{100}$$

$$R = 12\frac{1}{2}\%$$

Let required time be t years.

$$\text{So, } 5p = \frac{p \times 12\frac{1}{2} \times t}{100}$$

$$t = 40 \text{ years}$$

S9. Ans.(b)

Sol. Since rate calculated half yearly

$$R = \frac{10}{2} = 5\%$$

$$\text{and time} = \frac{3}{2} \times 2 = 3 \text{ half years} \quad \left. \vphantom{\frac{3}{2} \times 2} \right\} \text{for C.I}$$

$$\text{C.I-S.I} = 12000 \left[\left(1 + \frac{5}{100} \right)^3 - 1 \right] - \frac{12000 \times 10 \times 3}{100 \times 2}$$

$$= 1891.5 - 1800$$

$$= \text{Rs } 91.5$$

S10. Ans.(c)

Sol.

	Water	:	Pulp
Fresh grapes	3	:	1
Dried grapes	3	:	2

But quantity of pulp should be same in fresh grapes as well as in dried grapes.

Water : Pulp

$$\text{Fresh grapes} \quad 6 \quad : \quad 2 \quad = 8 \xrightarrow{\times 3} 24$$

$$\text{Dried grapes} \quad 3 \quad : \quad 2 \quad = 5 \xrightarrow{\times 3} 15$$

Weight of dry grapes obtained from 24 kg of fresh grapes = 15 kg

S11. Ans.(c)

Sol. Present total age of husband and wife = $34 \times 2 + 2 \times 7 = 82$

Present total age of husband, wife and child = $3 \times 23 = 69$

Present age of child = 13 years

S12. Ans.(b)

Sol. Sum of correct numbers = $18 + 34 + 63 = 115$

Sum of wrong numbers = $81 + 43 + 36 = 160$

$$\text{The correct average} = 45 - \left(\frac{160 - 115}{10} \right)$$

$$= 45 - 4.5$$
$$= 40.5$$

S13. Ans.(c)

Sol.

$$(A's \text{ profit}) : (B's \text{ profit}) = 50,000 \times 12 : 40,000 \times 8$$
$$= 15 : 8$$

$$\therefore \text{profit share of A} = \frac{15}{23} \times 6900$$
$$= 4500$$

S14. Ans.(b)

Sol.

$$\text{Ratio of profit} \rightarrow \text{Pawan} : \text{Ankit}$$
$$2 \times 4 : 3 \times 5$$
$$8 : 15$$

Let profit of Pawan be $8x$ and Ankit be $15x$.

ATQ,

$$15x - 8x = 420$$

$$7x = 420$$

$$x = 60$$

$$\text{Required total} = 60 \times 23 = \text{Rs. } 1380$$

S15. Ans.(c)

Sol. Here, there are total 8 students and total no. of prizes is 5.

$$\text{So, no. of ways} = 8^5$$

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