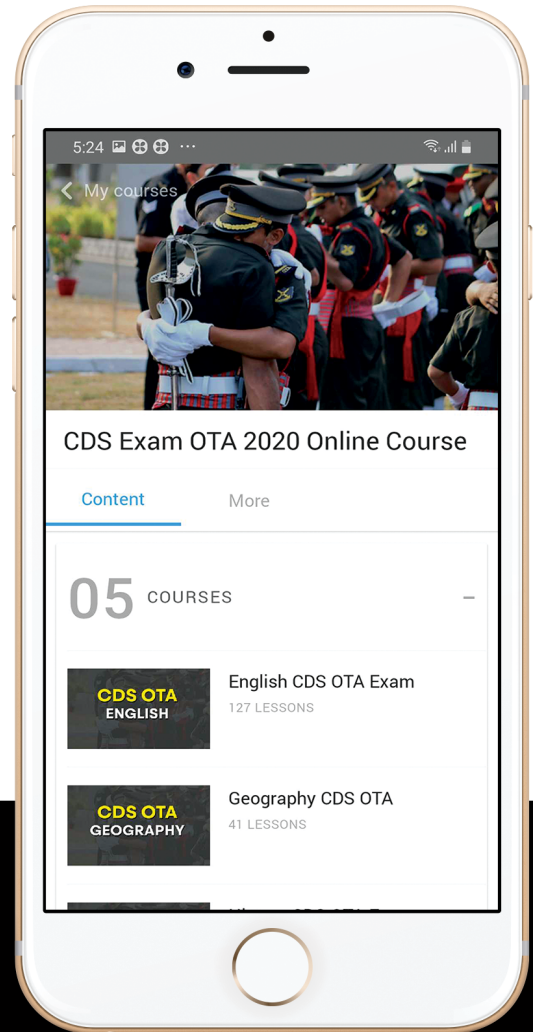




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Top 300 Most Expected Questions

AFCAT 2021 – Numerical Ability

| Part 1 | |
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| Percentage | |
| Q. | <p>The price of a car is decreased by 10 % and 20 % in two successive years. What per cent of price of a car is decreased after two years?</p> <p>a) 20%</p> <p>b) 25%</p> <p>c) 27%</p> <p>d) 28%</p> <p>Ans. (d)</p> |
| Q. | <p>A's income is 60% of B's income, and A's expenditure is 70% of B's expenditure. If A's income is 75% of B's expenditure, find the ratio of A's savings to B's savings.</p> <p>a) 5:1</p> <p>b) 1:5</p> <p>c) 3.5:1</p> <p>d) 2:7</p> <p>Ans. (b)</p> |
| Q. | <p>300 grams of sugar solution has 40% of sugar in it. How much sugar should be added to make it 50% in the solution?</p> <p>a) 60gms</p> <p>b) 80 gms</p> <p>c) 40 gms</p> <p>d) 10 gms</p> |

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| | Ans. (a) |
| Q. | Due to a 25% increase in the price of rice per kilogram, a person is able to purchase 20 kg less for RS. 400. What is the increased price of rice per kilogram? a) RS. 5 b) RS. 6 c) RS. 10 d) RS. 4 Ans. (a) |
| Q. | How many litres of pure acid are there in 8 litres of a 20% solution? a) 1 litre b) 2 litre c) 1.6 litres d) None of these Ans. (c) |
| Q. | A batsman scored 120 runs which included 3 boundaries and 8 sixes. What percent of his total score did he make by running between the wickets? a) 50% b) 20% c) 30% d) 40% Ans. (a) |
| Q. | A number, when 35 is subtracted from it, reduces to its 80 percent. What is four - fifth of that number? a) 175 |

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| | <p>b) 140 c) 95 d) 180</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The cost of a bike last year was RS. 19000. Its cost this year is RS. 17000. Find the per cent decrease in its cost.</p> <p>a) 10% b) 9.05% c) 10.05% d) 10.5%</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>If the price of coal be raised by 20%, then find by how much a householder must reduce his consumption of this commodity so as not to increase his expenditure?</p> <p>a) 16% b) 16.67% c) 17% d) 18%</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Ravi's weight is 25% that of Meena's and 40% that of Tara's. What percentage of Tara's weight is Meena's weight?</p> <p>a) 120% b) 160% c) 130% d) 140%</p> <p>Ans. (b)</p> |

