1. The average weight of four boys A, B, C, and D is 75 kg. The fifth boy E is included and the average weight decreases by 4 kg. A is replaced by F. The weight of F is 6 kg more than E. Average weight decreases because of the replacement of A and now the average weight is 72 kg. Find the weight of A.
   1) 57 kg
   2) 54 kg
   3) 56 kg
   4) 60 kg
   5) 58 kg

   2. If a discount of 16% is given on the marked price of a book, the publisher gains 20%. If the discount is increased to 20% the gain percent is
   1) 14 2/7%
   2) 14 1/7%
   3) 14 3/7%
   4) 14 4/7%
   5) 14 5/7%

   3. In 165 litres of mixtures of milk and water, water is only 28%. The milkman sold 40 litres of this mixture and then he added 30 litres of pure milk and 13 litres of pure water in the remaining mixture. What is the percentage of water in the final mixture?
   1) 29.35%
   2) 28. 57%
   3) 24. 57%
   4) 27. 75%
   5) 26. 57%

   4. A rectangular plot has a concrete path running inner side of the plot is used as a lawn, which has an area of 432 sq.m. If the width of the path is 4 m and the length of the plot is greater than its breadth by 2m, what is the area of the rectangular plot?
   1) 980 m^2
   2) 975 m^2
   3) 984 m^2
   4) 960 m^2
   5) 965 m^2

   5. Difference between the compound interest and the simple interest accrued on an amount of Rs. 18000 in two year is Rs. 405. What was the rate of interest?
   1) 14%
   2) 16%
   3) 12.5%
   4) 15%
   5) 15.5%

   6. 12 men can complete any work in 36 days. 18 women can complete the same

piece of work in 60 days. 8 men and 20 women work together for 20 days. If only the women were to complete the remaining work in 4 days, then how many women would be required?
1) 60
2) 74
3) 68
4) 75
5) 70

7. Out of 5 women and 4 men, a committee of three members is to be formed in such a way that at least one member is woman. In how many different ways can this be done?
1) 60
2) 100
3) 120
4) 90
5) 80

8. Excluding the stoppages, the speed of a bus is 64 km/hr and including the stoppages the speed of the bus is 48km/hr. For how many minutes does the bus stop per hour?
1) 15 min
2) 10 min
3) 12 min
4) 20 min
5) 18 min

9. A box contains 2 black, 3 orange and 4 pink ribbons. If two ribbons are drawn at random. What is the probability that both are orange?
1) 5/12
2) 1/13
3) 1/14
4) 1/12
5) 1/24

10. Pradeep invested 20% more than Mohit. Mohit invested 10% less than Raghu. If the total sum of their investment is Rs. 17880, how much amount did Raghu invested?
1) Rs. 5000
2) Rs. 6500
3) Rs. 6000
4) Rs. 7500
5) Rs. 5500

Answers:

1. 3;
Sum of the weight of A, B, C and D = 75 × 4 = 300 kg
and average weight of A, B, C, D and E = 71 kg
sum of the weight of A, B, C, D and E
= 71 × 5 = 355 kg
weight of E = 355 – 300 = 55 kg
weight of F = 55 + 6 = 61 kg
Now, average weight of F, B, C, D and E = 72 kg
Sum of the weight of F, B, C, D and E = 72 × 5 = 360 kg
B + C + D = 360 – 55 – 61 = 244 kg.
Weight of A = 300 – 244 = 56 kg.

2. 1;
Let the marked price be Rs. 100 and the cost price be Rs. x
(84 - x)/x * 100 = 20
x = Rs. 70
Gain% when discount is 20 % = (80 - 70)/70 * 100 = 14 2/7%

3. 2;
Now, milkman sold 40 litre of mixture
So, remaining mixture = 165 – 40 = 125 litre
Quantity of water = 125 × 28/100 = 35 litre
Quantity of milk = 90 litre.
Now, milkman made new mixture in which
water = 35 + 13 = 48 litre
milk = 90 + 30 = 120 litre
Percentage of water in the new mixture
= 48/(48 + 120) * 100 = 28.57%

4. 4;
Let the breadth of the rectangle plot be x m.
Given, width of the path = 4 m
Area of the path = 432 m^2
and length of rectangular plot = (x + 2) m
2 × [4 (x + 2) + 4x – 2 × 4 × 4] = 432 m^2
8 (x + 2 + x – 8) = 432 m2
8 (2x – 6) = 432
16 (x – 3) = 432 $\Rightarrow$ x = 30 m
Area of plot = x × (x + 2) = 30 × 32 = 960 m^2

5. 4;
Difference of CI and SI in 2 years = Pr^2/(100)^2
r = 15%

6. 5;
12 men × 36 days = 18 women × 60 days
2m = 5w
8m = 20w
(8m + 20w) × 20 days + xw × 4 days = 18w × 60 days
40 × 20 + x × 4 = 18 × 60 $\Rightarrow$ 4x = 1080 – 800
x = 280/4
= 70 women

7. 5;
Total number of ways
= 5C1 × 4C2 + 5C2 × 4C1 +5C3
5*4*3/2 + 5*4/2 + 5*4*3/3*2
= 30 + 40 + 10 = 80 ways

8. 1;
Let distance be LCM of speeds = 192 km
Time taken by bus without stoppage = 192/64 = 3hr
Time taken by bus with stoppage = 192/48 = 4hr
Bus stops in 4 hours for 60 min
Bus stops in 1 hr for 60/4
= 15 min

9. 4;
Required Probability = 3C2/9C2 = 1/12

10. 3
Let the investment by Raghu be x
Mohit = x * 90/100 = 9x/10
Pradeep = 9x/10 * 120/100 = 108x/100
x + 9x/10 + 108x/100 = 17880
x = Rs. 6000

Data Interpretation [Missing DI] :

Refer to the table and answer the given questions.

Year	Number of Candidates Appeared	% of Qualified Candidates	Respective Ratio of qualified male & qualified females
2001	__	__	5:3
2002	750	__	5:4
2003	600	28%	__
2004	__	65%	8:5
2005	1040	40%	__

1. In 2001, 6400 candidates appeared at the exam and 40% of them qualified. In 2005 the ratio between qualified males and females was 3:5. What is the total number of female candidates who qualified in these two years?
A. 1120
B. 1220
C. 1330
D. 1150
E. None of the Above

2. In 2004, what percent of male candidates did qualify in the exam among all qualified candidates?
A. 51%
B. 61%
C. 55%
D. 56%
E. None of the Above

3. In 2002, 54% of appeared candidates did qualify. How many female candidates did qualify in the exam?
A. 280
B. 170
C. 180
D. 250
E. 240

4. In 2003, a total of 68 male candidates did qualify. What is the respective ratio between males and females who had qualified in 2003?
A. 11:25
B. 19:25
C. 17:25
D. 25:13

E. 13:19

5. What is the average number of candidates who did not qualify in the exam in the years 2003 and 2005?
A. 576
B. 556
C. 528
D. 546
E. None of the Above

6. In 2003, if the number of female qualified candidates was 70, what was the respective ratio of number of female qualified candidates and number of male qualified candidates same year?
A. 5:9
B. 7:11
C. 10:11
D. 10:13
E. 5:7

7. Number of appeared candidates increased by 20% from 2002 to 2006. If 25% of the appeared candidates qualified in 2006, what was the number of qualified candidates in 2006?
A. 205
B. 225
C. 245
D. 240
E. 230

8. If the average number of qualified candidates in 2002 and 2005 was 433, what percent of appeared candidates qualified in the competitive exam in 2002?
A. 60%
B. 75%
C. 45%
D. 70%
E. 50%

9. In 2004, if the difference between number of male qualified candidates and number of female qualified candidates was 120, what was the number of appeared candidates in 2004?
A. 840
B. 800
C. 660
D. 600
E. 720

10. In 2001, the respective ratio of number of appeared candidates to qualified candidates was 5:2. Number of female candidates qualified in 2001 constitutes what percent of the number of appeared candidates in the same year?
A. 15%

B. 25%
C. 125%
D. 20%
E. Can not be determined

Answers
1. B. 1220
Explanation :
x = Female candidates in 2001
40% of 6400 = 2560
(3/8)x of 2560 = 960
y = Female candidates in 2005
40% of 1040 = 416
y = (5/8)*416 =260
Total = 960 + 260 = 1220

2. B. 61%
Explanation :
x = percent of qualified male candidates
x = (8/13)*100 = 61%

3. C. 180
Explanation :
54% of 750 = 405
x = percent of qualified female candidates
x = (4/9)*405 = 180

4. C. 17:25
Explanation :
28% of 600 = 168
Female Candidates = 168 – 68 = 100
68 : 100 => 17:25

5. C. 528
Explanation :
72% of 600 = 432
60% of 1040 = 624
432 + 624 = 1056 = 1056/2 = 528

6. E. 5:7
Explanation :
28% of 600 = 168
Female candidates = 70
Male candidates = 168 – 70 = 98
=> 70:98
=> 5:7

7. B. 225

Explanation :
20% of 750 = 150
= 750 + 150 = 900
25% of 900 = 225

8. A. 60%
Explanation :
Number of qualified candidates in 2002 and 2005 = 866
2005: 40% of 1040 = 416
866 – 416 = 450
(450/750)*100 = 60%

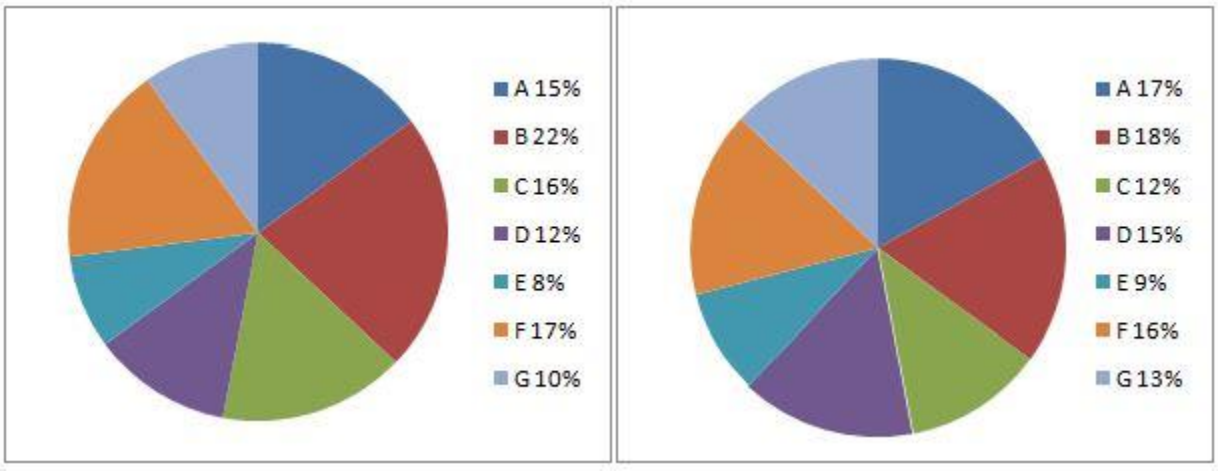
9. B. 800
Explanation :
x = qualified candidates; y = Appeared Candidates
(3/13)*x = 120
x = 520
65% of y = 520
y = 800

10. A. 15%
Explanation :
[2x * (3/8) / 5] * 100 = 15%

Q.1-5): Read the following Pie-chart carefully and answer the questions given below it.

Percentage wise distribution of candidates enrolled for MBA and the candidates who have successfully completed the course from different institutes.

