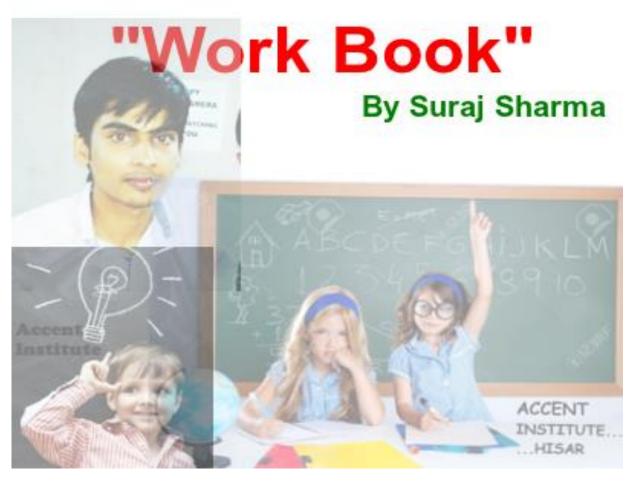




# Important Practice Maths Questions



Maths work Book For H.S.S.C. (Work Book For SSC – CGL , CHSL, Bank Po , MAT .....etc.)



## LCM & HCF - Set 01

1. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

A.8 B.11 C.13 D.16 E.None of these

2. The least multiple of 7, which leaves a remainder of 4, when divided by 6, 9, 15 and 18 is:

A.68 B.98 C.180 D.364 E.None of these

3. The least number, which when divided by 48, 60, 72, 108 and 140 leaves 38, 50, 62, 98 and 130 as remainders respectively, is:

A.11115 B.15110 C.15130 D.15310 E.None of these

4. The H.C.F. of two numbers is 11 and their L.C.M. is 7700. If one of the numbers is 275, then the other is:

A.269 B.275 C.308 D.310 E.None of these

5. A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds, all starting at the same point. After what time will they meet again at the starting point?

A.15 minutes 15 seconds B.42 minutes 30 seconds

C.42 minutes D.46 minutes 12 seconds E.None of these

6. The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. Then sum of the number is:

A.30 B.22 C.40 D.60 E.None of these

7. The least number, which when divided by 12, 15, 20 and 54 leaves in each case a remainder of 8 is:

A.534 B.486 C.544 D.548 E.None of these

8. The product of two numbers is 4107. If the H.C.F. of these numbers is 37, then the greater number is:

A.124 B.100 C.111 D.175 E.None of these

9. The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:

A.1 B.2 C.3 D.5 E.None of these

Answer

01. D (16) 02. D (364) 03. B (15110) 04. C (308) 05. D 06. C (40) 07. D (548) 08. C (111) 09. B (2)



### LCM & HCF - Set 02

 $1.\,$  If the product of two numbers is 2496 and HCF is 8, then the ratio of HCF and LCM is

A)1:32

B)39:1

C)1:39

D)4:63

E)None of these

2. The greatest possible length which can be used to measure exactly the lengths 1m 92cm,3m 84cm ,23m 4cm

A)23

B)32

C)36

D)34

E)None of these

HCF of 4/3, 8/6, 36/63 and 20/42

B)4/8 A)4/126

C)4/36

D)4/42

E)None of these

4. 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

5. The HCF of 2511 and 3402 is

A)31

B)42

C)76

D)81

E)None of these

6. A gardener had a number of shrubs to plant in rows. At first he tried to plant 8, then 12 and then 16 in a row but he had always 3 shrubs left with him. On trying 7 he had none left. Find the total number of shrubs.

A)154

B)147

C)137

D)150

E)None of these

7. If m and n are two whole numbers and if  $m^n = 49$ . Find  $n^m$ , given that  $n \neq 1$ E)None of these A)118 B)94 C)561 D)128

8. What will be the least number which when doubled will be exactly divisible by 12,18,21 and 30?

A)630

B)360

C)603

D)306

E)None of these

9. HCF and LCM of two numbers are 11 and 385 .If one number lies between 75 and 125 then that number is

A)123

B)73

C)77

D)154

E)None of these

10. If the L.C.M of x and y is z, their H.C.F is

A)xy/z

B)xyz

C(x + y)/z D(x/xy)

E)None of these

Answer

01. **C) 1:39** 

02. **B) 32** 

03. **A. 4/126** 

04. **C) 198/8** 07. **D) 128** 

05. **D) 81** 08. A) 630 06. **B) 147** 

09.