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| <p>Q.</p> | <p>If the length of a rectangle is increased by 10% and the area is unchanged, then by how much per cent does the breadth decrease?</p> <ul style="list-style-type: none">a) 100/11%b) 100/9%c) 9%d) 10% <p>Ans. (a)</p> |
| <p>Q.</p> | <p>In a college election between two rivals, a candidate who got 40% of the total votes polled, was defeated by his rival by 160 votes. The total number of votes polled was</p> <ul style="list-style-type: none">a) 900b) 800c) 600d) 700 <p>Ans. (b)</p> |
| <p>Q.</p> | <p>There are some coins and rings of either gold or silver in a box. 60% of the objects are coins, 40% of the rings are of gold and 30% of the coins are of silver. What is the percentage of gold articles?</p> <ul style="list-style-type: none">a) 16%b) 27%c) 58%d) 70% <p>Ans. (c)</p> |
| <p>Q.</p> | <p>Water tax is increased by 20% but its consumption is decreased by 20%. Then the increase or decrease in the expenditure of the money is</p> <ul style="list-style-type: none">a) 5% increaseb) 4% increasec) 4% decreased) No change <p>Ans. (c)</p> |

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| Q. | If salary of X is 20% more than salary of Y, then by how much percentage is salary of Y less than X? a) 25 b) 20 c) 50/3 d) 65/4 Ans. (c) |
| Q. | 56% of 225 + 20% of 150 = ? - 109 a) 200 b) 265 c) 300 d) 284 Ans. (b) |
| Q. | What is the number whose 20% is 30% of 40? a) 90 b) 80 c) 60 d) 50 Ans. (c) |
| Q. | A fruit seller has a certain number of mangoes of which 5% are rotten. He sells 75% of the remainder and he is left with 95 mangoes. How many mangoes did he have originally? a) 500 b) 450 c) 400 d) 350 Ans. (c) |

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| <p>Q.</p> | <p>The price of cooking oil is increased by 25%. By what percent a family should reduce the consumption of cooking oil so as not to increase the expenditure on this account?</p> <p>a) 10%</p> <p>b) 15%</p> <p>c) 25%</p> <p>d) 20%</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The difference of two numbers is 20% of the larger number, if the smaller number is 20, then the larger number is :</p> <p>a) 20</p> <p>b) 25</p> <p>c) 30</p> <p>d) 35</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Two numbers are 20% and 30% less than the third number. How much percent is the second number less than first?</p> <p>a) 12.5%</p> <p>b) 14%</p> <p>c) 13%</p> <p>d) 15%</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>If $a\%$ of $a + b\%$ of $b = 2\%$ of ab, then what percent of a is b ?</p> <p>a) 50%</p> <p>b) 75%</p> <p>c) 100%</p> <p>d) Cannot be determined.</p> <p>Ans. (c)</p> |

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| Q. | If the price of wheat rises by 25%, then by how much percent must a man reduce his consumption in order to keep his budget the same as before? a) 15% b) 20% c) 25% d) 30% Ans. (b) |
| Q. | The tax on a commodity is diminished by 20% and its consumption increased by 15%. The effect on revenue is? a) 8% b) 10% c) 12% d) 15% Ans. (a) |
| Q. | Due to a 25% increase in the price of sugar per kilogram, a person is able to purchase 10 kg less for RS. 200. What is the increased price of rice per kilogram? a) RS. 5 b) RS. 4 c) RS. 6 d) RS. 8 Ans. (a) |
| Profit & Loss | |
| Q. | A dealer marks a washing machine for RS. 7500, and allows a discount of 6% on it. Find the selling price. a) 6850 b) 7050 c) 7250 |

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| | <p>d) 6950</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Loss of 20% on selling price is equal to x% loss in cost price. What is x?</p> <p>a) 20%</p> <p>b) 20</p> <p>c) $16\frac{2}{3}\%$</p> <p>d) 16</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>Cost of 4 pens, 6 notebooks and 9 files is RS. 305. Cost of 3 pens, 4 notebooks and 2 files is RS. 145. What is the cost (in RS.) of 5 pens, 8 notebooks and 16 files?</p> <p>a) 415</p> <p>b) 465</p> <p>c) 440</p> <p>d) Cannot be determined.</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>On a certain item profit is 150%. If the cost price increases by 25% what will be the new profit margin (in %)?</p> <p>a) 25</p> <p>b) 50</p> <p>c) 100</p> <p>d) 75</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>Two articles are sold for RS. 9,720 each. On one, the seller gains 8% and on the other, he loses 10%. What is his overall gain or loss?</p> <p>a) 380 gain</p> <p>b) 360 loss</p> |