Candidates Enrolled=2500



Candidates who have successfully completed the course=1900

1).Which institute has the highest percentage of candidates successful to enrolled?
a) D
b) E
c) A
d) F
e) None of these

2).What percent of candidates from institute D have come out to be successful out of the total candidates enrolled from this institute?
a) 115
b) 95
c) 80
d) 85
e) None of these

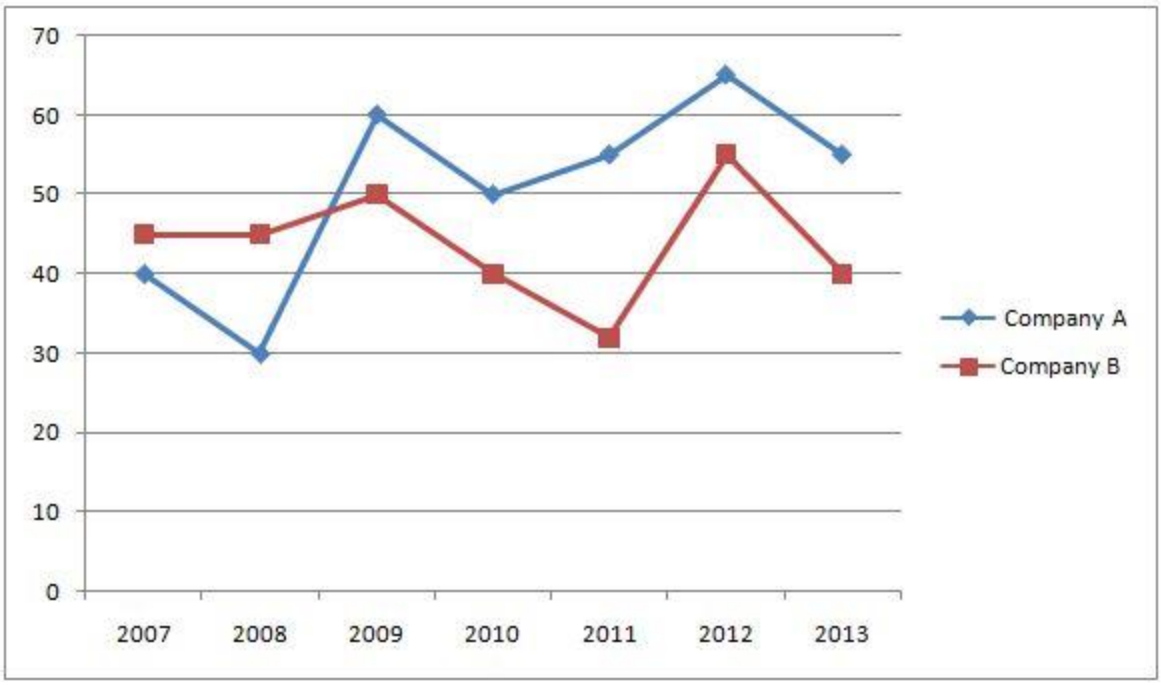
3).What is the approximate percentage of candidates successful to enrolled from institute A?
a) 92
b) 89
c) 86
d) 96
e) 88

4).What is the ratio between the enrolled and successful candidates from the institutes B and C together?
a) 55:12
b) 5:7
c) 135:271
d) 5:3
e) None of these

5).What is the percentage of successful candidates from institute E and F together over the candidates enrolled from these institutes together?
a) 76
b) 105
c) 80
d) 74
e) None of these

(Q.6-10): Read the following graph carefully and the answer the questions given below.

Percentage profit of two companies in different years.



6).If total income of company B in 2008 was Rs.140 crore, what was the total expenditure of that company in the same year? (approx)
a) Rs.100.66 cr.
b) Rs.110.33 cr.
c) Rs.98.22 cr.
d) Rs.94.90 cr.
e) Rs.96.55 cr.

7).If total expenditure of company B in 2009 and 2010 was Rs.270 crore, what was total income of that company in both the same years?
a) Rs.121.5 cr.
b) Rs.135 cr.
c) Rs.140 cr.
d) Data inadequate
e) None of these

8).In which year was the total income more than double the total expenditure in that year for company A?
a) 2010
b) 2009
c) 2011
d) 2008
e) None of these

9).If the total expenditure of company A in 2010 was Rs.200 cr. What was the total income of that company in the same year?
a) Rs.260 cr.

b) Rs.300 cr.
c) Rs.160 cr.
d) Data inadequate
e) None of these

10).If the income of company A in 2009 was Rs.100 cr. Then what was the expenditure of company B in that year?
a) Rs.150 cr.
b) Rs.120 cr.
c) Rs.140 cr.
d) Can't be determined
e) None of these

Answers:
1). e)
2).b)
3). c)
4).d)
5). a)
6). e)
7). d)
8). e)
9). b)
10). d)

Solutions:
1). e)

2). No. of enrolled candidate from institute D= (150/100)*2500=300
No. of successful candidates= (15/100)*1900=285
Required percentage= (285/300)*100=95%

3). No. of enrolled candidates from institute A = (15*100)*2500=375
No. of successful Candidates= (17/100)*1900=323
Required Percentage= (323/375)*100=86% (approx)

4). No. of enrolled candidates from institute B= (22/100)*2500=550
No. of enrolled candidates from institute C= (16/100)*2500=400
Total=550+400=950
No. of successful candidates from institute B= (18/100)*1900=342
No. of successful candidates from institute C= (12/100)*1900=228
Total= 342+228=570
Required Ratio=570:950=5:3

5). No. of successful candidates from institute E= (9/100)*1900=171
No. of successful candidates from institute F=(16/100)*1900=304
Total 304+171=475
No. of enrolled candidates from institute E= (8/100)*2500=200
No. of enrolled candidates from institute F= (17/100)*2500=425

Total=200+425=625
Required %= (475/625)*100=76%

6). Expenditure =140*(100/145) =Rs.96.55 cr. (approx)

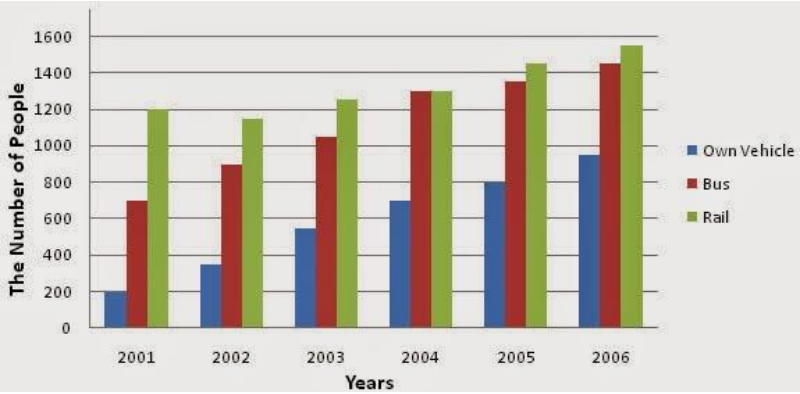
7). Data inadequate

8). Income>2* expenditure profit should be more than 100%

9). Income=200*(150/100) =Rs.300 cr.

10). Answer: d)

Preferences of People (In thousands)
In Using Different Modes of Transport Over the Years



1. From 2001 to 2006, the total number of people who preferred to travel by rail, was how many thousands?
a) 7900
b) 8300
c) 9100
d) 6300
e) None of these

2. What is the respective ratio of the number of people preferring to travel by rail in 2006 to the number of people preferring to travel by rail in 2002?
a) 31 : 27
b) 31 : 23
c) 23 : 31
d) 27 : 31
e) None of these

3. In the year 2003, if all the buses reduced their rates by 40% and 50% of the people who preferred to travel by rail, now preferred buses, then how many people (in thousands) prefer to travel by bus?
a) 1750
b) 1569
c) 1458
d) 1675
e) None of these

4. What is the respective ratio of the number of people preferring to travel bus to the number of people preferring to travel by rail in the year 2005?
a) 29 : 27
b) 9 : 10
c) 27 : 29
d) 23 : 27

e) None of these

5. In 2003, the people preferring to travel by bus represented approximately what per cent of the people preferring to travel by own vehicles, buses and rails together in the year?
a) 46
b) 54
c) 22
d) 14
e) 37

Answers
1. (a)
Explanation: From 2001 to 2006, the total number of people who preferred to travel by rail = (1200 + 1150 + 1250 + 1300 + 1450 + 1550) = 7900 thousand

2. (b) Explanation: Required ratio = 1550 : 1150 = 31 : 23

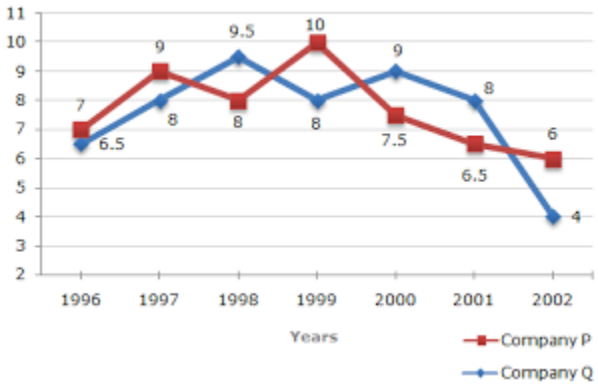
3. (d) Explanation: Required number of people prefer to travel by bus = 1050 + 50100 of 1250 = 1050 + 625 = 1675 thousand

4. (c) Explanation: Required ratio: 1350: 1450 = 27: 29

5. (e) Explanation:People preferring to travel by bus in 2003 = 1050 People preferring to travel by own vehicles, buses and rails together in the year 2003 = 550 + 1050 + 1250 = 2850 Required = 1050 ×1002850 % = 36.84 % = 37% (Approx)

Practice Quant Questions for Bank , Railway and LIC Exam.

Directions: (1-5): Two different finance companies declare fixed annual rate of interest on the amounts invested with them by investors. The rate of interest offered by these companies may differ from year to year depending on the variation in the economy of the country and the banks rate of interest. The annual rate of interest offered by the two Companies P and Q over the years is shown by the line graph provided below.



1. A sum of Rs. 4.75 lakhs was invested in Company Q in 1999 for one year. How much

more interest would have been earned if the sum was invested in Company P?
A.Rs 19,000
B.Rs.14, 250
C.Rs.11, 750
D.Rs. 9,500
E. None of these

2.If two different amounts in the ratio 8:9 are invested in Companies P and Q respectively in 2002, then the amounts received after one year as interests from Companies P and Q are respectively in the ratio?
A.2:3
B. 3:4
C.6:7
D. 4:3
E. None of these

3. In 2000, a part of Rs. 30 lakhs was invested in Company P and the rest was invested in Company Q for one year. The total interest received was Rs. 2.43 lakhs. What was the amount invested in Company P?
A. Rs.9 lakh
B. Rs.11 lakh
C.Rs. 12 lakh
D.Rs.18 lakh
E. None of these

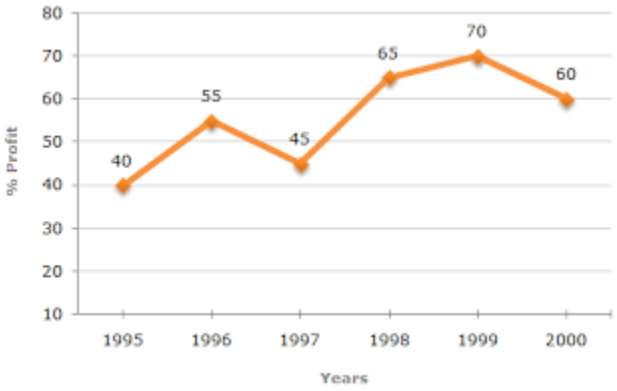
4. An investor invested a sum of Rs. 12 lakhs in Company P in 1998. The total amount received after one year was re-invested in the same Company for one more year. The total appreciation received by the investor on his investment was?
A. Rs. 2, 96,200
B. Rs. 2, 42,200
C. Rs. 2, 25,600
D. Rs. 2, 16,000
E. None of these

5.An investor invested Rs. 5 lakhs in Company Q in 1996. After one year, the entire amount along with the interest was transferred as investment to Company P in 1997 for one year. What amount will be received from Company P, by the investor?
A. Rs. 5, 94,550
B. Rs. 5, 80,425
C. Rs. 5, 77,800
D. Rs. 5, 77,500
E. None of these

Direction(6 – 10): The following line graph gives the annual percent profit earned by a Company during the period 1995 - 2000.

Percent Profit Earned by a Company over the Years.

%Profit = [(Income – Expenditure)/ (Expenditure)] x 100



6.If the expenditures in 1996 and 1999 are equal, then the approximate ratio of the income in 1996 and 1999 respectively is?
A.1:1
B. 2:3
C.13:14
D. 9:10
E. None of these

7.If the income in 1998 was Rs. 264 crores, what was the expenditure in 1998?
A. Rs. 104 crores
B. Rs. 145 crores
C. Rs. 160 crores
D. Rs. 185 crores
E. None of these

8.In which year is the expenditure minimum?
A. 2000
B. 1997
C. 1996
D. Cannot be determined
E. None of these

9.If the profit in 1999 was Rs. 4 crores, what was the profit in 2000?
A. Rs. 4.2 crores
B. Rs. 6.2 crores
C. Rs. 6.8 crores
D. Cannot be determined
E. None of these

10. What is the average profit earned for the given years?
A. 50 2/3
B. 55 5/6
C. 60 1/6
D. 33 5/3

E. None of these

ANSWERS

1. Answer: (D)

DIFFERENCE = Rs. [(10% of 4.75) - (8% of 4.75)]
= Rs. (2% of 4.75) lakhs
= Rs. 0.095 lakhs
= Rs. 9500.