10. A) xy/z



# Simplification

What will come in place of the question mark (?) in the following questions?

1. 
$$(50^2 + 30^2) \div 6400 = ?$$

4. 
$$(5)^3 - (3.75)^3 - (1.25)^3 - 3(3.75)(6.25) = ?$$

What approximate value should replace the question mark (?) in the following questions?

1. 
$$108 \times 107 \times 96 = ?$$

2. 
$$8(2/7) + 30\%$$
 of  $60 + 10(5/9) = ?$ 

5. 
$$\sqrt{224} \times 12.05 + \sqrt[3]{342} \times 4 = ?$$

#### Answer



## Time And Work Set 01

1. If 10 Carpenters working 4hours a day can make 320 chairs in 200 days, then no. Of chairs made by 16 carpenters in 32 days each working 6hours in a day B)122 C)123 D)124 E)None of these A)120 2. 6 men or 10 women can do a piece of work in 24 days. How long will 12men and 20 women take to finish the work? A)6 B)10 E)None of these C)9 D)6 3. A and B together can complete a piece of work in 6 days. If A alone can complete the work in 10 days. In how many days B alone can complete that work? A)12 E)None of these B)15 C)13 D)10 4. A can do a certain job in 14 days. B is 40% more efficient than A. How many days does B alone take to do the same job? A)12 B)20 C)13 D)10 E)None of these 5. X can do a piece of work in 20 days and Y can do a piece of work in 30 days. They work together in 6 days then how much work left? C)1/3D)1/6E)None of these 6. 12 men complete the work in 9 days. Ater they worked for 6days, 6 more men joined then how many days required to complete the remaining the work? C)3 D)2 E)None of these 7. A is twice as good a workman as B, A and B together can complete a work in 12 days. In how many days B alone finish the work? C)12 D)48 E)None of these B)36 8. X and Y can do a piece of work in 18 days and 14 days..X started the work alone, after 3 days Y joined till the completion of work. How long they did the work ?(approximately) A)6 D)7 E)None of these 9. 4 men and 6 women can complete the work in 8days. While 3 men and 7 women can complete the work in 10 days. In how many days 10 women will complete the work? A)40 B)42 C)30 D)36 E)None of these 10.A ,B and C together earn Rs.320 per day.A and C together earn Rs.125 and B and C together earn Rs. 150. The daily earning of C is E)None of these A)42 B)44 C)45 01. **C) 123** 02. **A) 6** 03. **B)15** 04. **D) 10** 05. **A) ½** 06. **D) 2** 07. **B) 36** 08. **D) 7** 09 **A) 40** 10. **C) 45** 

## Time And Work Set 02

1. Mohan can do a work in 15 days. After working for 3 days he is joined by Vinod. If they complete the remaining work in 3 more days, in how many days can Vinod alone complete the work?

A.10 days B.8 days C.5 days D.12 days E.15 days

2. Arun can do a certain work in the same time in which Bipasha and Rahul together can do it. If Arun and Bipasha together could do it in 10 days and



Rahul alone in 50 days, then Bipasha alone could do it in:

A.15 days B.20 days C.25 days D.30 days E.35 days

3. Sekar, Pradeep and Sandeep can do a piece of work in 15 days. After all the three worked for 2 days, sekar left. Pradeep and Sandeep worked for 10 more days and Pradeep left. Sandeep worked for another 40 days and completed the work. In how many days can sekar alone complete the work if sandeep can complete it in 75 days?

A.25 days B.20 days C.30 days D.35 days E.15 days

4. Dinesh does 80% of a work in 20 days. He then calls in Gokul and theytogether finish the remaining work in 3 days. How long Gokul alone would take to do the whole work?

A.39 days B.37 days C.37  $\frac{1}{2}$  days D.40 days E.39  $\frac{1}{2}$  days

5. Hari and Vijay can together finish a work in 30 days. They worked together for 20 days and then Vijay left. After another 20 days, hari finished the remaining work. In how many days hari alone can finish the work?

A.45 B.60 C.35 D.50 E.65

6. Madhavan can finish a work in 5 hours. He invites Manohar and Manjima who can work 3/4th as fast as he can to join him. He also invites Mani and Mohan who can work only 1/5th as fast as he can to join him. If the five person team works the same job and they start together, how long will it take for them to finish the job?