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| | <p>c) 380 loss d) 360 gain</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>A person sold an article for RS. 3600 and got a profit of 20%. Had he sold the article for RS. 3150, how much profit would he have got?</p> <p>a) 4% b) 5% c) 6% d) 7%</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Charu purchased a dinner set at $\frac{3}{10}$th of its selling price and sold it at 10% more than its CP. Find the gain percent.</p> <p>a) 15% b) 5% c) 9% d) 10%</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A fruit seller buys lemons at 2 for a rupee and sells them at 5 for three rupees. What is his gain per cent?</p> <p>a) 10% b) 15% c) 20% d) 25%</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>The selling price of 20 articles is equal to the cost price of 22 articles. The gain percentage is</p> <p>a) 12%</p> |

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| | <p>b) 9%</p> <p>c) 10%</p> <p>d) 11%</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?</p> <p>a) 3</p> <p>b) 4</p> <p>c) 6</p> <p>d) 5</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A dishonest dealer sells his goods at 10% loss on cost price but uses 20% less weight. Wat is his profit or loss per cent?</p> <p>a) 12% Loss</p> <p>b) 22.5 % Gain</p> <p>c) 13.9% Loss</p> <p>d) 12.5 % Gain</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A furniture seller sells two tables at RS. 1500 each. He earned a profit of 20% on one table and suffered a loss of 20% on another table. Net profit or Loss in this deal is</p> <p>a) 4% loss</p> <p>b) 4% profit</p> <p>c) Neither profit nor loss</p> <p>d) 10% profit</p> <p>Ans. (a)</p> |

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| <p>Q.</p> | <p>A shopkeeper has announced 14% rebate on marked price of an article. If the selling price of the article is RS. 645, then the marked price of the article will be</p> <p>a) RS. 800 b) RS. 810 c) RS. 750 d) RS. 775</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>Suma purchased 20 dozen of toys at the rate of Rs. 375 per dozen. He sold each one of them at the rate of Rs. 33. What was his percentage profit?</p> <p>a) 2.5% b) 3.6% c) 5.6% d) 6.5%</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>The difference between a discount of 40% on RS. 500 and two successive discounts of 36% and 4% on the same amount is</p> <p>a) RS. 0 b) RS. 2 c) RS. 1.93 d) RS. 7.20</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>If a commission of 10% is given on the written price of an article, the gain is 20%. The gain per cent when the commission is increased to 20% will be.</p> <p>a) $6\frac{2}{3}\%$ b) 5%</p> |

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| | <p>c) 8%</p> <p>d) $5\frac{1}{3}$</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>If a shopkeeper sold a book with 20% profit after giving a discount of 10% on marked price. The ratio of cost price and marked price of the book is.</p> <p>a) 6:5</p> <p>b) 5:6</p> <p>c) 3:4</p> <p>d) 2:3</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is:</p> <p>a) 8%</p> <p>b) 5%</p> <p>c) 6%</p> <p>d) 7%</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>If the C.P. of 6 articles is equal to the S.P. of 4 articles. Find the gain per cent.</p> <p>a) 20%</p> <p>b) 30%</p> <p>c) 50%</p> <p>d) 40%</p> <p>Ans. (c)</p> |

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| <p>Q.</p> | <p>If the cost price is 96% of the selling price, then what is the profit percent?</p> <p>a) 4.5%</p> <p>b) 4.2%</p> <p>c) 4%</p> <p>d) 3.8%</p> <p>Ans. (b)</p> |
| <p>Part 2</p> | |
| <p>Q.</p> | <p>A milk man makes a profit of 20% on the sale of milk. If he were to add 10% water to the milk, by what % would his profit increase?</p> <p>a) 30</p> <p>b) 40/3</p> <p>c) 22</p> <p>d) 10</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>A sells a tube to B at a profit of 20% and B sells it to C at profit of 25%. If C pays Rs 225 for it, what did A pay for it?</p> <p>a) RS. 100</p> <p>b) RS. 125</p> <p>c) RS. 150</p> <p>d) RS. 175</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>For a certain article, if discount is 25%, the profit is 25%. If the discount is 10%, then the profit is.</p> <p>a) 10%</p> <p>b) 20%</p> <p>c) 35%</p> |

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| | d) 50% |
| | Ans. (d) |
| Q. | A shopkeeper cheats to the extent of 10% while buying as well as selling, by using false weights. His total gain is. a) 10% b) 11% c) 20% d) 21% |
| | Ans. (d) |
| Q. | If selling price is doubled, the profit triples. Find the profit percent. a) 50 b) 100 c) 150 d) 200 |
| | Ans. (b) |
| Simple & Compound Interest | |
| Q. | What is the interest received on a principal of Rs. 450 for 2 years if the interest received on RS. 1 after four year at the same rate of simple interest is RS. 0.40? a) Rs. 90 b) RS. 180 c) RS. 30 d) Cannot be determined |
| | Ans. (a) |

