HCL Aptitude Questions and Answers with Explanation

1. **A number of students in 4th and 5th class is in the ratio 6: 11. 40% in class 4 are girls and 48% in class 5 are girls. What percentage of students in both classes are boys?**
A. 62.5%
B. 52.6%
C. 55.8%
D. 53.5%
E. 54.8%
Answer - E. 54.8%
Explanation:
Total students in both = 6x+11x = 17x
Boys in class 4 = (60/100)*6x = 360x/100
Boys in class 5 = (52/100)*11x = 572x/100
So total boys = 360x/100 + 572x/100 = 932x/100 = 9.32x
% of boys = [9.32x/17x] * 100 = 54.8%.

2. **Consider two alloys A and B. 50 kg of alloy A is mixed with 70 kg of alloy B. A contains brass and copper in the ratio 3 : 2, and B contains them in the ratio 4 : 3 respectively. What is the ratio of copper to brass in the mixture?**
A. 7: 5
B. 5: 11
C. 4: 9
D. 5: 7
E. 8: 5
Answer - D. 5: 7
Explanation:
Brass in A = 3/5 * 50 = 30 kg, Brass in B = 4/7 * 70 = 40 kg
Total brass = 30+40 = 70 kg
So copper in mixture is (50+70) – 70 = 50 kg
So copper to brass = 50: 70

3. **The ratio of A and B is in the ratio 5: 8. After 6 years, the ratio of ages of A and B will be in the ratio 17: 26. Find the present age of B.**
A. 65
B. 77
C. 60
D. 72
E. None of these
Answer - D. 72
Explanation:

A/B = 5/8 , A+6/B+6 = 17/26
Solve both, B = 72
Therefore, the present age of B is 72.

4. **A bag contains 25p, 50p and 1Re coins in the ratio of 2: 4: 5 respectively. If the total money in the bag is Rs 75, find the number of 50p coins in the bag.**
A. 40
B. 45
C. 50
D. 25
E. None of these
Answer - A. 40
Explanation:
2x, 4x, 5x
(25/100)*2x + (50/100)*4x + 1*5x = 75
x = 10, so 50 p coins = 4x = 40

5. **What is the difference between the selling price of an article costing 1000 rupees when a discount of 20% is given in the article and when two successive discounts of 10% are given in the article?**
A. 10
B. 20
C. 30
D. 40
Answer – A. 10
Explanation:
(80/100)* 1000 = 800
1000*(90/100)*(90/100) = 810.
Therefore, when two successive discounts of 10% are given in the article is 10.

6. **Priya bought 10 tables at the rate of 600 each. She spends 1600 rupees on transportation and 400 on the packaging. At what price should Priya sell a table to make a profit of 20%.**
A. 860
B. 920
C. 960
D. 1020
Answer – C. 960
Explanation:
Total cost = 600*10 + 1600 + 400 = 8000 (For 10 tables)

CP of one table = 8000/10 = 800.
SP = 800*120/100 = 960

7. **If an article is sold for 270 at a loss of 10% then, to make a profit of 15%, at what price article should be sold.**
A. 315
B. 325
C. 335
D. 345
Answer – D. 345
Explanation:
270 = (90/100)*CP. So Cp = 300.
So, SP = 300*(115/100) = 345

8. **The marked price of an article is 20% above the cost price. When the selling price of an article is increased by 30% the profit doubles. If the market price of an article is 480, the original selling price is.**
A. 531.15
B. 537.14
C. 571.4
D. 582.12
Answer – C. 571.4
Explanation:
Given MP = 120/100*CP. So, CP = 400.
SP -400 = P (Profit)
(130/100)*SP – 400 = 2P
Solving both equation we get, SP = 4000/7 = 571.4

9. **The average expenditure of Sharma for January to June is Rs. 4200 and he spent Rs. 1200 in January and Rs.1500 in July. The average expenditure for the months of February to July is:**
A. 4250
B. 4500
C. 3500
D. 2750
E. 3250
Answer – A. 4250
Explanation:
Total Expenditure(Jan – June) = 4200 * 6 = 25200
Total Expenditure(Feb – June) = 25200 – 1200 = 24000

Total Expenditure(Feb – July) = 24000 + 1500 = 25500/6 = 4250.
Therefore, Average expenditure for months of February to July is 4250

10. **The average presence of students of a class in a College on Monday, Tuesday and Wednesday are 32 and on Wednesday, Thursday, Friday and Saturday are 30. if the average number of students on all the six days is 26 then the number of students who attended the class on Wednesday is?**
A. 50
B. 80
C. 40
D. 70
E. 60
Answer – E. 60
Explanation:
32 * 3 + 30 * 4 – 26 * 6 = 96 + 120 – 156 = 60

11. **The average weight of all the 11 players of CSK is 50 kg. If the average of the first six lightest weight players of CSK is 49 kg and that of the six heaviest players of CSK is 52 kg. The average weight of the player which lies in the sixth position in the list of players when all the 11 players of CSK are arranged in the order of increasing or decreasing weights.**
A. 54 kg
B. 53 kg
C. 56 kg
D. 52 kg
E. 50 kg
Answer – C. 56 kg
Explanation:
Average of First six players = 49 * 6 = 294
Average of Last six players = 52 * 6 = 312; Average of all players = 50 * 11 = 550
Average weight of sixth player = 294 + 312 – 550 = 56.

12. **If m and n are two whole numbers and if m^n= 49. Find n^m, given that n ≠ 1**
A. 94
B. 561
C. 128
D. 118
E. None of these
Answer - C. 128
Explanation:

49 = 7^2 = m^n
n^m = 2^7 = 128

13. **The greatest possible length which can be used to measure exactly the lengths 1m 92cm,3m 84cm ,23m 4cm**
A. 32
B. 36
C. 34
D. 23
E. None of these
Answer - A. 32
Explanation:
192 = 4^2×2^2×3
384 = 4^2×2^2×6
2304 = 4^2×2×6^2
HCF = 4^2×2 = 16×2 = 32

14. **HCF of 4/3, 8/6, 36/63 and 20/42**
A. 4/126
B. 4/8
C. 4/36
D. 4/42
E. None of these
Answer - A. 4/126
Explanation:
HCF of numerator(4,8,36,20) = 4
LCM of denominator(3,6,63,42) = 126

15. **Find the LCM of 3/8, 9/32, 33/48, 18/72**
A. 3/8
B. 8/33
C. 198/8
D. 8/3
E. None of these
Answer - C. 198/8
Explanation:
LCM of numerator(3,9,33,18) = 198
HCF of denominator(8,32,48,72) = 8
Therefore LCM = 198/8.

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