A.50/97 days B.87 days C.50/29 days D.78 days E.62 days

7. A typing work is done by three person P, Q and R. P alone takes 10 hours to type a single booklet but B and C working together takes 4 hours, for the completion of the same booklet. If all of them worked together and completed 14 booklets, then how many hours have they worked?

A.30hrs B.40hrs C.25hrs D.45hrs E.50hrs

8. Nakul and Ram are working on aproduction company. Nakul takes 6 hours to make 32 products, while Ram takes 5 hours to make 40 products. How much time will they take, working together to make 110 products?

A.8 hours B.8 hours 15 minutes C.9 hours D.8 hours 25 minutes E.9 hours 15 minutes

9. Gopal does a work in 90 days, Vikash in 40 days and Santhosh in 12 days. They work one after another for a day each, starting with Gopal followed by Vikash and then by Santhosh. If the total wages received are Rs 360 and Gopal, Vikash, Santhosh share them in the ratio of the work done, find their respective individual wages.

A.Rs 44, Rs 80 and Rs 264
C.Rs 36, Rs 81 and Rs 243
B.Rs 40, Rs 87 and Rs 276
D.Rs 42, Rs 86 and Rs 232

E.Rs 37, Rs 89 and Rs 284

10. When Ashok and Karthik are working alone, they can complete a piece of work in 25 days and 30 days respectively. On day 1, Karthik started the work and Ashok joined B from day 3 on-wards. Find approximately after how many days will the work be completed?

A.20 days B.10 days C.15 days D.25 days E.30 days

#### **Answer**

01. **C.5 days** 02. **C.25 days** 03. **C.30 days** 04. C.37 ½ days 05. **B.60** 

06. **C.50/29 days** 07. **B.40hrs** 08. **B.8 hours15 minutes** 09 **C.Rs 36, Rs 81 and Rs 243** 

10. **C.15 days** 



## Pipes & Cistern Set 01

1.	Two pipes can fill a tank in 6hours and 8 hours . While a third pipe empties the
	full tank in 12hours. If all the three pipes are operate simultaneously, In how
	much time will the tank be filled?

A)4 hours B)4hours 48min C)5hours D)5hours 48min E)None of these

- 2. A tap can fill a tank in 6hrs.After half the tank is filled, three more similar taps are opened. What is the total time taken to fill the tank completely?

  A)3hrs B)3hrs 15 min C)3hrs 45 min D)4hrs E)None of these
- 3. Two pipes can fill a tank in 8 hours and 10 hours .If two pipes are operate simultaneously, In how much time will the tank be filled?

  A)4hrs 18min B)10min C)4hrs D)12hrs 10min E)None of these
- 4. Two pipes A and B can fill a tank in 20 minutes and 40 minutes. If both pipes are opened simultaneously, after how much time should B be closed so that the tank is full in 18 minutes?
  - A)10 min B)9 min C)8 min D)7min E)None of these
- 5. A pump can fill the tank in 4 hours.Because of a leak in the tank i took 5(1/2) hours to fill the tank.If the tank is full,how much time will the leak take to empty it?
  - A)14hrs B)14hrs 20min C)14hrs 40min D)14hrs 45min E)None of these
- 6. Three taps P,Q and R can fill a tank in 10,20 and 30 hours respectively. If A is open all the time and Q and R are open for one hour each alternatively ,the tank will be fill in
  - A)7 hours B)7 hours 30min C)7hours 45min D)7hours 20 min E)None of these
- 7. One pipe can fill a tank twice as fast as another pipe. If together the two pipes can fill the tank in 12 minutes, then the slower pipe alone will be able to fill the tank in
  - A)30min B)33min C)36min D)35min E)None of these
- 8. 10 buckets of water fill a tank, when the capacity of each bucket is 11.5 litres. How many buckets will be needed to fill the same tank, If the capacity of each bucket is 5 litres?
  - A)22 B)32 C)21 D)23 E)None of these
- 9. Two pipes fill the tank in 12min and 15min. There is also a waste pipe in the tank. When all the three are opened, the empty tank is full in 20 min. How long will the waste pipe take to empty the tank?
  - A)10 min B)20 min C)30 min D)35 min E)None of these
- 10. Two pipes can fill a tank in 4 hours and 12 hours . If two pipes are operate simultaneously, In how much time will the tank be filled?
  - A)3hrs B)3 hrs 10min C)13hrs D)3hrs 10min E)None of these