2. Answer: (D)

Let the amounts invested in 2002 in Companies P and Q be Rs. 8x and Rs. 9xrespectively.
Then, interest received after one year from Company P = Rs. (6% of 8x)
= Rs. (48x/100)
and interest received after one year from Company Q = Rs. (4% of 9x)
= Rs. (36x/100)
Required ratio = 4/3

3. Answer: (D)

4. Answer: (C)

Amount received from Company P after one year (i.e., in 199) on investing Rs. 12 lakhs in it
= Rs. [12 + (8% of 12)] lakhs
= Rs. 12.96 lakhs.
Appreciation received on investment during the period of two years
= Rs. (14.256 - 12) lakhs
= Rs. 2.256 lakhs = Rs. 2, 25,600

5. Answer: (B)

Amount received from Company Q after one year on investment of Rs. 5 lakhs in the year 1996
= Rs. [5 + (6.5% of 5)] lakhs
= Rs. 5.325 lakhs.
Amount received from Company P after one year on investment of Rs. 5.325 lakhs in the year 1997
= Rs. [5.325 + (9% of 5.325)] lakhs
= Rs. 5.80425 lakhs
= Rs. 5, 80, 425

6. Answer: (D)

Let the expenditure in 1996 = x.
Also, let the incomes in 1996 and 1999 be I1 and I2 respectively.
Then, for the year 1996, we have:
55 =(I1 – x)/(x)*100 è I1= 155x/100 --- (1)
70 = (I2 – x)/(x) * 100 è I2 = 170x/100 ----- (2)
From (i) and (ii), we get:
I1 /II2 = 155/170 @ 0.91/1 @ 9/10

7. Answer: (C)

Let the expenditure is 1998 be Rs. x crores.

Then, [65 =(264 –x)/ x] * 100
x = 160
Expenditure in 1998 = Rs. 160 crores

8. Answer: (D)
The line-graph gives the comparison of percent profit for different years.
But the comparison of the expenditures is not possible without more data.
Therefore, the year with minimum expenditure cannot be determined.

9. Answer: (D)
From the line-graph we obtain information about the percentage profit only. To find the profit in 2000 we must have the data for the income or expenditure in 2000.
Therefore the profit for 2000 cannot be determined.

10. Answer: (B)
Average percent profit earned for the given years

= (1/6) x [40 + 55 + 45 + 65 + 70 + 60] = 55 5/6

Read given below questions and understand the method of solving. It will help you how to solve age related questions in Exam.

Basic Formula:
If the present age of A is ‘x’ years, the age of A, n years ago was (x-n) years, and the age of a after n years will be (x+n) years.

1. Rajeev's age after 15 years will be 5 times his age 5 years back. What is the present age of Rajeev ?
Sol. Let Rajeev's present age be x years. Then,
Rajeev's age after 15 years = (x + 15) years.
Rajeev's age 5 years back = (x - 5) years.
Therefore x + 15 = 5 (x - 5)
x + 15 = 5x - 25
4x = 40
x = 10.
Hence, Rajeev's present age = 10 years.

2. The ages of two persons differ by 16 years. If 6 years ago, the elder one be 3 times as old as the younger one, find their present ages.
Sol. Let the age of the younger person be x years.
Then, age of the elder person = (x + 16) years.
Therefore 3 (x - 6) = (x + 16 - 6)
3x -18 = x + 10
2x = 28
x = 14.
Hence, their present ages are 14 years and 30 years.

3. The product of the ages of Ankit and Nikita is 240. If twice the age of Nikita is more than Ankit's age by 4 years, what is Nikita's age?
Sol. Let Ankit's age be x years. Then, Nikita's age = 240/x years.
2 * (240 /x) – x = 4
480 – x2 = 4x
x2 + 4x – 480 = 0
(x+24)(x-20) = 0
x = 20.
Hence, Nikita's age = 240/x = 240/20 years = 12 years.

4. The present age of a father is 3 years more than three times the age of his son. Three years hence, father's age will be 10 years more than twice the age of the son. Find the present age of the father.
Sol. Let the son's present age be x years. Then, father's present age = (3x + 3) years
(3x + 3 + 3) = 2 (x + 3) + 10
3x + 6 = 2x + 16
x = 10.
Hence, father's present age = (3x + 3) = ((3 * 10) + 3) years = 33 years.

5. Rohit was 4 times as old as his son 8 years ago. After 8 years, Rohit will be twice as old as his son. What are their present ages?
Sol. Let son's age 8 years ago be x years. Then, Rohit's age 8 years ago = 4x years.
Son's age after 8 years = (x + 8) + 8 = (x + 16) years.
Rohit's age after 8 years = (4x + 8) + 8 = (4x+ 16) years.
2 (x + 16) = 4x + 16
2x = 16 => x = 8.
Hence, son's 'present age = (x + 8) = 16 years.
Rohit's present age = (4x + 8) = 40 years.

6. One year ago, the ratio of Gaurav's and Sachin's age was 6: 7 respectively. Four years hence, this ratio would become 7: 8. How old is Sa chin ?
Sol. Let Gaurav's and Sachin's ages one year ago be 6x and 7x years respectively.
Then, Gaurav's age 4 years hence = (6x + 1) + 4 = (6x + 5) years.
Sachin's age 4 years hence = (7x + 1) + 4 = (7x + 5) years.
(6x+5): (7x + 5) = 7:8
8(6x+5) = 7 (7x + 5)
48x + 40 = 49x + 35
x = 5.
Hence, Sachin's present age = (7x + 1) = 36 years.

7. The Ratio of Ages of Mona and Sona is 4:5. Twelve Years hence, their ages will be in the ratio of 5:6. What will be Sona's age after 6 years ?
Sol. Let their present ages be 4x & 6x
Then (4x + 12)/(5x + 12) = 5/6 or x=12
Sona's age after 6 years = (5x +6) = 66 years

8. Ramu was 4 times as old as his son 8 years ago. After 8 years, Ramu will be twice as old as his son. What their present ages ?
Sol. Let son's age 8 years ago be x years

Then Ramu's age at that time = 4x years
Son's age after 8 years = (x +8) + 8 = (x + 16) years
Ramu's age after 8 years = (4x + 8) + 8 = (4x + 16) years
2(x + 16) = 4x + 16 or x=8
Son's present age = (x + 8) = 16 years
Ramu's present age= (4x + 8) = 40 years

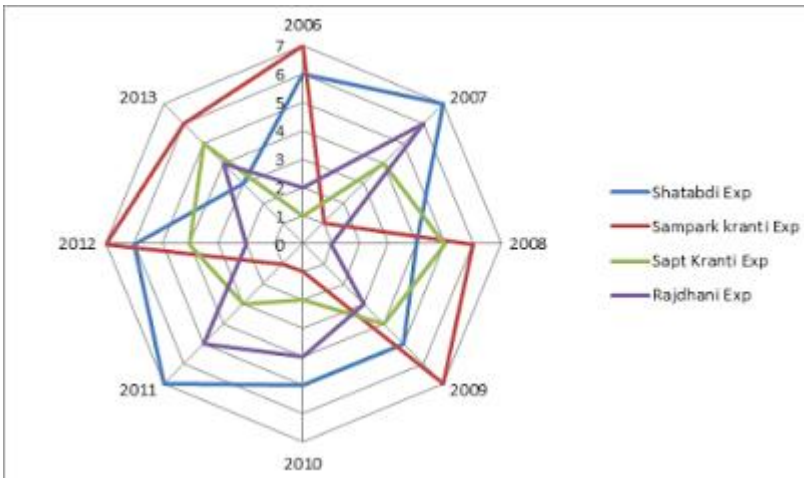
9. A man is four times as old as his son. Five years ago, the man was nine times as old his son was at that time. What is the present age of a man ?
Sol. Let son's age = x, then man's age =4x.
9(x - 5) = (4x-5) or x=8.
Man's present age = (4x + 7) = 35 years

10. The sum of ages of Aruna and her mother is 49 years. Also, 7 years ago, the mothers age was 4 times Aruna's age. Find the present age of Aruna's mother.
Sol. Let Aruna's age 7 years ago be x.
Mother's age 7 years ago = 4x
(x + 7) + (4x + 7) =49 or x=7
Mother's present age = (4x + 7) = 35 years

12. The ages of A and B differ by 16 years. If 6 years ago, the elder one be 3 times as old as the younger one, find their present ages.
Sol. Let A's age = x & B's age = (x + 16)
3(x - 6) = (x + 16 - 6) or x=14
A's age = 14 years & B's age = 30 years.

Directions (Q.1-5): Study the radar graph carefully and answer the questions given below:

The number of passengers travelled (in lakhs) in four different trains in different years



1.In which train is the number of passengers travelled the maximum during the eight years?
1) Shatabdi Exp
2) Sapt Kranti Exp

3) Sampark Kranti Exp
4) Either Sampark Kranti Exp or Sapt Kranti Exp
5) Rajdhani Exp

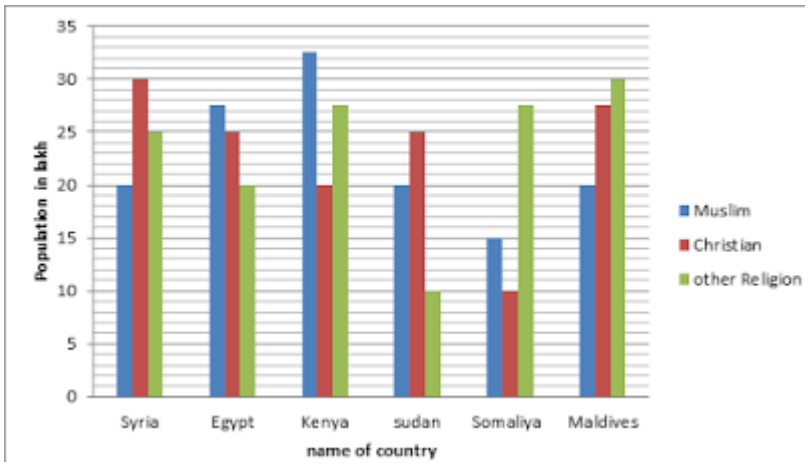
2.If the fare of Shatabdi Exp is Rs. 400 for all classes of passenger and the fare of Sampark Kranti Exp is 20% more than that of Shatabdi Exp, then what is the ratio of the income of Shatabdi Exp in 2012 to that of Sampark Kranti Exp in 2013?
1) 1 : 2
2) 2 : 1
3) 1 : 1
4) 3 : 2
5) 5 : 6

3.What is the difference between the number of passengers of Sapt Kranti Exp in 2011 and that of Rajdhani Exp in 2006?
1) 1.5 lakh
2) 1 lakh
3) 0.5 lakh
4) 0.75 lakh
5) 0.9 lakh

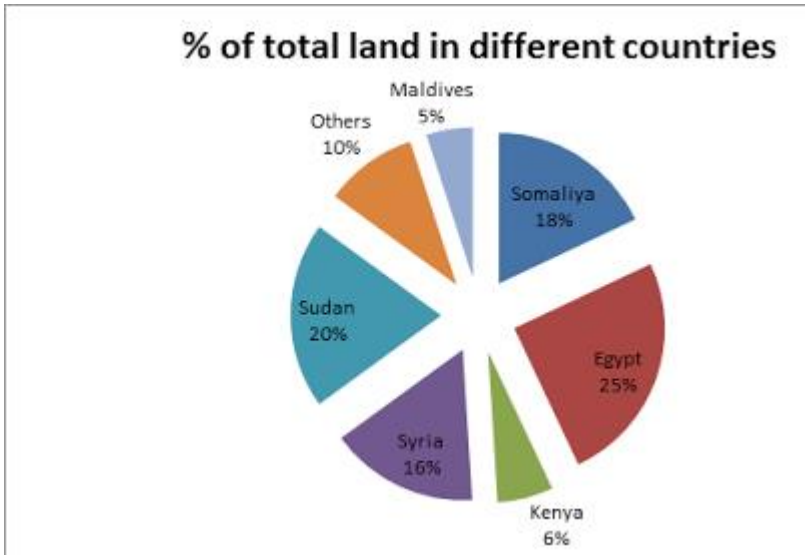
4.The total number of passengers in 2010 is what per cent of the total number of passengers in 2013?
1) 64.66%
2) 72.33%
3) 80.66%
4) 66.67%
5) 70.25%