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| <p>Q.</p> | <p>The difference between compound interest and simple interest on a certain sum of money in 3 years at the rate of 7% per annum is RS. 225.645. What is the principal?</p> <p>a) RS. 10, 000 b) RS. 15, 000 c) RS. 17,000 d) RS. 20,000</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>What will RS. 1000 be worth after three years if it earns interest at the rate of 5% compounded annually?</p> <p>a) 1057 b) 1257 c) 1157 d) 1300</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>If the difference between S.I and C.I for 2 years on a sum of money lent at 5% is RS. 6, then the sum B.</p> <p>a) RS. 2200 b) RS. 2400 c) RS. 2000 d) RS. 2600</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The present worth of Rs.169 due in 2 years at 4% per annum compound interest is</p> <p>a) RS. 156 b) RS. 156.25 c) RS. 160.25 d) None of these</p> |

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| | Ans. (b) |
| Q. | <p>Divide Rs. 1301 between A and B, so that the amount of A after 7 years is equal to the amount of B after 9 years, the interest being compounded at 4% per annum, so one of the part amount is?</p> <p>a) RS. 625 b) RS. 624 c) RS. 626 d) RS. 628</p> <p>Ans. (a)</p> |
| Q. | <p>A sum was put at simple interest at a certain rate for 4 years Had it been put at 2% higher rate, it would have fetched RS. 56 more. Find the sum.</p> <p>a) RS. 500 b) RS. 600 c) RS. 700 d) RS. 800</p> <p>Ans. (c)</p> |
| Q. | <p>The population of a particular area A of a city is 5000. It increases by 10% in 1st yr. It decreases by 20% in the 2nd yr because of some reason. In the 3rd year , the population increases by 30%. What will be the population of area A at the end of 3 yr?</p> <p>a) 2440 b) 5720 c) 5700 d) None of these</p> <p>Ans. (b)</p> |

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| Q. | <p>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 5% to that lent at 8% is</p> <ul style="list-style-type: none">a) 16:15b) 17:15c) 16:13d) 16:19 <p>Ans. (c)</p> |
| Q. | <p>The difference between the compound interest and simple interest on RS. x at 8% per annum for 2 years is RS. 19.20. What is the value of x?</p> <ul style="list-style-type: none">a) 2500b) 3200c) 2800d) 3000 <p>Ans. (d)</p> |
| Q. | <p>If a certain sum at compound interest becomes double in 5 yr, then in how many years, it will be 16 times at the same rate of interest?</p> <ul style="list-style-type: none">a) 5b) 10c) 15d) 20 <p>Ans. (d)</p> |
| Q. | <p>What will be the ratio of simple interest earned by certain amount at the same rate of interest for 12yr and for 18 yr?</p> <ul style="list-style-type: none">a) 2:5b) 1:3c) 2:3d) 3:1 |

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| | Ans. (c) |
| Q. | Find the compound interest on RS. 18,750 in 2 yrs the rate of interest being 4% for the first year and 8% for the second year. a) RS. 2000 b) RS. 2310 c) RS. 2320 d) RS. 2010 Ans. (b) |
| Q. | The difference between compound interest and simple interest for 2 years at the rate of 10% over principal amount of RS. X is RS. 10. What is the value of X? a) 1000 b) 2000 c) 3000 d) 4000 Ans. (a) |
| Q. | The simple interest on a sum of money at 8% per annum for 6 yr is half the sum. What is the sum? a) RS. 4800 b) RS. 6000 c) RS. 8000 d) Data inadequate Ans. (d) |
| Q. | A certain sum at simple interest amounts to RS. 1350 in 5 yr and to RS. 1620 in 8 yr. What is the sum? a) RS. 700 |

