Type 1 : Successive Percentages

Directions (Q.11-20) Find the percentage change in following questions.

1. A number increased by 10% and 20%
   a. 30%   b. 32%   c. 20%   d. 22%
2. a number increased by 20% and 30%
   a. 50%   b. 60%   c. 56%   d. 66%
3. a number increased by 20% and 20%
   a. 50%   b. 44%   c. 40%   d. 54%
4. a number increased by 20% and decreased by 10%
   a. 10%   b. 12%   c. 18%   d. 8%
5. a number increased by 30% and decreased by 20%
   a. 4%   b. 6%   c. 10%   d. 12%
6. a number decreased by 10% and decreased by 10%
   a. 1%   b. 21%   c. 19%   d. 17%
7. a number decreased by 20% and decreased by 10%
   a. 30%   b. 22%   c. 28%   d. 32%
8. a number decreased by 40% and decreased by 10%
   a. 46%   b. 50%   c. 30%   d. 42%
9. a number increased by 10% and decreased by 10%
   a. 0%   b. 1%↑   c. 1%↓   d. 5%↓
10. a number increased by 15% and decreased by 15%
    a. 0%   b. 2.25%↓   c. 2.25%↑   d. 30%↓

Type 2 : INCREASE / DECREASE

1. If a number increased by 20% by what % we should reduce it to bring back to original value.
   a. 20%   b. 25%   c. 16.66%   d. 12.5%
2. If a number increased by 25% by what % we should reduce it to bring back to original value.
   a. 20%   b. 25%   c. 16.66%   d. 12.5%
3. If a number increased by 30% by what % we should decrease it to bring back to original value.
   a. 23.1%   b. 30%   c. 45%   d. 12%
4. If a number decreased by 20% by what % we should increase it to bring back to original value.
   a. 20%   b. 25%   c. 16.66%   d. 12.5%
5. If a number decreased by 30% by what % we should increase it to bring back to original value.
   a. 20%   b. 25%   c. 42.85%   d. 12.5%

Type 3 : COMPARISION BASED PROBLEMS

1. If A is greater than B by 10% then B is less than A by what % ?
a.10%   b.9% c.11.11% d.9.09%
2. If A is less than B by 10% then B is greater than A by what % ?
a.10%   b.9% c.11.11% d.9.09%
3. If A is greater than B by 35% then B is less than A by what % ?
a.25%   b.25.9% c.25.11% d.25.09%

PROBLEMS
1) 20% of 600   2) 30% of 800   3) 35% of 900   4) 18% of 1200
5) 11% of 700   6) 17% of 3200   7) 25% of 9292
8) 45% of 9240   9) 82.5% of 9292   10) 6.25% of 8334
11) 28% of 12300   12) 46% of 18540   13) 72% of 14440
14) 55% of 18900   15) 55% of 72850   16) 45% of 63450   17) 45% of 11230   18) 78%
of 12350   19) 88% of 43250
20) 98% of 78900
21) If 20% of a number is 40, find the number.
22) If 24% of a number is 72, find the number.
23) If 40% of a number is 7250, find the number.
24) If 12% of a number is 3972, find the number.
25) If 48% of a number is 456, find the number.
26) If 56% of a number is 7896, find the number.

APPLICATION PROBLEMS
1) A company has 8344 chocolates. If company has sold 25% of its stock, then how many chocolates did it sell?
1) 2086   2) 2386   3) 2286   4) 2186   5) none of these

2)The time duration of one hour forty five minutes is what percent of a day?
1) 7.218   2) 7.291   3) 8.3   4) 8.24   5) none of these

3) The population of a town increased by 10%, 20% and then decreased by 30% in three years. If the initial population was 10000, find the new population?
1) 13200   2) 9240   3) 11000   4) 11200   5) none of these

4) The population of a town increased by 25%, 10% and then decreased by 15% in three years. If the current population of town is 18700, find the population of town three years ago?

1) 17400 2) 19000 3) 16000 4) 18200 5) none of these

5) Two successive discounts of 10% and 20% are equal to a single discount of ___
1) 28% 2) 30% 3) 32% 4) 20% 5) none of these

6) Three successive discounts of 10%, 15% and 20% are equal to a single discount of ___
1) 28% 2) 38.8% 3) 51.8% 4) 39.25% 5) none of these

7) One fourth of one third of two fifth of a number is 15. What will be 40% of that number?
1) 270 2) 180 3) 140 4) 370 5) none of these

8) If 37% of a number is 990.86, what will be approximately 19% of that number?
1) 680 2) 720 3) 500 4) 620 5) none of these

9) 15% of 45% of a number is 105.3 what is the 24% of that number?
1) 385.5   2) 374.4   3) 390   4) 375 e none of these