5.If the fare of Rajdhani Exp is Rs. 350 and that of Sapt Kranti Exp is Rs. 450 for all classes of passenger then what is the total income of both the trains during 2011 to 2013?
1) Rs. 95 crore
2) Rs. 98 crore
3) Rs. 90 crore
4) Rs. 89 crore
5) Rs. 92.5 crore

Directions (6-10) : Study the bar graph and pie-chart carefully and answer the following questions.The bar graph shows the number of people of different religions in six different countries



The pie-chart show the percentage of the total land in different countries& total land = 50 lakh square kilometres



6.In the given countries the population of which religion is the maximum?
1) Muslim
2) Other religions
3) Christian
4) Either Christian or Muslim
5) Both Muslim and Other religions

7.Which country has the minimum population density?
1) Syria
2) Egypt
3) Somalia
4) Sudan

5) Maldives

8.The population of Muslims in Kenya is what per cent of the population of Christians in Somalia?
1) 325%
2) 225%
3) 125%
4) 25%
5) 12.5%

9.Which country has the maximum population?
1) Kenya and Sudan
2) Maldives
3) Sudan
4) Somalia
5) Kenya

10.The annual rate of decrease in the population of Muslims, Christians and Other religions is 20%, 50% and 50% respectively. What was the population of Maldives two years ago?
1) 79.23 lakh
2) 121.25 lakh
3) 271.25 lakh
4) 242.2 lakh
5) none of these

Answers

1. (1) Number of passengers travelled by shatabdi Exp. During the given 8 years
$=6+7+4+5+5+7+6+3=43$ lakh
2. (5) Required ratio $= 6 : 6 \times \frac{120}{100}$
$= 5 : 6$
3. (2) Required Difference = (3-2) lakh
= 1 lakh.
4. (4) No of passengers in 2010 $= 1+2+4+5=12$
No. of passengers in 2013 $= 3+4+5+6=18$
Required % $= \frac{12}{18} \times 100 = 66.67\%$
5. (5) Fare Charge by Rajdhani Exp. During 2011 to 2013 $= 350(5+2+4) = 3850$ lakh.
Fare charge by Sapt Kranti Exp. $= 450(3+4+5) = 5400$
Total income $= 3850+5400 = 92.5$ crore
6. (2) Population of other religion $= 25+20+27.5+10+27.5+30 = 140$ lakh
7. (4) Density $= \frac{\text{Population}}{\text{Land(in km)}^2}$
Population density of Sudan $= \frac{(20+25+10)}{50\times\frac{50}{100}} = 5.5$ Person per Km.
8. (1) Required % $= \frac{32.5}{10} \times 100 = 325\%$
9. (5)
10. (5) Muslim Population 2 years ago $= 20 \times \frac{100}{80} \times \frac{100}{80} = 31.25$
Christians population 2 years ago $= 27.5 \times \frac{100}{50} \times \frac{100}{50} = 110$
Other population 2 years ago $= 30 \times \frac{100}{50} \times \frac{100}{50} = 120$
Required population$= 31.25 + 110 + 120 = 261.25$

Directions (Q. 1 - 5): The following questions have a series of numbers based on a definite pattern. Guess the pattern and identify the next number which should come in the series.

1. 3628800, 907200, 100800, 6300, 252
1) 117

2) 109
3) 27
4) 15
5) 7

2. 41419, 5916, 985, 196, 48
1) 10
2) 12
3) 15
4) 21
5) 30

3. 95, 60, 36, 21, 13
1) 11
2) 10
3) 12
4) 9
5) 8

4. 450, 233, 107, 42, 14
1) 8
2) 10
3) 5
4) 7
5) 11

5. 125, 117, 108, 100, 91
1) 80
2) 78
3) 85
4) 86
5) 83

6. Ravi, Rakesh and Vijay invest in a partnership in the ratio 7/2, 4/3, 6/5 respectively. After 4 months, Ravi increases his share 50%. If the total profit at the and of one year be Rs. 32,400, then what is Rakesh's share in the profit?
1) Rs. 2000
2) Rs. 3000
3) Rs. 4000
4) Rs. 5000
5) Rs. 6000

7. If the number 481 * 637 is completely divisible by 9, what is the smallest number in place of * ?
1) 3
2) 7
3) 5
4) 9
5) 2

8. On dividing a number by 56, we get 29 as remainder. On dividing the same number by 8, what is the remainder ?
1) 2
2) 3
3) 4
4) 5
5) 7

9. A shopkeeper has 2 cans of milk. The first contains 30% water and the rest milk. The second contains 50% water. How much milk should he mix from each of the cans so as to get 12 litres of milk such that the ratio of water to milk is 3 : 5?
1) 5 lit, 7 lit.
2) 9 lit, 3 lit.
3) 7.5 lit, 4.5 lit.
4) 4 lit, 8 lit.
5) None of these

10. There are 6 working days in a regular week and for each day, 10 hours is working hours. A woman earns Rs. 2.10 per hour. For regular work and Rs. 4.20 per hour for overtime. If he earns Rs. 525 in 4 weeks, how many hours did she work ?
1) 245
2) 225
3) 275
4) 255
5) 235

1. 5
÷ 2^2, ÷3^2, ÷4^2, ÷5^2, ÷6^2

2. 3
(-7 ÷ 7), (-6 ÷ 6), (-5 ÷ 5), (-4 ÷ 4), (-3 ÷3)

3. 2
(+1 - 6^2), (+1 -5^2), (+1 - 4^2), (+1 - 3^2), (+1 - 2^2)

4. 3
(-6^3 - 1), (-5^3 - 1), (-4^3 -1), (-3^3 - 1), (-2^3 -1)

5. 5
-8, -9 Repeated in alternate series

6. 5

7. 2

8. 4

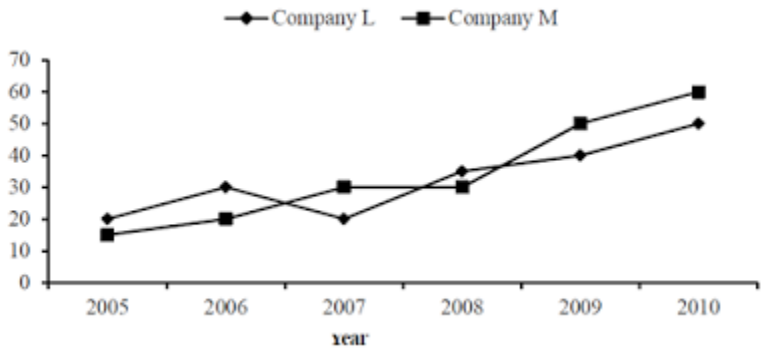
9. 3

10. 1

Direction : (1-5): Study the following graph and answer the given questions :

The line graph shows percentage profit earned by two companies over the given years.

% Profit = (Income - Expenditure)/ Expenditure * 100



1. What was the difference in the expenditure of the two companies in 2007?
1) 10
2) 100
3) 1000
4) Can't be determine
5) None of these

2. The income of company M in 2010 is Rs. 128 crores. What was its expenditure in that year?
1) Rs. 76.8 crores
2) Rs. 64 crores
3) Rs. 48 crores
4) Can't be determined
5) None of these

3. The expenditure of company L in 2005 is Rs 40 crores. Find the income of company L in the same year ?
1) Rs. 50 Crore
2) Rs. 48 crore
3) Rs. 46 crore
4) Can't be determined
5) None of these

4. If the income of both the companies are the same in the year 2008, find out the ratio of their expenditure?
1) 27 : 26
2) 26 : 27
3) 30 : 35

4) 7 : 6
5) None of these

5. Find the percentage change in profit of company M in 2007 from the previous year.
1) 50% increase
2) 20% increase
3) 10% increase
4) 10% decrease
5) None of these

Follow the direction given below for question 6-9

A woman divided her salary in the ratio of 5:3:4 for travelling, shopping and accommodation. She spends 60% of her traveling budget on air ticket, 25% on bus ticket and keep the remaining amount as savings. She spends 60 % of her shopping budget amount in duty free shopping and remaining in domestic shopping. And she spends 3/12th part of total hotel accommodation amount in eating and 1/3rd and 1/4th part of accommodation amount in drinking and hotel rent and save the remaining amount.

6. If she saves 17000 rupees then what is the total amount she had at the starting?
(a) 1.50 Lakhs
(b) 1.44 Lakhs
(c) 1.96 Lakhs
(d) 2.02 Lakhs
(e) 1.25 Lakhs

7. If she spends 3000 Rs in air travelling then what is amount she saves from the hotel accommodation?
(a) 633.37
(b) 666.67
(c) 650
(d) 625
(e) 634.34

8. If she spends 1000 Rs more for the shopping then what is the percentage of duty free shopping from the total amount she spends, if she had 24000 at the starting.
(a) 18.4%
(b) 16.3%
(c) 15.6%
(d) 12.6%
(e) 19.1%

9. If she spends 15000 in travelling, then what is the ratio between the total amount spend in drinking and duty free shop to the total amount spend in hotel rent and air ticket travel.
(a) 2 : 3
(b) 5 : 6
(c) 8 : 11
(d) 4 : 5

(e) None of these

Answers:

1. 4; Can't be determined

2. 5; Expenditure = 128 * 100/160 = 80cr

3. 2; Income = 40 * 120/100 = 48 crore.

4. 2; Ratio of Expenditure = 135 : 130 = 26 : 27

5. 1; %Profit increrase = 10/20 * 100 = 50%

6.

Let the salary of the woman be Rs 1200

500x	300x	400x
Air ticket 300x		Eating – 100x
Bus ticket 125x	Duty Free = 180 x Shopping	Drinking → 400/3 x
Saving 75x	Domestic shopping = 120x	Hotel rent = 100x
		Saving = 200/3 x

Sol1 (b) Saving = 75 + 200/3 x
= 425x/3=17000
x =(17000×3)/425
x = 120
Total amount she had at the starting
= 1200 × 120

= 144000=1.44LAKH
7.
sol (b)300x = 3000
X = 10
Amount she save from the hotel = (200/3)×10
= 2000/3 Rs.

8.

3. **(a)** $1200x = 24000$
$X = 20$
Total amount spend in duty free shopping
$= 1000 + 20 \times 180$
$= 1000 + 3600$
$= 4600$ Rs.
Required % $= \frac{4600}{24000+1000} \times 100$
$= \frac{4600}{25000} \times 100$
$= 18.4\%$

9.
(b) 5 : 6
(c) 8 : 11
(d) 4 : 5
(e) None of these

4. **(e)** $500x = 15000$
$X = 30$
Amount spend in drinking and duty free shop
$= \frac{400}{3}x + 180x$
$= 4000 + 5400$
$= 9400$
Amount spend in hotel rent and air ticket $= 100x + 300x$
$= 400x$
$= 400 \times 30$
$= 12000$
Required ratio $= \frac{9400}{12000}$
$= 47 : 60$

1.A shopkeeper sells two watches for Rs 308 each. On one watch he earns 12% profit and on the others he suffers 12% loss. His profit or loss in the entire transaction was:
1. 1(11/25)% loss
2. 1(11/25)% gain
3. 3(2/25)% loss
4. 3(2/25)% gain
2.A sells an article to B at 15% profit. B sells it to C at 10% loss. If C pays Rs 517.50 for it then A purchased it at:
1. Rs 500
2. Rs 750
3. Rs 1000
4. Rs 1250

3.By selling 100 oranges, a vendor gains the selling price of 20 oranges. His gain per cent is:
1. 20
2. 25
3. 30
4. 32

4.A fan in a shop is offered at a discount of 10%. It is sold during clearance sale at 6% discount over the already discounted price at Rs 846. The original marked price of the fan

is:
1. Rs 1000
2. Rs 900
3. Rs 850
4. Rs 896

5.A sells an article to B making a profit of 1/5 th his outlay. B sells it to C, gaining 20%. If C sells it for Rs 600 and incurs a loss of 1/6 th his outlay, the cost price of A is:
1. Rs 600
2. Rs 500
3. Rs 720
4. Rs 800

6.The profit earned after selling a wrist watch for Rs 4,080 is the same as the loss incurred after selling the same wrist watch for Rs 3,650. What is the cost price of the wrist watch?
1. Rs 3,785
2. Rs 3,800
3. Rs 3,775
4. Rs 3,865

7.Kamya purchased an item for Rs 46,000 and sold it at a loss of 12 per cent. With that amount she purchased another item which he sold at a gain of 12%. What was her overall gain/loss?
1. Loss of Rs 662.40
2. Profit of Rs 662.40
3. Loss of Rs 642.80
4. Profit of Rs 642.80

8.A shopkeeper sells notebooks at the rate of Rs 457 each and earns a commission of 4%. He also sells pencil boxes at rate of Rs80 each and earns a commission of 20%. How much amount(approximately) of commission will he earn in two weeks if he sells 10 notebooks and 6 pencils boxes a day?
1. Rs 1,956
2. Rs 1,586
3. Rs 1,496
4. Rs 3900

9.A shopkeeper bought 30 kg of wheat at the rate of Rs 45 per Kg. He sold 40% of the total quantity at the rate of Rs 50 per Kg. Approximately, at what price per Kg should he sell the remaining quantity to make 25 per cent overall profit?
1. Rs 54
2. Rs 52
3. Rs 50
4. Rs 60

10.Profit earned by an organization is distributed among officers and clerks in the ratio of 5 : 3. If the number of officers is 45 and the number of clerks is 80 and the amount received by each officer is Rs 25,000, what was the total amount of profit earned?
1. Rs 22 lakh

2. Rs 18.25 lakh
3. Rs 18 lakh
4. Rs 23.25 lakh

Answers

1.