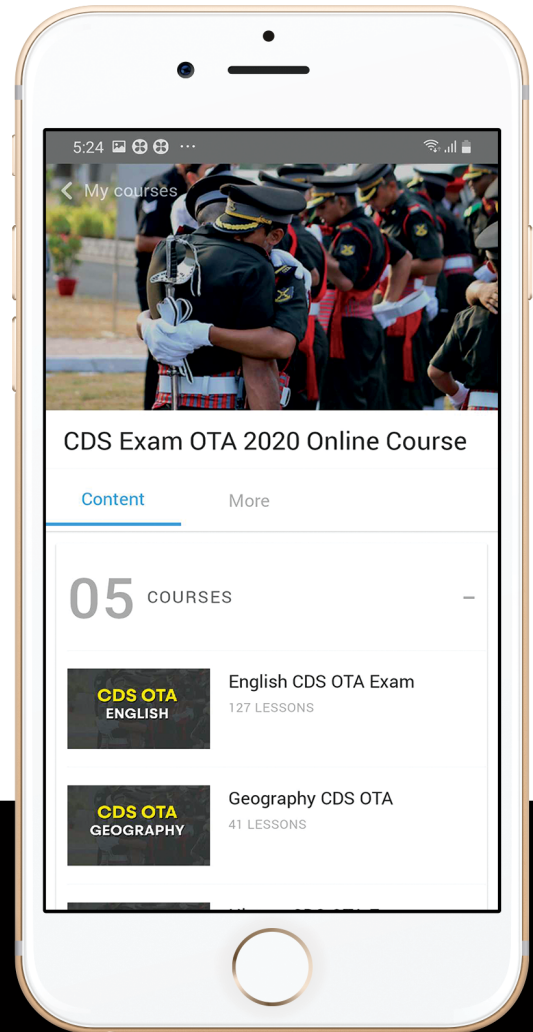
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| | <p>b) RS. 800 c) RS. 900 d) RS. 1000</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>At what rate per cent compound interest does a sum of money become nine-fold in 2 years?</p> <p>a) 20% b) 50% c) 200% d) 100%</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>The simple interest on a sum of money at 9% per annum for 5yr is half the sum. What is the sum?</p> <p>a) RS. 5800 b) RS. 5000 c) RS. 7000 d) Data is inadequate</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A principal amount to RS. 944 in 3yrs and to RS. 1040 in 5 yrs, each sum being invested at the same simple interest. The principal was</p> <p>a) RS. 800 b) RS. 991 c) RS. 750 d) RS. 900</p> <p>Ans. (a)</p> |



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| Q. | Find the amount to be paid back on a loan of RS. 18,000 at 5.5% per annum for 3 years. a) 20,000 b) 20,800 c) 20,970 d) None of these Ans. (c) |
| Q. | In 4 yrs, RS. 6000 amounts to RS. 8000. In what time at the same rate, will RS. 525 amount to RS. 700? a) 2 yr b) 3 yr c) 4 yr d) 5 yr Ans. (c) |
| Q. | The simple interest on a sum of money is $\frac{8}{25}$ of the sum. If the number of years is numerically half the rate percent per annum, then the rate percent per annum is a) 8 b) 5 c) $\frac{25}{4}$ d) 4 Ans. (a) |
| Q. | The simple interest on a certain sum of money at 4% per annum for 4 yrs is RS. 80 more than the interest on the same sum for 3 yrs at 5% per annum. Find the sum. a) RS. 8000 b) RS. 5000 c) RS. 7000 |

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| | <p>d) RS. 6000</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>A sum of money placed at compound interest doubles itself in 5 years. It will amount to eight times itself at the same rate of interest in</p> <p>a) 10 yrs b) 20 yrs c) 12 yrs d) 15 yrs</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The difference between the simple interest received from two different sources on RS. 1500 for 3 years is RS. 13.50. The difference between their rates of interest is:</p> <p>a) 0.1% b) 0.2% c) 0.3% d) 0.4%</p> <p>Ans. (c)</p> |
| <p>Ratio & Proportion</p> | |
| <p>Q.</p> | <p>The incomes of A and B are in the ratio 3 : 2 and their expenditures are in the ratio 5 : 3. If each saves Rs 2000, what is their income?</p> <p>a) 10000, 6000 b) 12000, 8000 c) 15000, 10000 d) 18000, 12000</p> <p>Ans. (b)</p> |

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| <p>Q.</p> | <p>20 litres of a mixture contains milk and water in the ratio 5 : 3. If 4 litres of this mixture be replaced by 4 litres of milk, the ratio of milk to water in the new mixture would be:</p> <p>a) 2 : 1 b) 7 : 3 c) 8 : 3 d) 4 : 3</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The ratio of two numbers is 4 : 7. If each of these numbers increases by 30, their ratio will become 5 : 8 . What are the two numbers?</p> <p>a) 120, 210 b) 145, 120 c) 145, 165 d) 165, 210</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>Present ages of A and B are in ratio 3 : 5, 7 years later B's age will be twice the age of C. If C celebrated his 10th birthday 4 years ago, then what is the present age (in years) of A?</p> <p>a) 14 b) 21 c) 28 d) 42</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Ratio of ages of Mani and Prabhu is 2:1. Ramona is half the age of Prabhu. If Mani is sixty, find out the age of Ramona.</p> <p>a) 20 b) 15 c) 10</p> |