10) 22.005% of 449.999=?
1) 85   2) 100 3) 125 4) 75 5) 150

11) If 75% of a number is added to 75, the result is the number itself. Then the number is
1) 300 2) 200 3) 400 4) 100 5) none of these

12) if the length and breadth of rectangle are increased by 20% and 30%, then find the percentage change in area.
1) 50% 2) 56% 3) 32% 4) 40% 5) none of these

13) if the price 0f the commodity is increased by 25%, then by what % we must reduce the consumption to keep the expenditure constant?
1) 20% 2) 50% 3) 100% 4) 45% 5) none of these

14) if the numerator of a fraction is increased by 20% and the denominator is increased by 25%, the fraction obtained is 3/5. What was the original fraction?
1) 5/7 2) 4/7 3) 5/8 4) cnbd 5) none of these

15) In an examination there were 1200 boys and 800 girls. 60% of the boys and 55% of the girls passed the examination. The percentage of candidates failed is
1) 40% 2) 32% 3) 42% 4) 46% 5) none of these

16) On a test consisting of 250 questions, kiran answered 40% of the first 125 questions correctly. What percent of the other 125 question does he need to answer correctly for his grade on the entire exam to be 60%

1) 75 2) 80 3) 60 4) cnbd 5) none of these

17) A bank decides to hire freshers through two level exam process of prelims and mains. 40% percent of applicants cleared prelims and 20% of them cleared main exam. If totally 3040 members are selected by bank, then how many members applied for the job?

1) 42000 2) 33000 3) 30400 4) 38000 5) none

18) in a class of 65 students and 4 teachers, each student got sweets that are 20% of the total number of students and teacher got sweets that are 40% of the total number of students. How many sweets were there?

1) 845 2) 897 3) 949 4) 104 5) none of these

19) In a class one third of total boys is equal to half of total girls. If there are 40 girls in class, then total girls makes what percent of total boys

1) $66\frac{2}{3}$% 2) $33\frac{1}{3}$ 3) 25% 4) 20% 5) none of these

20) In a test minimum passing % for boys and girls is 40% and 35% respectively. A boy scored 483 marks and failed by 117 marks. What is minimum passing marks for girls?

1) 425 2) 525 3) 500 4) 625 5) none of these

21) Pradeep invested 20% more than Mohit. Mohit invested 10% less than Raghu. If the total sum of their investment is 17880, how much amount did raghu invest?

1) 6000 2) 8000 3) 3700 4) 5000 5) none of these

22) The income of A is 150% of the income of B. and the income of C is 120% of the income of A. if the total income of A, B and C together is rs.86000. what is c's income.

1) 30000 2) 32000 3) 20000 4) 36000 5) none of these

23) Rohan decided to donate 15% of his salary to an orphanage. On the day of donation he changed his mind and donated rs.1896, which was 80% of what he had decided earlier. How much is rohan's salary?

1) 18500 2) 10250 3) 15800 4) cnbd 5) none of these

24) Rahul spends 50% of his monthly income on house hold items, 20% of his monthly income on buying clothes, 5% of his monthly income on medicines, and remaining amount of rupees 11250 he saves. What is Rahul's monthly income?

1) 38200 2) 34000 3) 41600 4) 45000 5) none of these

25) Mr. More spent 20% of his monthly income on food and 15% on children's education. 40% of the remaining spent on entertainment and transport together and 30% on medical. He is left with an amount of rs.8775 after all these expenditures. What is Mr.More's monthly income.
1) 45000 2) 35000 3) 42000 4) 38000 5) none of these

26) out of the total number of students in a college 12% are interested in sports. ¾ of total number of students in are dancing. 10% of total number of students are interested in singing and the remaining 15 students are not interested in any of the activities. What is the total number of students in the college?
1) 450 2) 500 3) 600 4) cnbd e.none of these.

27) In a college election fought between two candidates, one candidate got 55% of the total valid votes. 15% of the votes were invalid. If the total votes were 15200, what is the number of valid votes the other candidate got?
1) 7160   2) 6840   3) 8360 4) 5814 5) none of these

28) In an election between two candidates, only 68 votes were declared as invalid. the winning candidate scores 52% of votes and wins by 98 votes. Find the total number of votes polled in.
1) 2518 2) 2624 3) 2672 4) 2820 5) one of these

29) In an election between two candidates, 75 % of the voters cast their votes, out of which 2% of the votes were declared invalid. A candidate got 9261 votes which were 75% of the total valid votes. Find the total number of voters.
1) 16800 2) 15800 3) 16700 4) 15700 5) none of these

30) In a shipment of 140 machine parts, 15% were defective. In a shipment of 60 machine parts, 20% were defective. For the 2 shipments combined what percent of machine parts were defective?
1) 35% 2) 25% 3) 65.5% 4) 16.5% 5) none of these