1. **(a)**; Loss percentage $= \left(\frac{\text{Common gain or loss}}{10}\right)^2$

$= \frac{144}{100} = \frac{36}{25} = 1\frac{11}{25}\%$

Quicker Method:

$12 - 12 - \frac{12\times12}{100} = -\frac{144}{100} = -\frac{36}{25} = -1\frac{11}{25}\%$

Negative sign shows loss.

2.

2. **(a);** Let, the price of article be Rs 100

A sold to B at = Rs115

C purchased from B for = Rs $\left[115 - \frac{115\times10}{100}\right]$ = Rs 103.50

Required C.P. for A Rs $\frac{517.50}{103.50} \times 100$ = Rs 500

3.

3. **(b);** Let S.P. of 100 oranges be Rs x.

$\therefore$ S.P. of 20 oranges $= \frac{x\times20}{100} = \text{Rs}\frac{x}{5}$ = Gain

$\therefore$ CP $= x - \frac{x}{5} = \text{Rs}\frac{4x}{5}$

$\therefore$ Gain per cent $\frac{\frac{x}{5}}{\frac{4x}{5}} \times 100 = \frac{100}{4} = 25\%$

4.

4. **(a);** Let, the original marked price be Rs x.

Equivalent discount % $= \left(10 + 6 - \frac{10\times6}{100}\right)\%$

$= (16 - 0.6)\% = 15.4\%$

Selling price $= x\left(\frac{100-15.4}{100}\right) = \frac{84.6x}{100} = \frac{846}{1000}$

Now, according to the question,

$\frac{846x}{1000}$ = Rs 846

$\therefore x = \frac{846\times1000}{846}$ = Rs1000

5.

5. **(b);** Let, the C.P. of A be Rs x.

Now, according to the question,

$$x \times \left(1+\frac{1}{5}\right) \times \frac{120}{100} \times \left(1-\frac{1}{6}\right) = \text{Rs } 600$$

$$\Rightarrow x \times \frac{6}{5} \times \frac{6}{5} \times \frac{5}{6} = 600$$

$$\Rightarrow x = \frac{600 \times 5}{6} = \text{Rs}500$$

6.

6. **(d);** $\frac{4080+3650}{2} = 3865$

7.

7. **(a);** First S.P. $= \frac{46000 \times 88}{100} = \text{Rs}40480$

Second S.P. $= \frac{40480 \times 112}{100} = \text{Rs } 45337.6$

$\therefore$ Loss = Rs (46000 – 45337.6) = Rs 662.4

8.

8. **(d);** Total number of notebooks sold in two weeks = 2 × 7 × 10 = 140.

Total commission earned on selling of notebooks = $140 \times 457 \times \frac{4}{100}$ = Rs 2559.2

Similarly, commission earned on selling of pencils

$= 2 \times 7 \times 6 \times 80 \times \frac{20}{100}$ = Rs 1344

Total commission earned = 2559.2 + 1344 = Rs 3903.2 = 3900

9.

9. **(d);** C.P. of wheat = 30 × 45 = Rs 1350

40% of 30 kg = 12 kg

S.P. of 12 kg = 12 × 50 = Rs 600

For 25% profit, total S.P. of all the wheat is

$1350 \times \frac{125}{100} = 1350 \times \frac{5}{4} = \text{Rs}\frac{6750}{4} = \text{Rs } 1687.5$

Remaining wheat (30 – 12) = 18 kg

Rate of the remaining wheat $\frac{1087.5}{18} = \text{Rs}60$

10.

10. **(d)** Amount received by all the officers = 45 × 25000 = 11,25,000

Amount received by each clerk $\frac{3}{5} \times 25000 = 15000$

Amount received by all the clerks = 80 × 15000 = 12,00,000

Total amount of profit earned = 11,25,000+12,00,000 = 23.25 Lakhs.

Directions (Q. 1 - 5) : In the following questions two equations numbered (I) and (II) are given. You have to solve both the equations and give answer:

1) If x > y
2) If x >= y

3) If x < y
4) If x <= y
5) If x = y or the relationship can't be established.

1.
I. 14x^2 + 17x - 6 = 0
II. 6y^2 - 13y + 5 = 0

2.
I. x = √7
II. 6y^2 - 7y - 20 = 0

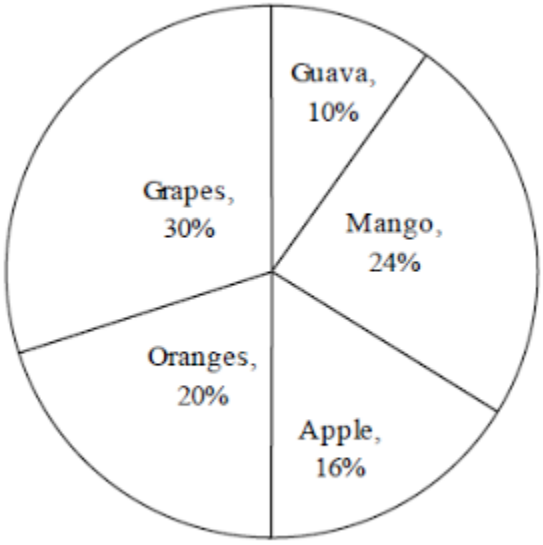
3.
I. 3x^2 + 8x - 35 = 0
II. y^2 - 2y - 48 = 0

4.
I. x^2 - 23x + 132 = 0
II. y = 3√1331

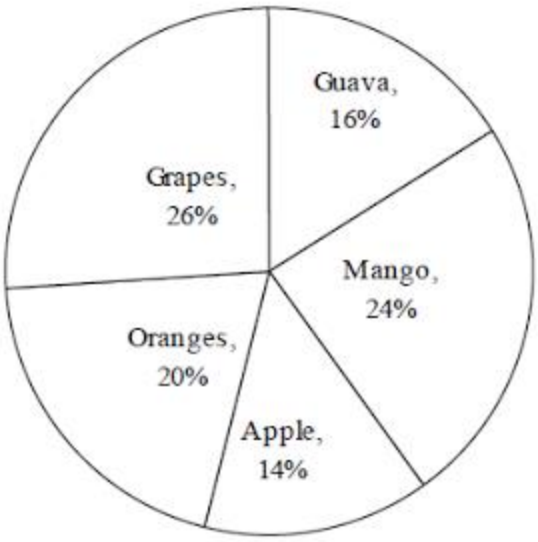
5.
I. 7x - 5y = 64
II. 4x + 3y = 19

Directions (Q. 6 -10): Study the following pie-charts carefully and answer the questions given below:

The pie–charts show the percentage quantity of fruits available at two fruit vendor.



Total quantity = 2400 kg



Total quantity = 2000 kg

6.What is the difference between the quantity of Guava available at vendor B and that at vendor A?
1) 90 kg
2) 45 kg
3) 85 kg
4) 80 kg
5) 60kg

7. If the price of Mango is Rs. 130 per kg, Apple is Rs. 140 per kg and Orange is Rs. 80 per kg, then what is the ratio of their cost at vendor A?
1) 11 : 14 : 16
2) 39 : 28: 20
3) 39 : 28 : 21
4) 15 : 14 : 11 5) 39 : 26 : 20

8. The quantity of Mango available at vendor B is approximately what percent of the quantity of Mango available at vendor A?
1) 69%
2) 78%
3) 88%
4) 83%
5) 70%

9. If the price of Mango is Rs. 130 per kg, Apple is Rs. 140 per kg and Orange is Rs. 80 per kg, Grapes is Rs. 115 per kg and Guava is Rs. 68 per kg at both vendor A and B then what is the difference between the cost of all fruits at vendor A and that at Vendor B?
1) Rs. 72000
2) Rs. 55000
3) Rs. 64000
4) Rs. 51000

5) Rs. 46000

10. The quantity of Orange available at vendor A is approximately what percent more than that of Apple available at vendor B?
1) 61.52%
2) 68.4%
3) 82%
4) 90%
5) 71.43%

Answers
1. 3
2. 1
3. 5
4. 2
5. 1

6. 4
Quantity of Guava available at vendor A
= 2400 × 10/100 = 240 kg
Quantity of Guava at available at vendor B
= 2000 × 16/100 = 320 kg
So, required difference = 320 – 240 = 80 kg

7. 2
At vendor A,
Cost of Mango = 130 × 2400 × 24/100 = Rs. 74880
Cost of Apple = 140 × 2400 × 16 /100 = Rs. 53760
Cost of Orange = 80 × 2400 × 20/100 = Rs. 38400
So, required ratio = 7488 : 5376 : 3840= 39 : 28 : 20
128. 4; Quantity Mango available at vendor B
= 2000 × 24/100 = 480 kg
Quantity Mango available at vendor A
= 2400 × 24/100 = 576 kg
So, required percentage = 480/576 * 100 = 83%

9. 4
Cost of all fruits available at vendor A
= (2400 × 24/100 × 130 + 2400 × 16/100 × 140
+ 2400 × 10/100 × 68 + 2400 × 20 /100 × 80
+ 2400 × 30/100 × 115)
= 24× [24 × 130 + 16 × 140 + 10 ×68 + 20 × 80 + 30 × 115]
= 24× [3120 + 2240 + 680 + 1600 + 3450] = Rs. 266160
Cost of all fruits available at vendor B
= (2000 × 24/100 × 130 + 2000 × 14/100 × 140 + 2000 ×
16/100 × 68 + 2000 × 20/100 × 80 + 2000 × 26/100 × 115)
= 20[24 × 130 + 14 × 140 + 16 × 68 + 20 × 80 + 26 × 115]
= [3120 + 1960 + 1088 + 1600 + 2990] × 20 = ` 215160
So, required difference = Rs. 51000

10. 5
Quantity of Orange available at Vendor A = 2400 × 20/100 = 480kg
Quantity of Apple available at Vendor B = 2000 × 14/100 = 280 kg
So, required percentage = (480 - 280)/280 * 100 = 71.43%

Find the approximate value

1.9837+315 X 6-77 X 13+10% of 1500
(1)10600
(2)10850
(3)11200
(4)10700
(5)11000

2.12 X 13+105% of 993 +879/18 +15
(1)1150
(2)1170
(3)1185
(4)1200
(5) 1215

3.12833 + 133 % of 1655 -7/5 of 3533
(1)9000
(2)10000
(3)10500
(4)11000
(5) 9500

Directions (Q.4-8): What approximate value should come in place of question mark (?) in the following questions? (You are not expected to calculate the exact value.