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| | <p>d) 24</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>P is greater than Q by 60% and greater than R by 30%. The ratio of Q and R is</p> <p>a) 1 : 2 b) 2 : 1 c) 13 : 16 d) 16 : 13</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>The ratio of males and females in a city is 7 : 8 and the percentage of children among males and females is 25% and 20% respectively. If the number of adult females in the city is 156800 what is the total population?</p> <p>a) 245000 b) 367500 c) 196000 d) 171500</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The largest and the second largest angles of a triangle are in the ratio of 13 : 12. The smallest angle is 20% of the sum of the largest and the second largest angles. What is the sum of the smallest and the second largest angles?</p> <p>a) 120° b) 108° c) 100° d) 102°</p> <p>Ans. (d)</p> |

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| <p>Q.</p> | <p>The total number of boys in a school are 16% more than the total number of girls in the school. What is the ratio of the total number of boys to the total number of girls in the school?</p> <p>a) 25:21 b) 29:35 c) 25:29 d) None of these</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>Populations of two villages X and Y are in the ratio of 5 : 7 respectively. If the population of village Y increases by 25000 and the population of village X remains unchanged the respective ratio of their populations becomes 25 : 36. What is the population of village X?</p> <p>a) 6,25,000 b) 6,75,000 c) 8,75,000 d) 9,00,000</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>When 50% of one number is added to a second number, the second number increases to its four-thirds. What is the ratio between the first number and the second number?</p> <p>a) 3 : 2 b) 3 : 4 c) 2 : 3 d) Data inadequate</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>If $0.75 : x :: 5 : 8$, then x is equal to:</p> <p>a) 1.12 b) 1.20 c) 1.25</p> |

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| | <p>d) 1.30</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The entry ticket at a fun park was increased in the ratio 7 : 9, due to which footfalls fell in the ratio 13 : 11. What is the new daily collection, if the daily collection before the price hike was Rs 2,27,500?</p> <p>a) 237500 b) 247500 c) 232500 d) 242500</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>In a college union, there are 48 students. The ratio of the number of boys to the number of girls is 5:3. The number of girls to be added in the union, so that the number of boys to girls in 6:5 is</p> <p>a) 6 b) 7 c) 12 d) 17</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Given that the ratio of altitudes of two triangles is 4 : 5 and ratio of their areas is 3 : 2. The ratio of their corresponding bases is</p> <p>a) 8 : 15 b) 5 : 8 c) 15 : 8 d) 8 : 5</p> <p>Ans. (c)</p> |
| <p>Part - 3</p> | |

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| <p>Q.</p> | <p>A and B have their monthly incomes in the ratio 8 : 5, while their monthly expenditures are in the ratio 5 : 3. If they have saved Rs 12,000 and Rs 10,000 monthly respectively, then the difference in their monthly income is</p> <p>a) Rs 42,000 b) Rs 44,000 c) Rs 46,000 d) RS 52,000</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>The prize money of Rs 1,800 is divided among 3 students A, B and C in such a way that 4 times the share of A is equal to 6 times the share of B, which is equal to 3 times the share of C. Then A's share is</p> <p>a) Rs 400 b) Rs 600 c) Rs 700 d) Rs 800</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Zinc and copper are melted together in the ratio 9 : 11. What is the weight of melted mixture, if 28.8 kg of zinc has been consumed in it?</p> <p>a) 58 kg b) 60 kg c) 64 kg d) 70 kg</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>In an express train, the passengers travelling in A.C. sleeper class, First class and Sleeper class are in the ratio 1:2:7, and rate for each class is in the ratio 5 : 4 : 2. If the total income from this train is Rs 54, 000, find the income of Indian Railways from A.C. sleeper class.</p> |

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| | <p>a) Rs 12,000 b) Rs 20,000 c) Rs 22,000 d) Rs 10,000</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The ratio of number of ladies to gents at a party was 1 : 2, but when 2 ladies and 2 gents left, the ratio became 1 : 3. How many people were originally present at the party?</p> <p>a) 6 b) 9 c) 12 d) None of these</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The dimensions of a rectangular room when increased by 4 metres are in the ratio of 4 : 3 and when decreased by 4 metres, are in the ratio of 2 : 1. The dimensions of the room are</p> <p>a) 6 m and 4 m b) 12 m and 8 m c) 16 m and 12 m d) 24 m and 16 m</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Divide 70 in the ratio 3 : 7.</p> <p>a) 21 & 49 b) 16 & 54 c) 18 & 52 d) 20 & 60</p> <p>Ans. (a)</p> |