#### **Answer**

 01. B) 4hours 48min
 02. C) 3hrs 45 min
 03. A) 10hrs

 04. 5) None of these (4)
 05. C)14hrs 40min
 06. A) 7 hours

 07. C) 36 min
 08. D) 23
 09 A) 10 min
 10. A) 3 hrs



# Average Set – 01

3 years ago, the average of a family of 5 members was 17 years. A baby having been born, the average age of the family is the same today. The present

age of the baby is:

A.5 years B.2 years C.1 year

D.4 years E.None of these

2. Of the four numbers, the first is twice the second, the second is one-third of the third and the third is 5 times the fourth. The average of the numbers is

24.75. The largest of these numbers is: B.25

A.45

D.45

E.None of these

3. The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of the girls is 15.4 years. The ratio of the

number of boys to the number of girls in the class is:

A. 1:4

B. 2:3

C. 3:4

D. 4:2

E. None of these

4. The average price of 10 books is Rs. 12 while the average price of 8 of these books is Rs. 11.75. Of the remaining two books, if the price of one book is 60% more than the price of the other, what is the price of each of these two books?

A.Rs 10 and Rs 16

B.Rs 12 and Rs 24

C.Rs 24 and Rs 18

D.Rs 28 and Rs 12

E.None of these

5. The average age of 30 boys of a class is equal to 14 years. When the age of the class teacher is included the average becomes 15 years. Find the age of the

class teacher?

A.50

B.44

C.45

D.42

E.None of these

6. The Average of marks obtained by 120 candidates in a certain examination is 35. If the average marks of passed candidates is 39 and that of failed candidates is 15, what is the number of candidates who passed the

examination?

A.90

B.100

C.108

D.115

E.None of these

7. The average of 11 results is 50. If the average of first 6 results is 49 and that

of last 6is 52, find the sixth result?

B.56

C.65

D.62

E.None of these

8. The average age of a family of 6 members is 22 years. If the age of the youngest member be 7 years, then what was the average age of the family at the birth of the youngest member?

A.15

B.18

C.28

D.24

E.None of these

9. A batsman in his 17th innings makes a score of 85, and thereby increases his

average by 3. What is his average after 17 innings?

E.None of these

10. There were 35 students in a hostel. If the number of students increase by 7, the expenses of the mess increase by Rs 42 per day while the average expenditure per head diminishes by Rs 1. Find the original expenditure of the mess?

A.450

B.420

C.430

C.40

D.410

D.45

E.None of these



# Answer COACHING INSTITUTE

01. B (2 years) 02. D (45) 03. B (2:3) 04. A (Rs 10 and Rs 16) 05. C (45) 06. B (100)

07. **B (56)** 08. **B (18)** 09 **B (37)** 10. **B (420)** 

## Averages Set 02

1. The arithmetic mean of the scores of a group of students in a test was 52. The brightest 20% of them secured a mean score of 80 and the dullest 25% a mean score of 31. The mean score of remaining 55% is:

A.51.4 B.52.6 C.56.1 D.55.3 E.None of these

2. The average of a non-zero number and its square is 5 times the number. The

number is:

A.0, 7 B.0, 6 C.5, 7 D.0, 9 E.None of these

3. If the mean of a, b, c is M and ab + bc + ca = 0, then the mean of  $a^2$   $b^2$ ,  $c^2$  is:

A.3 M x M B.3 M C.9 M D.9 M x M E.None of these

4. The average weight of 8 persons increases by 2.5 kg when a new person comes in place of one them weighing 65 kg. What might be the weight of the new

person? CCCENT INSTITUTE

A.65 kg B.70 kg C.85 kg D.92 kg E.None of these

5. The average age of the boys in a class is 16 years and that of the girls is 15 years. The average age for the whole class is:

A.15 B.16 C.17 D.Data inadequate E.None of these

6. A cricketer has completed 10 innings and his average is 21.5 runs. How many runs must he make in his next innings so as to raise his average to 24?

A.44 B.45 C.49 D.48 E.None of these

7. 1/3 rd of certain journey is covered at the rate of 25 km/hr, 1/4 th at the rate of 30 km/hr and rest at 50 km/hr. Find the averae speed for the whole journey?