4. 63251 * 82 = ? * 42l05
1) 101
2) 123
3) 147
4) 165
5) 8885

5. (84111)^1/2= ?
1) 240
2) 270
3) 330

4) 290
5) 310

6. (54.78)^2= ?
1) 3000
2) 3300
3) 3500
4) 3700
5) 3900

7. (7171 + 3854 + 1195) ÷ (892 + 214 + 543) = ?
1) 13
2) 18
3) 3
4) 26
5) 7

8. (562 % of 816) + 1449 = ?
1) 4145
2) 5675
3) 6035
4) 7325
5) 8885

Answer :
1. 2
2. 4
3. 2
4. 2
5. 4
6. 1
7. 5
8.3

1. Profit after selling an article for Rs 736 is the same as loss after selling the article for Rs 638. What is the cost price of the article?
   1. Rs 687
   2. Rs 649
   3. Rs 597
   4. Rs 674

   2. The profit after selling a pair of trousers for Rs 863 is same as loss incurred after selling the same pair of trousers for Rs 631. What is the cost price of the trousers?
   1. Rs747

2. Rs 800
3. Rs 763
4. Cannot be determined

3. Amit sold an article for Rs 630 and earned a profit of 20%. Find the cost price for Amit.
1. Rs 555
2. Rs 535
3. Rs 552
4. Rs 525

4. The selling price of 30 items is equal to the purchasing price of 25 items. What is the profit percent?
1. 25%
2. 20%
3. 16.67%
4. 20.33%

5. The labelled price of a product is Rs 750. If it is sold at a 20% discount, the dealer earns a 25% profit. What is the cost price?
1. Rs 550
2. Rs 450
3. Rs 435
4. Rs 480

6. A gold bracelet is sold for Rs 14500 at a loss of 20%. what is the cost price of the gold bracelet?
1. Rs 18125
2. Rs 17400
3. Rs 15225
4. Rs 16800

7.Mohan brought a cycle for Rs 425 and then sold it at a loss of 8% of the cost price. For how much did he sell the cycle?
1. Rs 453
2. Rs 419
3. Rs 441
4. Rs 437

8. A trader sells 145 m of cloth for Rs 12325 at the profit of Rs 10 per metre of cloth. What is the cost price of 1 m of cloth?
1. Rs 65
2. Rs 75
3. Rs 95
4. Rs 85

9. Manish purchased 25 kg of rice @ Rs32 per kg and 15 kg of rice @ Rs 36 per kg. He mixed the two varieties of rice and sold it @ Rs 40.20 per kg. What is the percent profit earned?
1. 25
2. 40
3. 30
4. 20

10. Nandu purchased a mobile phone and got a discount of 5% from dealer. he sold that mobile phone at a profit of 10% on his purchase price. What is the percentage profit on actual price of the mobile phone?
1. 2%
2. 3%
3. 4%
4. 4.5 %

Note- Explanation provide soon
Answers
1-1
2-1
3-4
4-3
5-4
6- 1
7-4
8-2
9-4
10- 4

Explanation
1. Cost price of the article= (736+638)/2 = Rs 687

2. C.P of pair of trousers= (863+631)/2= Rs747

3.C.P = 630(100/100+20)= Rs 525

4.If selling of x articles is equal to the cost price of y articles then profit percentage= x-y/x *100%
here x= 30 and y = 25
prefit percentage= 30-25/30 *100= 16.67

5. S.P of product = 80/100* 750= Rs 600
Profit = 25%
C.P= 100/125 * 600= Rs 480

6. C.P = 100/80* 14500= Rs 18125

7. S.P of cycle= 92/100* 475= 437

8.Let cost of 1 m of cloth be x.
(x+10) * 145= 12325
x= Rs 75

9. Total C.P= 25*32 + 15*36 = Rs 1340
S.P= (25+15) * 40.20= Rs 1608
profit %= (1608-1340)/1340*100= 20%

10. Let the actual price of mobile phone be Rs 100
purchase price= 100-5= Rs 95
Selling price= 95 * 100+10/100= 95*11/10
% profit= (95*11/10)/100*100= 4.5%

DATA INTERPRETATION (Language based D.I.) RBI grade B, IBPS exams

Directions (Q. Nos. 1-7) Study the following information carefully to answer the questions.

In a medical college there are 1600 students studying Dentistry and Homeopathy. Each student from each course knows one or more languages out of English, Hindi and Bangla. 45% of the students study Dentistry and remaining students study Homeopathy. Out of the students studying Dentistry, boys and girls are in the ratio of 5:3 respectively.Out of the boys studying Dentistry, 16% know English, 10% know only Hindi and 4% know only Bangla. 24% know English as well as Hindi. 20% know English as well as Bangla. 14% know Hindi as well as Bangla. Remaining boys know all three languages. Out of the girls studying Dentistry, 20% know only English, 10% know only Hindi and 10% know only Bangla . 20% know English as well as Hindi. 20% know English as well as Bangla. 10% know Hindi as well as Bangla . Remaining girls know-all three languages. Out of the students studying Homeopathy boys and girls are in the ratio of 4 : 7 respectively. Out of the boys studying Homeopathy, 20% know only English, 15% know only Hindi and 5% know only Bangla. 15% know English as well as Hindi. 25% know English as well as Bangla. 10% know Hindi as well as Bangla. Remaining boys know all three languages. Out of the girls studying Homeopathy, 15% know only English, 15% know only Hindi and 5% know only Bangla. 20% know English as well as Hindi. 20% know English as well as Bangla. 15% know Hindi as well as Bangla. Remaining girls know all three languages.

1.How many students studying Dentistry know only either English or Hindi?
(1) 166
(2) 162
(3) 308
(4) 198
(5) 248

2.Total how many students in the college know all three languages?
(1)108
(2)132
(3)169
(4)137
(5)142

3.What percent of the total number of girls in the college know Bangla?
(1) 45
(2) 40
(3) 48
(4) 42
(5) 50

4.How many students studying Homeopathy, do not know English?
(1) 292
(2) 232
(3) 228
(4) 298

(5) 207

5.Out of the students studying Homeopathy, what is the ratio between number of boys knowing English and the number of girls knowing Hindi respectively?
(1) 3 : 5
(2) 2 : 3
(3) 9 : 11
(4) 9 : 13
(5) 1 : 3

6.Out of the total number of students studying Dentistry, what percent knows at least two languages?
(1) 6112/13
(2) 5713/16
(3) 5913/17
(4) 661/4
(5) 6212/19

7.What percent of the total number of girls in the college do not know Hindi? (rounded off to nearest integer)
(1) 38
(2) 46
(3) 48
(4) 36
(5) 43

Directions—(8-12) Study the information carefully to answer the questions that follow—

A school consisting of a total of 3120 students has boys and girls in the ratio of 7 : 5 respectively. All the students are enrolled in different types of hobby classes, viz. Singing, Dancing and Painting. One-fifth of the boys are enrolled in only Dancing classes. Twenty per cent of the girls are enrolled in only Painting classes. Ten per cent of the boys are enrolled in only Singing classes. Twenty four per cent of the girls are enrolled in only Singing and Dancing classes together. The number of girls enrolled in only Singing classes is two hundred per cent of the boys enrolled in the same. One-thirteenth of the boys are enrolled in all the three classes together. The respective ratio of boys enrolled in only Dancing and Painting classes together to the girls enrolled in the same is 2 : 1 respectively. Ten per cent of the girls are enrolled in only Dancing classes whereas eight per cent of the girls are enrolled in only Dancing and Painting classes together. The remaining girls are enrolled in all the three classes together. The number of boys enrolled in only Singing and Dancing classes together is fifty per cent of the number of girls enrolled in the same. The remaining boys are enrolled in only Painting classes.

8.Total number of girls enrolled in Singing is approximately what per cent of the total number of students in the school ?
(1) 22
(2) 38
(3) 64

(4) 28
(5) 26

9. What is the respective ratio of the number of girls enrolled in only Painting classes to the number of boys enrolled in the same ?
(1) 77 : 26
(2) 21 : 73
(3) 26 : 77
(4) 73 : 21
(5) None of these

10. Number of girls enrolled in only Dancing classes is what per cent of the boys enrolled in the same? (Rounded off to two digits after decimal)
(1) 38•67
(2) 35•71
(3) 41•83
(4) 28•62
(5) None of these

11. What is the total number of boys who are enrolled in Dancing ?
(1) 636
(2) 728
(3) 584
(4) 868
(5) None of these

12. What is the total number of students enrolled in all the three classes together ?
(1) 150
(2) 125
(3) 140
(4) 160
(5) None of these

Answers :-

Ans.(1-7)

Students in Dentistry = 45% of 1600 = 720		Students in Homeopathy = 1600 – 720 = 880	
Number of boys = $\frac{5}{8} \times 720 = 450$	Number of girls = $\frac{3}{8} \times 720 = 270$	Number of boys = $\frac{4}{11} \times 880 = 320$	Number of girls = $\frac{7}{11} \times 880 = 560$
In Eng = 16% of 450 = 72	In Eng = 20% of 270 = 54	In Eng = 20% of 320 = 64	In Eng = 15% of 560 = 84
In Hin = 10% of 450 = 45	In Hin = 10% of 270 = 27	In Hin = 15% of 320 = 48	In Hin = 15% of 560 = 84
In Bang = 4% of 450= 18	In Bang = 10% of 270 = 27	In Bang = 5% of 320= 16	In Bang = 5% of 560= 28
In (E + H) = 24% of 450 = 108	In (E + H) = 20% of 270 = 54	In (E + H) = 15% of 320 = 48	In (E + H) = 20% of 560 = 112
In (E + B) = 20% of 450 = 90	In (E + B) = 20% of 270 = 54	In (E + B) = 25% of 320 = 80	In (E + B) = 20% of 560 = 112
In (H + B) = 14% of 450 = 63	In (H + B) = 10% of 270 = 27	In (H + B) = 10% of 320 = 32	In (H + B) = 15% of 560 = 84
In (E + H + B) = 450 – (72 + 45 + 18 + 108 + 90 + 63) = 450 – 396 = 54	In (E + H + B) = 270 – (54 + 27 + 27 + 54 + 54 + 27) = 270 – 243 = 27	In (E + H + B) = 320 – (64 + 48 + 16 + 48 + 80 + 32) = 320 – 288 = 32	In (E + H + B) = 560 – (84 + 84 + 28 + 112 + 112 + 84) = 560 – 504 = 56

1.(4)

Required number of students = 72 + 45+ 54 + 27 = 198

2.(3)
Required number of students = 54 + 27 + 32 + 56= 169

3.(5)
Required percentage= (27 + 54 + 27 + 27 + 28 + 112 + 84 + 56)/(270 +560)x 100%= 50%

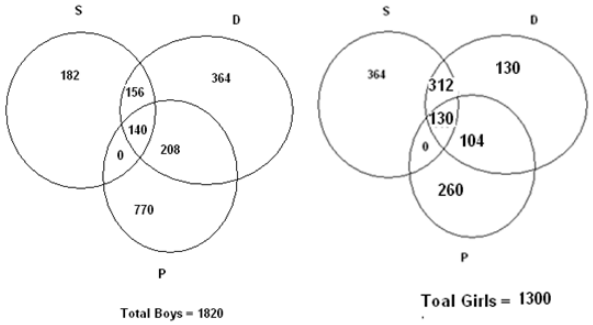
4.(1)
Required number of students = 48 + 16 + 32 + 84 + 28 + 84= 292

5.(2)
Required ratio = (64+ 48+ 80+ 32) : (84+ 112 + 84+ 56)= 224:336=2:3

6. (4)
Required ratio = (108+90+63+54+54+54+27+27)/720x 100% = 661/4 %

7.(5)
43%

Ans.(8-12)



8. (5)
Required percentage = (364 + 312 + 130)/3120 * 100 = 26

9. (3)
Required ratio = 260 : 770 = 26 : 77

10. (2)
Required percentage = 130/364 * 100 = 35.71

11. (4)
Total number of boys who are enrolled in Dancing = 364 + 156 + 140 + 208 = 868

12. (5)
Total number of students enrolled in all the three classes together = 130 + 140 = 270

Quant Mixed Quiz for RBI grade B, SBI and SSC exams

1. The average age of two persons is 46 years. 16 years back the ratio between their ages were 1 : 2, then what is the difference between present ages of these two persons?
1) 16 years
2) 20 years
3) 24 years
4) 12 years
5) 8 years

2. In how many different ways can the letters of the word “MOBILE” be arranged?
1) 120
2) 240
3) 360
4) 720
5) 36

3. The population of a city is 480000. It increases by 8% in the first year and decreased by 9% in the second year. What will be the population of city after two years?
1) 565056
2) 471744
3) 518400
4) 481344
5) 523200