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| <p>Q.</p> | <p>Three partners Rahul, Puneet and Chandan invested Rs 1600, Rs 1800 and Rs 2300 respectively in a business. What is the Chandan's share in the profit of Rs 399 ?</p> <p>a) Rs 213 b) Rs 161 c) Rs 180 d) Rs 165</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>A began a business with Rs 4500 and was joined afterwards by B with Rs 5400. If the profits at the end of year was divided in the ratio 2 : 1 when did B join as a partner?</p> <p>a) 3 months b) 2 months c) 5 months d) 7 months</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>If $(a - b) : (a + b) = 1 : 5$, then what is a:b equal to?</p> <p>a) 2 : 3 b) 3 : 2 c) 5 : 13 d) 13 : 15</p> <p>Ans. (b)</p> |

Time & Work

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| <p>Q.</p> | <p>A man is twice as fast as a woman. Together the man and the woman do the piece of work in 10 days. In how many days each will do the work if engaged alone?</p> |
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| | <p>a) man-14 days, woman-28 days b) man-15 days, woman-30 days c) man-10 days, woman-20 days d) None of these</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>A is 20% more efficient than B. How much time will they take to complete a job working together, which A alone could have done in 22 days?</p> <p>a) 11 days b) 10 days c) 17 days d) None of these</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Suresh can finish a piece of work by himself in 42 days. Mahesh, who is $\frac{1}{5}$ times more efficient as Suresh, requires X days to finish the work by working all by himself. Then what is the value of X ?</p> <p>a) 25 days b) 30 days c) 35 days d) 20 days</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>Carpenter A can make a chair in 6 hours, carpenter B in 7 hours and carpenter C in 8 hours. If each carpenter works for 8 hours per day, how many chairs will be made in 21 days?</p> <p>a) 61 b) 67 c) 73 d) 79</p> |

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| | Ans. (c) |
| Q. | <p>If 4 men working 4 hours per day for 4 days complete 4 units of work, then how many units of work will be completed by 2 men working for 2 hours per day in 2 days?</p> <p>a) 2 b) 1 c) 1/2 d) 1/8</p> <p>Ans. (c)</p> |
| Q. | <p>Two pipes A and B can fill a tank in 60 minutes and 75 minutes respectively. There is also an outlet C. If A, B and C are opened together, the tank is full in 50 minutes. How much time will be taken by C to empty the full tank?</p> <p>a) 100 minutes b) 110 minutes c) 120 minutes d) 125 minutes</p> <p>Ans. (a)</p> |
| Q. | <p>A is thrice as efficient as B and hence completes a work in 40 days less than the number of days taken by B. What will be the number of days taken by both of them when working together?</p> <p>a) 22.5 days b) 15 days c) 20 days d) 18 days</p> <p>Ans. (b)</p> |

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| Q. | How many men will be required to plough 100 acres of land in 10 days, if 10 men require 8 days to plough 20 acres of land? a) 30 b) 40 c) 50 d) 60 Ans (b) |
| Q. | A can do a piece of work in 'x' days and B can do the same work in '3x' days, to finish the work together they take 12 days. What is the value of 'x'? a) 8 b) 10 c) 12 d) 16 Ans (d) |
| Q. | Rahul can do a piece of work in 25 days. Riya is 50% more efficient than Rahul. The number of days taken by Riya is a) 15 b) 10 c) 21 d) 30 Ans. (b) |
| Q. | X can complete a job in 12 days. If X and Y work together, they can complete the job in $\frac{20}{3}$ days. Y alone can complete the job in a) 10 days b) 12 days c) 15 days d) 18 days |

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| | Ans. (c) |
| Q. | <p>2 men and 1 woman can complete a piece of work in 14 days, while 4 women and 2 men can do the same work in 8 days. If a woman gets Rs 60 per day, what should be the wages per day of a man?</p> <p>a) Rs 48 b) Rs 90 c) Rs 72 d) Rs 135</p> <p>Ans. (b)</p> |
| Q. | <p>X and Y can do a piece of work in 30 days. They work together for 6 days and then X quits and Y finishes the work in 32 more days. In how many days can Y do the piece of work alone?</p> <p>a) 30 days b) 32 days c) 34 days d) 40 days</p> <p>Ans (d)</p> |
| Q. | <p>12 men construct 1.5 km of road in 7 days. 28 men will construct 12 km of roads in</p> <p>a) 20 days b) 24 days c) 28 days d) 38 days</p> <p>Ans. (b)</p> |
| Q. | <p>Seventy-five men are employed to lay down a railway line in a year. Due to certain emergency conditions, the work was to be finished in 73</p> |

