Q1. Seven bells starts ringing together and ring at intervals of 2, 3, 4, 6, 8, 10 and 12 seconds respectively. How many times do the bells ring together in 30 minutes? [Level 2, Wipro]

A. 15 B. 16 C. 12 D. 8

Ans: B

Solution:

Interval of ringing = LCM (2, 3, 4, 6, 8, 10, 12) = 120 sec = 2min

In 30 minutes they will toll 16 times together (Including starting time)

Q2. Two numbers are in the ratio of 2: 3 and their LCM is 516. Their HCF is: [Level 2, Capgemini]

A. 30 B. 10 C. 17 D. 86

Ans: D

Solution:

HCF = LCM/(2 x 3) = 516/6 = 86

Q3. In a group, number of men are 20% more than number of women. 62.5% of the men are literate. Of the total literates, 33.33% are women. What percent of the women are literate?

A. 62.5 % B. 37.5% C. 66.67% D. Data Insufficient

Ans: B

Solution:

Let the women are 100x, then number of men = 120x

Literate men = 62.5% of 120x = 75x which is 66.67% of total literate

So, literate women = 33.33% of total literate = 75x/2 = 37.5x which is 37.5% of total women.

Q4. The ratio of number of boys and girls in a class is 3: 2. In the 1st semester exam 20% of boys and 25% of girls get more than or equal to 90% marks. What percentage of students get less than 90% marks? [Level 2, Wipro]

A. 56 B. 70 C. 78 D. 80

Ans: C

Solution:

Let Boys = 30, Girls = 20

Students with more than 90% = 20% of 30 + 25% of 20 = 6 + 5 = 11 which is 22% of total students.

Students with less than 90% marks = 78%

Q5. A cycle agent buys 30 bicycles, of which 8 are first grade and the rest are second grade for ` 3150. Find at what price he must sell the first grade bicycles so that if he sells the second grade bicycles at third quarter of the price, he may make a profit of 40% on both the types of transactions? [Level 2, TCS]

A. Rs 200 B. Rs 240 C. Rs 180 D. Rs 210

Ans: C

Solution:

Let the selling price of first grade = x

So, SP of 2^{nd} grade = 3x/4

Total SP = 8x + 22(3x/4) = 140% of 3150 (since profit is 40%)

x = 180

Q6. A person lent a certain sum of money at 4% simple interest; and in 8 years the interest amounted to Rs 340 less than the sum lent. Find the sum lent. [Level 2, TCS]

A. 500 B. 600 C. 1000 D. 1500

Ans: A

Solution:

Principal = x

x – 340 = x * 4*8/100
So, x = 500

Q7. If simple interest is 10.5% annual and compound interest is 10% annual, Find the difference between the interest after 3 years on a sum of Rs. 1000 [level 2, Capegemini]

A. 15 B. 12 C. 16 D. 11

Ans: C

Solution:

SI for 3 years = 1000 x 10.5 x 3/100
CI for 3 years = 1000[(1 + 10/100)^3 – 1]
Find CI – SI

Q8. Two vessels A and B contain milk and water mixed in the ratio 8:5 and 5:2 respectively. The ratio in which these two mixtures be mixed to get a new mixture containing 69(3/13) % milk is? [level 2, TechM]

A. 3:5 B. 5:2 C. 5:7 D 2:7

Ans: D

Solution:

Proportion of milk in new mixture = 69(3/13) % = 9/13
Using the concept of mixture and allegation
(5/7 - 9/13): (9/13 – 8/13) = 2: 7

Q9. A vessel full of pure acid 10 litres of it, of which 2 litres are withdrawn. The vessel is then filled with water. Next 2 litres of the mixture are withdrawn, and again the vessel is filled up with water. The ratio of the acid left in the vessel with that of original quantity is [Level 2, Accenture, Microsoft]

A. 1:5 B. 4:5 C. 4:25 D. 16:25

Ans: D

Solution:

Quantity of remaining acid = Initial quantitiy

$$\left(1-\frac{\text{Quantity taken out}}{\text{Total initial quantity}}\right)^{n}$$

$$= 10\left(1-\frac{2}{10}\right)^{2} = 10\times\left(\frac{4}{5}\right)^{2}$$

$$= 10\times\frac{4}{5}\times\frac{4}{5}=\frac{32}{5}\text{litres}$$

$$\text{Required ratio} = \frac{32}{5}: 10$$

= 32 : 50
= 16 : 25

Q10. If a boy walks from his house to school at the rate of 4 kmph, he reaches the school 10 min earlier than the scheduled time. However, if he walks at the rate of 3kmph, he reaches 10min late. The distance of the school from his house is? [level 2, Wirpo, TechM]

A. 6km B. 4.5km C. 4km D. 3km

Ans: C

Solution:

$$\frac{x}{3}-\frac{x}{4}=\frac{20}{60}$$

$$\Rightarrow \frac{x}{12}=\frac{1}{3}\Rightarrow x=\frac{12}{3}=4 \text{ km}$$

Q11. A train departs from Patna at 5am & arrives at Delhi at 9am. Second train departs from Delhi at 6:30am & arrives at Patna at 10am. At which time both trains will meet each other? [level 2, Infosys]

A. 7:30am B. 7:40am C. 8:00am D. 7:20am

Ans: B

Solution:

If its a linear equation (No stops, no acceleration/breaking)
Train A: 4 hours -> 35 kph, at 6:30 am its traveled 52.5 km already (1.5 hours * 35 kph)
new distance between trains = 87.5 km
Train B: 3,5 hours -> 40 kph
87.5 km = 35 kph*x + 40 kph*x = 75 kph*x
x= 87.5/75 h = 1h 10 mins
6:30 am + 1h 10 mins= 7:40 am

Q12. 4 men & 6 women can complete a work in 8 days, while 3men & 7 women can do it in 10 days. In how many days 10 women can finish the work? [Level 2, Wipro]

A. 30 B. 35 C. 40 D. none of these

Ans: C

Solution:

Use $M_1D_1 = M_2D_2$

Q13. LCM OF 2/3, 4/9, 5/6 is [level 1, Accenture]

A. 8/27 B. 20/3 C. 10/3 D. 20/27

Ans: B

Solution:

LCM = (LCM of 2, 4, 5)/(HCF of 3, 9, 6) = 20/3

Q14. The marked price of a watch is 800 Rs. A shopkeeper gives two successive discount and sells the watch at Rs. 612. If the first discount is 10%, the second discount is [level 2, Wirpo, TechM]

A. 10% B. 12% C. 15% D. 20%

Ans: C

Solution:

Let the second discount be D_2 %.

Then, 90 % of (100 – D_2) % of 800 = 612

$$\Rightarrow \frac{90}{100}\times\frac{100-D_2}{100}\times 800 = 612$$

$$\Rightarrow 100-D_2=\frac{612\times 100}{90\times 8}=85$$

$$\Rightarrow D_2 = 100-85 = 15\%$$

Q15. The average age of 30 boys in a class is 15 years. One boy, aged 20 years, left the class, but two new boys came in his place whose age differ by 5 years. If the average age of all the boys now in the class become 15 years, the age of the younger newcomer is [level 2, Wirpo, TechM]

A.20 B.15 C.10 D. 8

Ans: B

Solution:

Let the age of younger boy be y years.

∴ Age of older boy = (y + 5) years.

The average age of 30 boys in a class = 15 years

Then, total age of 30 boys = 30 × 15 = 450 years.

Total age of 31 boys after two newcomers join & 1 left = 450 – 20 + y + y + 5 = 435 + 2y

Clearly, 435 + 2y = 31 × 15

⇒ 2y = 465 – 435

⇒ y = 30 ÷ 2 = 15 years