4. A train starts from Delhi and reaches Lucknow in 24.5 hours. If it travels the first half of journey at 30 kmph and second half at 40 kmph then what is the total distance it travelled?
1) 750 km
2) 800 km
3) 840 km
4) 900 km
5) 920 km

5. A wall have length 24m and breadth 16m. What will be total cost of painting it from both sides if rate of painting is Rs 8 per square metre?
1) Rs 5696
2) Rs 5856
3) Rs 6032
4) Rs 6144
5) Rs 6272

6. A rectangular park has a concrete footpath running in the middle of the park parallel to the length of the park. The rest of the park is used as a playing ground, which has an area of 253 sq. m. If the width of the path is 4m and the length of the park is greater than its breadth by 8 m. What is the area of the park? (in sq. m.)
(a) 896
(b) 345
(c) 432
(d) 354

(e) 682

7. Mr. Xavier invested a certain amount in Debit and Equity funds in the ratio of 4 : 5 respectively. At the end of one year, he earned a total dividend of 30% on his investment. After one year he reinvested the amount including dividend in the ratio of 6 : 7 in Debt and Equity Funds. If the amount reinvested in Equity Funds was Rs. 94,500/-, what was the original amount invested in Equity Funds?
(a) Rs. 75,000/-
(b) Rs. 81,000/-
(c) Rs. 60,000/-
(d) Rs. 65,000/-
(e) None of these

8. The average weight of a group of 75 women was calculated as 47 kg. It was later discovered that the weight of one of the women was read as 45 kg, whereas her actual weight was 25kg. What is the actual average weight of the group of 75 women? (rounded off to two digits after decimal)
(a) 46.73 kg
(b) 46.64 kg
(c) 45.96 kg
(d) Cannot be determined
(e) None of these

9. On an IQ test consisting of 250 questions, Jasvinder answered 40% of the first 125 questions correctly. What per cent of the other 125 questions does he need to answer correctly for his grade on the entire exam to be 60%?
(a) 75%
(b) 80%
(c) 60%
(d) Cannot be determined
(e) None of these

10. If the length of a rice field is increased by 20% and the breadth is reduced by 20%, the area of the field will be 192 sq. m. What is the area of the original field?
(a) 184 sq. m.
(b) 196 sq. m.
(c) 204 sq. m.
(d) 225 sq. m.
(e) None of these

Answers
1. 2
Let the present age of these two persons are ‘x’ & ‘y’
$(x + y)/2 = 46$
$x + y = 92$
$(x - 16)/(y - 16) = 1/2$
$2x - 32 = y - 16$
$2x - y = 16$

Hence, x = 36 years & y = 56 years
Difference = 56 - 36 = 20

2. 4

Total number of letters is six and their is no repeatation.

So number of arrangements = 6! = 720

3. 2
Population = 480000 * 108/100 * 91/100 = 471744

4. 3
Let the total distance is 'x' km
x/(2 * 30) + x/(2 * 40) = 24.5
x/6 + x/8 = 245
(4x + 3x)/24 = 245
x = (245 * 24)/7 = 840 km

5. 4
Area of wall = 24 × 16 = 384 sqm
Area from both side = 2 × 384 = 768 sqm
Cost of painting = 768 × 8 = 6144

6. **(b);** According to question,

$$(x)(x+8)-(4)(x+8)=253$$
$$x^2+8x-4x-32=253$$
$$x^2+4x-285=0$$
$$x^2+19x-15x-285=0$$
$$x(x+19)-15(x+19)=0$$
$$(x+19)(x-15)=0$$
$$x=15$$
$$\therefore \text{Area of park} = 15\times 23 = 345 \text{ m sq.}$$

7. **(a);** Let the common ratio be x.
The amount invested in Debit Funds = 4x
The amount invested in Equity Funds = 5x
After one year, Mr. Xavier's total amount (including dividend)
$= 4x\times\frac{130}{100}+5x\times\frac{130}{100}\Rightarrow 11,.7x$
Amount reinvested in Equity Funds = $11.7x\times\frac{7}{13}$
$11.7x\times\frac{7}{13}=94500$
$6.3x=94500\Rightarrow x=15000$
∴ The original amount invested in Equity Funds = 5 × 15000 ⇒ Rs. 75,000/–

8. **(a);** Required average weight $= \frac{75\times47+25-45}{75}$

$= \frac{3525-20}{75}$

$= \frac{3505}{75}$

$= 46.73$ Kg

9. **(b);** Let he need x% questions to answer.

$\therefore 125 \times \frac{40}{100} + 125 \times \frac{x}{100} = 250 \times \frac{60}{100}$

$\Rightarrow 50 + \frac{5x}{4} = 150$

$\Rightarrow 5x = 100 \times 4 = 400$

$\Rightarrow x = 80\%$

10. **(e);** Change in area $= 20 - 20 - \frac{20\times20}{100} = -4\%$

$\therefore$ 4% area is decreased.

Let x be the initial area.

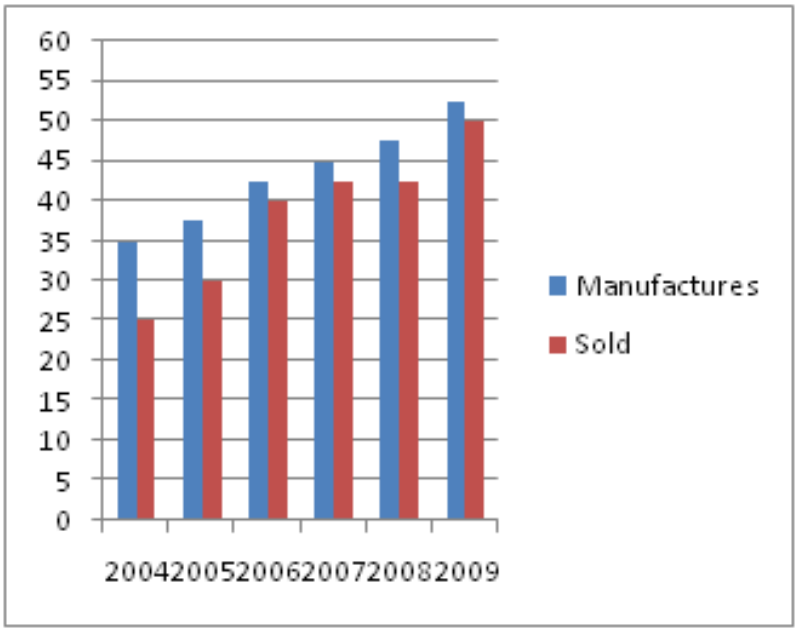
Then; $\frac{96x}{100} = 192$

$\Rightarrow 96x = 19200$

$x = 200\ m^2$

Directions—(Q. 1–5) Study the following graph carefully to answer the questions—

The following Bar graph gives the number of products manufactured and sold by a company over the years. (in thousands)



1. What is the difference in the number of products manufactured by the Company in the year 2009 and 2008 ?
(1) 4000
(2) 5500
(3) 3500
(4) 4500
(5) None of these

2. The number of products sold by the company in the year 2004 is what per cent of the number of products manufactured by it in that year ? (Rounded off to two digits after decimal)
(1) 71·43
(2) 67·51
(3) 81·67
(4) 56·29
(5) None of these

3. What is the per cent increase in the number of products manufactured by the company in the year 2006 from the previous year ? (Rounded off to two digits after decimal)
(1) 19·25
(2) 33·33
(3) 10·45
(4) 42·66
(5) None of these

4. What is the respective ratio of the number of products not sold by the company in the year 2007 to those not sold in the year 2005 ?
(1) 3 : 1

(2) 6 : 5
(3) 1 : 3
(4) 5 : 6
(5) None of these

5. What is the average number of products manufactured by the company over all the years together ?
(1) 36550
(2) 39480
(3) 41220
(4) 43330
(5) 34420

6. A sum was invested for 4 yr at a certain rate of simple interest. If it had been invested at 2% more annual rate of interest, then Rs. 64 more would have been obtained. What is the sum?
(a) Rs.600
(b) Rs.700
(c) Rs.800
(d) Rs.900
(e) Rs.1000

7. 2/3 part of the sum is lent out at 3%, 1/6 part is lent out at 6% and remaining part at 12%. All the three parts are lent out at simple interest. If the annual income is Rs. 35, what is the sum?
(a) Rs.500
(b) Rs.600
(c) Rs.700
(d) Rs.850
(e) Rs.950

8. A sum of Rs. 1521 is lent out in two parts in such a way that the interest on one part at 10% for 5 yr is equal to that of another part at 8% for 10 yr. What will be the two parts of sum?
(a) Rs.946 and Rs.565
(b) Rs.986 and Rs.515
(c) Rs.956 and Rs.505
(d) Rs.936 and Rs.585
(e) None of the above

9. The annual payment of Rs. 200 in 5 yr at 5% per annum simple interest will discharge a debt of?
(a) Rs. 950
(b) Rs. 800
(c) Rs. 1000
(d) Rs. 1250
(e) None of the above

10. A sum of Rs. 1550 was lent partly at 5% and partly at 8% per annum simple interest.

The total interest received after 4 yr was Rs. 400. The ratio of the money lent at 8% to that lent at 5% is?
(a) 15:16
(b) 16:17
(c) 19:17
(d) 21:26
(e) 20:17

Answers
1. (5) Difference = 52500 – 47500 = 5000

2. (1) Required percentage =(25/35) X 100 = 71.43 %

3. (5) Required percentage = [(42.5 – 37.5)/(37.5)]X 100= 13.33 %

4. (3) Required ratio = (45 – 42.5) : (37.5 – 30) = 1 : 3

5. (4) Required average = (35000 + 37500 + 42500 + 45000 + 47500 + 52500)/6 =43330 (approx).

6.

Solutions

(c); According to the question,

$$\frac{P\times(R+2)\times 4}{100}-\frac{P\times R\times 4}{100}=64$$

$$\Rightarrow \frac{4PR+8P-4PR}{100}=64$$

$$\Rightarrow \frac{8P}{100}=64$$

$$\therefore P=\text{Rs. } 800$$

Solution

(c); Let the entire sum $= P$

According to the question,

$$\frac{2}{3}P \times 3\% + \frac{1}{6}P \times 6\% + \left[1 - \left(\frac{2}{3} + \frac{1}{6}\right)\right] P \times 12\% = 35$$

$$\Rightarrow \frac{2P}{100} + \frac{P}{100} + \frac{2P}{100} = 35$$

7. $\Rightarrow 5P = 3500, \quad P = Rs.700$

8.

Solution

(d); Given, $T_1 = 5$ yr, $R_1 = 10\%$ and $T_2 = 10$ yr, $R_2 = 8\%$

Let the first part $= Rs.\, x$
The, second part $= Rs.\,(1521 - x)$

Now, according to the question,

$$\frac{x \times 5 \times 10}{100} = \frac{(1521 - x) \times 10 \times 8}{100}$$

$\Rightarrow 13x = 12168 \Rightarrow x =$ Rs. 936

And second part $= 1521 - 936 =$ Rs. 585

Solution

(e); Give, annual payment = Rs. 200

R = 5%, T = 5 yr, debt (P) = ?

$$\text{Annual payment} = \frac{100\,P}{100 \times T + \frac{RT\,(T-1)}{2}}$$

$$\Rightarrow 200 = \frac{100\,P}{5 \times 100 + \frac{5 \times 4 \times 5}{2}}$$

$$\therefore P = \frac{550 \times 200}{100} = 550 \times 2 = \text{Rs.}1100$$

9 .

10.

Solution

(a); Let the sum lent at 5% = Rs. P

$\therefore$ Sum lent at 8% = $Rs.(1550 - P)$

Then, $\frac{P\times5\times4}{100} + \frac{(1550-P)\times8\times4}{100} = 400$

$\Rightarrow \quad 20P - 32P + 1550 \times 32 = 40000$

$\therefore P$ = Rs. 800

Sum lent at 8% = 1550 − 800 = Rs. 750

$\therefore$ Required ratio = 750 : 800 = 15 : 16

1. By selling a telephone for Rs. 2400, a shopkeeper make a profit of 25%. Then, his profit percentage, if he had sold it for Rs. 2016, is ?

(a) 10%
(b) 6.25%
(c) 6.5%
(d) 5%
(e) 12%

2. Rajesh loses 20% by selling a radio for Rs. 768. What per cent will he gain by selling it for Rs. 1080?

(a) 6.25%
(b) 8.25%
(c) 10.25%
(d) 4.25%
(e) None of these

3. Meeta purchased 35 rings at the rate of Rs. 160 per ring. At what rate per ring should she sell it so that profit earned is 20%?