A.31 1/3 km/hr B.30 1/3 km/hr C.33 1/3 km/hr

D.34 1/3 km/hr E.None of these

8. The average of six numbers is 3.95. The average of two of them is 3.4, while the average of the other two is 3.85. What is the average of the remaining two numbers?

A.4.2 B.4.6 C.5.1 D.5.6 E.None of these

9. The average salary of the entire staff in a office is Rs 120 per month. The average salary of officers is Rs 460 and that of non officer is Rs 110. If the number of officer is 15, then find the number of non-officer in the office?

A.450 B.550 C.510 D.520 E.None of these

10.**Find the average of first 20 multiple of 7?**A.71.5 B.73.5 C.75.2 D.76.6 E.None of these

Answer Accent COACHING INSTITUTE

01. A (51.4) 02. D (0,9) 03. A (3 M x M)

04. C (85 kg) 05. D (Data inadequate) 06. C (49) 07. C (33 1/3) 08. B (4.6) 09 C (510) 10. B (73.5)



## Profit and Loss

1.	A manufacture undertakes to supply 2000 pieces of a particular component
	at Rs.25 per piece. According to his estimates, even if 5% fail to pass the
	quality tests, then he will make a profit of 25%. However as it turned out,
	50% of the components were rejected. What is the loss to the
	manufacture? [TCS recruitment exam question]

A. Rs 12,000 B. Rs 13,000 C. Rs 14,000 D. Rs 15,000 E. None f these

2. Shan bought 30 liters of milk at the rate of Rs.8 per liter. He got it churned after spending Rs.10 and 5kg of cream and 30 liter of toned milk were obtained. If he sold the cream at Rs.30 per kg and toned milk at Rs.4 per

liter, his profit in the transaction is:

A. 20%

B. 8%

C. 30%

D. 40%

3. The sale price of an article including the sale tax is Rs. 616. The rate of sale tax is 10%. If the shopkeeper has made a profit of 12%, the cost price of the article is [The Pearson Guide book]

A. Rs 500

B. Rs 515

C. Rs 550

D. Rs 600

4. When a article is sold for Rs.3400, there is a loss of 2%. What is the cost

price of the commodity?

A. Rs 3500.50

B. Rs 3200

C. Rs 3400.56

D. Rs 3469.34

5. The marked price of a watch was Rs. 720.A man brought the same for Rs.550.80 after getting two successive discounts the first being 10% .What

CCENTMON UP TO STITUTE

was the second discount rate?

A. 12%

B. 14%

C. 15%

D. 18%

6. Jagdeep bought a refrigerator with 20% discount on the labeled price. Had he bought at it with 30% discount, he would have saved Rs. 500 more. At

what price did he buy the refrigerator?



A. Rs 5000

B. Rs 10,000

C. Rs 12,500

D. Rs 15,000

7. If the S.P of Rs.40 results in a 20% discount on list price. What S.P would

result in a 30% discount on list price?



B. Rs 20

C. Rs 35

D. Rs 27

8. A discount of 25% on one article is same as a discount of 50% on another article .The costs of two article can be:

A. Rs 30, Rs 20 B. Rs 90, Rs 40 C. Rs 80, Rs 40

D. Rs 50, Rs 40

9. A article is listed at Rs. 2000 and a discount of 20% is offered on the list price . What additional discount must be offered to the customer bring the net price to Rs. 1400?

A. 12.5%

B. 10%

C. 12%

D. 15%

A shopkeeper gives 12% additional discount on the discounted price, 10. after giving an initial discount of 20% on the labeled price of a mobile. If the final sale price of the mobile is 704. then what is its labelled price?