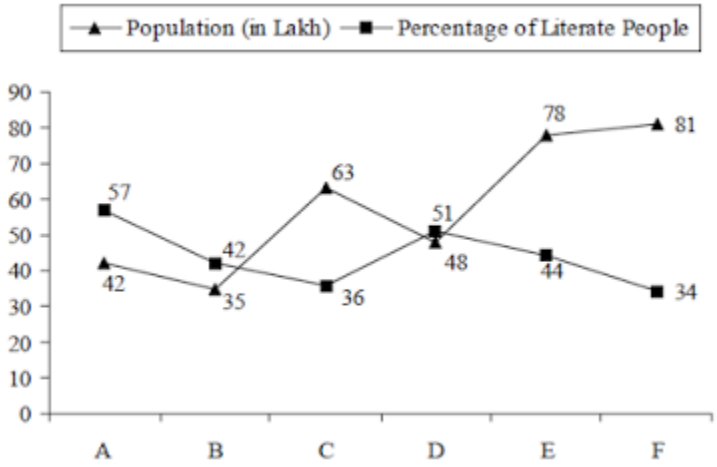
(a) Rs. 180
(b) Rs. 186
(c) Rs. 192
(d) Rs. 194
(e) Rs. 200

4. The owner of a TV shop charges his customer 20% more than the CP. If a customer paid Rs. 10800 for a TV, then find its original price?

(a) Rs. 9300
(b) Rs. 8600
(c) Rs. 9800
(d) Rs. 7600
(e) None of the above

5. Paresh purchased an I-pod for Rs. 7500 and sold it at the gain of 24%. From that amount he purchased another I-pod and sold it at the loss of 20%. What is his overall gain/loss?
(a) Loss of Rs. 100
(b) Gain of Rs. 60
(c) Loss of Rs. 60
(d) Neither gain nor loss
(e) Gain of Rs. 100

Direction (Q. 1-5) : Following line graph shows the population of six different cities (in lakh) and the percentage of literate people among them.



6. What is the total number of literate people in city 'A'?
1) 21.62 lakh
2) 22.18 lakh
3) 23.94 lakh
4) 24.63 lakh
5) 25.02 lakh

7.What is the total number of illiterate people in city B & C together?
1) 57.34 lakh
2) 58.12 lakh
3) 59.64 lakh
4) 60.62 lakh
5) 61.32 lakh

8.What is the difference between total literate and total illiterate population of city D?
1) 91000
2) 93000
3) 94500
4) 96000
5) 97500

9. Total literate population of city E is what percentage of total population of city D?
1) 67.5%
2) 71.5%
3) 74.5%
4) 77.5%
5) 82.5%

10 Total literate population of City F is approximately what percentage of total illiterate population of City A ?
1) 137.5%
2) 142.5%
3) 147.5%
4) 152.5%
5) 157.5%

Answers1.

(d) SP of telephone = Rs. 2400

$$\therefore \text{CP of telephone} = 2400 \times \frac{100}{100+25}$$

$$= \text{Rs. } 1920$$

$\therefore$ Required percentage profit

$$= \frac{2016 - 1920}{1920} \times 100 = 5\%$$

2.

(e) SP = Rs. 768 and loss = 20%

$$\therefore \text{CP} = \frac{100}{80} \times 768 = \frac{5}{4} \times 768 = \text{Rs. } 960$$

Now, CP = Rs. 960 and SP = Rs. 1080

Gain = 1080 – 960 = Rs. 120

$$\therefore \text{Gain\%} = \frac{120}{960} \times 100\% = 12.5\%$$

3.

(c) Cost price of one ring = Rs. 160

Profit earned = 20%

$\therefore$ Selling price of one rings

$$= 160 + 160 \times \frac{20}{100}$$

$$= 160 + 32 = \text{Rs. } 192$$

Hence, Meeta should sell her ring at Rs. 192 per piece.

4.

$$\textbf{(e)}\ \text{Original CP} = \left(\frac{100}{100+\text{Gain\%}}\right) \times \text{SP}$$

$$= \frac{100}{120} \times 10800 = \text{Rs.}\,9000$$

5.

$$\textbf{(c)};\ \text{CP}_1 \text{ of first I} - \text{pod} = \text{Rs.}\,7500$$

$$\therefore \text{SP}_1 = 7500 \times \frac{124}{100} = \text{Rs.}\,9300$$

Hence CP_2 of second I-pod= Rs 9300

$$\text{SP}_2 = 9300 \times \frac{80}{100} = \text{Rs.}\,7440 \Rightarrow \text{CP}_1 > \text{SP}_2$$

Hence, loss is incurred in this transaction.

$\therefore$ Required loss $= (\text{CP}_1 - \text{SP}_2)$

$= 7500 - 7440 = \text{Rs.}\,60$

6. 3
Req Ans = 42 * 57/100 = 23.94 lakh

7. 4
Req Ans = 35 * (100 - 42)/100 + 63 * (100 - 36)/100
35 * 58/100 + 63 * 64/100
= 20.3 + 40.32 = 60.62 lakh

8. 4
Req ans = 48 * (51 - 49)/100 = 48 * 2/100 = 96000

9. 2
E = 78 * 44/100 = 34.32 lakh
Dtotal = 48 lakh
Req Ans = 34.32/48 * 100 = 71.5%

10 4
Flit = 81 * 34/100 = 27.54 lakh
Alit = 42 * 43/100 = 18.06 lakh

Req % = 27.54/18.06 * 100 = 152.5%

Direction(01-05): Study the given table carefully to answer the following questions:

Following table shows the investment (In Rs. Crore) in various sectors in different years

	2011		2012		2013		2014	
	Domesti	Foreig	Domesti	Foreig	Domesti	Foreig	Domesti	Foreig
	c	n	c	n	c	n	c	n
Industry	5000	2000	1000	1500	4000	3000	6000	1500
Cement	3000	1600	3000	2500	5000	2800	4000	1800
Metals	4000	2800	3500	2000	3200	2200	1500	500
Machinery	2000	3000	2500	3000	3600	6000	1000	1500
Transport	2500	2000	1500	3200	3000	1600	4000	1000
Fuel	1500	2500	1000	2800	1500	5000	1200	2000
Chemical	3500	1000	500	4000	2400	3200	2000	3000

1). What is the difference between the total domestic investment and the total foreign investment in the year 2011?
a) Rs.6400 Crore
b) Rs.6200 Crore
c) Rs.6600 Crore
d) Rs.7000 Crore
e) Rs.7100 Crore

2). What is the ratio of the total investment in Metals to that in Machinery?
a) 135 : 302
b) 24 : 49
c) 2 : 4
d) 197 : 226
e) 123 : 233

3). What is the average domestic investment in the year 2014? (You are not expected to calculate the exact value?
a) Rs.2814.28 Crore
b) Rs.2519.75 Crore
c) Rs.2234.82 Crore
d) Rs.3151.51 Crore
e) Rs.3329.79 Crore

4). Domestic investment in 2013 is what percent of foreign investment in 2011?
a) 176.5%
b) 179.7%
c) 181.6%
d) 183.5%
e) 152.3%

5). The average domestic investment in the year 2011 is what percent of the average investment in Transport during the given four years?
a) 201%
b) 65.34%
c) 125.45%
d) 147.97%
e) 167.23%

Answers
1). c)
2). d)
3). a)
4). e)
5). b)

1).
Total domestic investment in 2011 = 5000 + 3000 + 4000 + 2000 + 2500 + 1500 + 3500 = Rs.21500 Crore
Total foreign investment in 2011 = 2000 + 1600 + 2800 + 3000 + 2000 + 2500 + 1000
= Rs.14900 Crore
So, required difference = 21500 - 14900 = Rs.6600 Crore

2).
Total investment in Metals = 4000 + 2800 + 3500 + 2000 + 3200 + 2200 + 1500 + 500
= Rs.19700 Crore
Total investment in Machinery = 2000 + 3000 + 2500 + 3000 + 3600 + 6000 + 1000 + 1500
= Rs.22600 Crore
So, required ratio = 19700 : 22600 = 197 : 226

3).
Average domestic investment in 2014
= (6000 + 4000 + 1500 + 1000 + 4000 + 1200 + 2000) / 7
= 19700 / 7 = Rs.2814.28 Crore

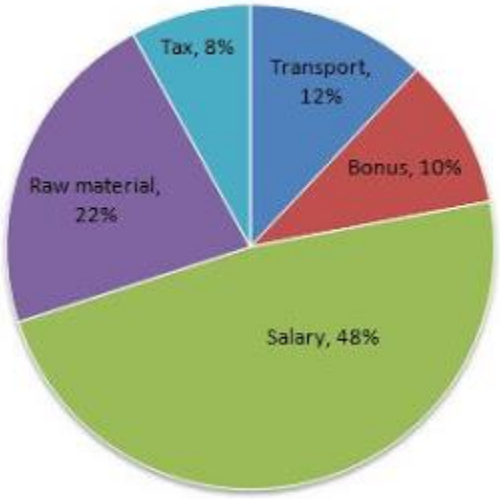
4).
Domestic investment in 2013 = 4000 + 5000 + 3200 + 3600 + 3000 + 1500 + 2400
= Rs.22700 Crore
Foreign investment in 2011 = 2000 + 1600 + 2800 + 3000 + 2000 + 2500 + 1000
= Rs.14900 Crore
= (22700 × 100) / 14900 = 152.3%

5).
Average domestic investment in 2011 = Rs. 21500 / 7 Crore
Average investment in transport
=(2500+ 2000 + 1500 + 3200 + 3000 + 1600 + 4000 + 1000) / 4 = Rs.4700 Crore
So, required % = [21500 / (7 × 4700)] × 100 = 65.34%

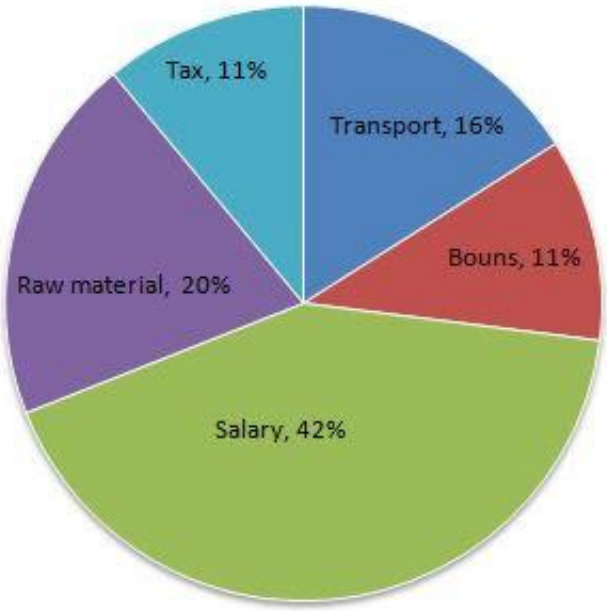
Directions(1-5): The following pie-chart shows the percentage distribution of total expenditure of company P and company Q in the year 2011. If the total expenditure of company P is Rs.240 lakhs and that of company Q is Rs. 400 lakhs, then answer the

questions given below:

Company P



Company Q



1).What is the sum between money spent on bonus by these two companies?
a) Rs.72 lakhs
b) Rs.62 lakhs

c) Rs.60 lakhs
d) Rs.65 lakhs
e) None of these

2).For which item the money spent by both companies are minimum?
a) Bonus
b) Transport
c) Tax
d) Raw Material
e) None of these

3).What is the ratio between money spent by company Q on tax and money spent by P on salary?
a) 23:121
b) 33:144
c) 47:144
d) 144:157
e) None of these

4).The money spent by company P on transport is approximately what percentage of money spent on raw material?
a) 30%
b) 42%
c) 48%
d) 45%
e) 54%

5).What is the difference between money spent by both companies on tax (in lakh Rs.)?
a) 26.8
b) 24.4
c) 24.6
d) 23.8
e) None of these

Answer
1). e)
2).c)
3). e)
4). e)
5).e)
1). Required sum=24+44⇒Rs. 68 lakhs

2). On tax

3). Required ratio=55/144

4). Required percent= (28.8/52.8)×100=54% (approx)

5). Required difference= 44-19.2 = Rs.24.8 lakh