A. Rs 844

B. Rs 920

C. Rs 1000



- The difference between the cost price and sale price of an article is Rs. 500 if the profit is 20%. The selling price is:
  - A. Rs 4000
- B. Rs 1500
- C. Rs 3000
- D. Rs 3300
- 12. A dealer sold a Radio at a loss of 2.5%. Had he sold it for Rs. 100 more, he would have gained 7.5%. To gain 12.5% he should sell it for :
  - A. Rs 2200
- B. Rs 1000
- C. Rs 1100
- D. Rs 1125

#### **Answer**

- 01 **B. Rs 13,000** 04. **D. Rs 3469.34** 05. **C. 15%**
- 02. **B.8%**
- 03. **A. Rs 500**
- 06. **A. Rs 5,000**

- 07. **C. Rs 35**
- 08. **C. Rs 80, Rs 40**
- 09 **A. 12.5%**

- 10. **C. Rs 1000**
- 11. C. Rs.3000
- 12. D. Rs.1125

# Compound Interest

- 1. What annual payment will discharge a debt of 1025 due in 2 years at the rate of 5% compound interest?
  - A)550
- B)551.25
- C)560
- D)560.35
- E)None of these
- 2. In what time will Rs. 64,000 amount to Rs.68921 at 5% per annum interest being compounded half yearly?
  - A)3 years B)2 years

- C)2(1/2) years D)1(1/2) years E)None of these
- 3. If the difference between the CI and SI on a sum of money at 5% per annum for 2 years is Rs.16. Find the Simple Interest?
- B)460
- C)520
- D)640
- E)None of these
- 4. The difference between the SI and CI on Rs.5000 at 10%per annum for 2 year is
  - A)24
- B)35
- C)50
- D)56
- E)None of these
- 5. The difference SI and CI on Rs.1000 for 1 year at 10%per annum reckoned Half yearly is
  - A)2
- B)2.5
- C)3
- D)2.4
- E)None of these
- 6. Compound interest on a certain sum of money at 20% per annum for 2 years is Rs.5984. What is the SI on the same money at 9% per annum for 6 years?
  - A)7320 B)7233
- C)7433
- D)7344
- E)None of these
- 7. The difference between CI and SI on an amount Rs. 15000 for 2 year is Rs.96.What is the rate of interest per annum?
  - A)12
- B)10
- C)8
- D)7
- E)None of these
- 8. The effective annual rate of interest corresponding to the nominal rate of 4% per annum payable half yearly is
- B)4.4%
- C)4.04% D)4.2%
- E)None of these
- 9. Rohit borrowed Rs. 1200 at 12% PA .He repaid Rs. 500 at the end of 1 year. What is the amount required to pay at the end of 2<sup>nd</sup> year to discharge his loan which was calculated in CI
  - A)945.28
- B)1106.00
- C)1107.55
- D)1100.65
- E)None of these
- A sum of money invested at CI to Rs.800 in 3 years and to Rs.840 in 4 years. Find rate of interest PA?





A)6%

B)5%

C)4%

D)2%

E)None of these

**Answer** 

01 **B) 551.25** 04. **C) 50** 

02. **D) 1(1/2) years** 05. **B) 2.5** 

03. **D) 640** 06. **D) 7344** 

07. **C) 8** 

08. **C) 4.04%** 

09 A) 945.28

10. **B) 5%** 

## **Number Series**

1. **1, 11, 38, 78, 175, 301** 

A.11 B.78 C.175

D.301

E.None of these

2. **7, 39, 85, 179, 211, 369, 879** 

A.369 B.211 C.179 D.879 E.None of these

3. **5, 8.5, 54.5, 90.25, 250.25, 125.125** 

A.90.25 B.8.5 C.250.25

E.None of these

4. **65, 91, 13, 45.5, 2.6, 30.50, 0.52, 11.375** 

C.30.50 A.11.375 B.2.6 D.0.52 E.None of these

5. **4, 100, 296, 654, 988, 1484** 

A.296

B.1484 C.988 D.654

E.None of these

6. **163, 86.5, 98.5, 159.75, 339.5, 873.5** 

A.98.5 B.163 C.339.5

D.873.5

D.125.125

E.None of these

7. **2, 20, 30, 72, 90, 140, 182** 

A.72 B.140 C.182

D.30

E.None of these

8. **342, 512, 728, 999, 1330, 1727** 

A.512

B.999

C.1330

D.1727

E.None of these

9. **17, 23, 40, 63, 103, 166, 329, 435** 

A.435

B.166

C.329

D.103

E.None of these

531, 552, 535, 514, 531, 552, 535

A.514

B.552

C.535

D.531

E.None of these

#### **Answer**

01 **B.78** 

02. **D.879** 

03. **A.90.25** 

04. **C.30.50** 07. **B.140** 

05. **D.654** 08. **A.512** 

06. **A.98.5** 09 **C.329** 

10. E.None of these