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| | <p>days. How many more men should be employed to complete the work in the desired time?</p> <p>a) 300 b) 325 c) 350 d) 375</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>12 men and 16 boys can do a piece of work in 5 days, 13 men and 24 boys can do it in 4 days. Then the ratio of daily work done by a man to that of a boy is</p> <p>a) 2 : 1 b) 3 : 1 c) 3 : 2 d) 5 : 4</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>A contractor undertakes to built a wall in 50 days. He employs 50 people for the same. However, after 25 days he finds that only 40% of the work is complete. How many more men need to be employed to complete the work in time?</p> <p>a) 25 b) 30 c) 35 d) 20</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>Pipe A can fill a tank in 3 h but there is a leakage also, due to which it takes 3.5 h for the tank to be filled. How much time will the leakage take in emptying the tank, if the tank is filled initially?</p> <p>a) 21 h</p> |

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| | <p>b) 20 h c) 18 h d) 10.5 h</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>If 10 persons can dig 8 ft trench in 12 days, then how many days will 8 persons take to dig 6 ft trench?</p> <p>a) 10 days b) 10.25 days c) 11 days d) 11.25 days</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A can do a piece of work in 5 days, and B can do it in 6 days. How long will they take to finish the work if both work together?</p> <p>a) 25 b) 30/11 c) 35/10 d) 20</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>A and B can do alone a job in 6 day and 12 days respectively. They began the work together but 3 days before the completion of job, A leaves off. In how many days will the work be completed?</p> <p>a) 5 b) 4 c) 6 d) 7</p> <p>Ans (c)</p> |

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| <p>Q.</p> | <p>A and B together can do a piece of work in 6 days and A alone can do it in 9 days. In how many days can B alone do it?</p> <p>a) 18 b) 16 c) 9 d) 36</p> <p>Ans (a)</p> |
| <p>Q.</p> | <p>10 men can finish a piece of work in 10 days, whereas it takes 12 women to finish it in 10 days. If 15 men and 6 women undertake to complete the work, how many days will they take to complete it?</p> <p>a) 5 b) 10 c) 15 d) 20</p> <p>Ans (a)</p> |
| <p>Q.</p> | <p>A certain number of men can do a work in 60 days. If there were 8 men more it could be finished in 10 days less. How many men are there?</p> <p>a) 40 b) 30 c) 10 d) 20</p> <p>Ans (a)</p> |
| <p>Q.</p> | <p>5 men prepare 10 toys in 6 days working 6 hrs a day. Then in how many days can 12 men prepare 16 toys working 8 hrs a day?</p> <p>a) 4 b) 3 c) 2 d) 10</p> |

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| | Ans (b) |
| Speed, Distance & Time | |
| Q. | <p>A boat's speed in still water is 10 km/h, while river is flowing with a speed of 2km/h and time taken to cover a certain distance upstream is 4 h more than time taken to cover the same distance downstream. Find the distance.</p> <p>a) 86 km b) 96 km c) 76 km d) None of these</p> <p>Ans. (b)</p> |
| Q. | <p>Without stoppage, the speed of a train is 54 km/h and with stoppage it is 45 km/h. For how many minutes, does the train stop per hour?</p> <p>a) 25 min b) 5 min c) 15 min d) 10 min</p> <p>Ans. (d)</p> |
| Q. | <p>A 250 m long train is running at 100 km/h. In what time will it pass a man running at 10 km/h in the same direction in which the train is going?</p> <p>a) 5 s b) 10s c) 15 s d) 20 s</p> <p>Ans. (b)</p> |

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| <p>Q.</p> | <p>A is twice as fast as B and B is thrice as fast as C. The journey covered by C in 56 min will be covered by A in</p> <p>a) $16/3$ min b) $7/3$ min c) $22/3$ min d) $28/3$ min</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>A policeman sees a chain snatcher at a distance of 50 m. He start chasing the snatcher who is running with a speed of 2 m/s while the policeman chasing him with a speed of 4 m/s. Find the distance covered by the chain snatcher when he is caught by the policeman.</p> <p>a) 40 m b) 60 m c) 50 m d) 100 m</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>If a person covers 40 km at a speed of 10 km/h by a cycle, 25 km at 5 km/h on foot and 100 km at 50 km/h by bus. Then, find his average speed for the whole journey?</p> <p>a) 15 kmph b) 20 kmph c) 25 kmph d) 10 kmph</p> <p>Ans. (a)</p> |
| <p>Q.</p> | <p>A bike crosses a bridge with a speed of 108 km/h. what will be the length of the bridge, if the bike takes 8 h to cross the bridge?</p> <p>a) 800 km b) 864 km</p> |

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| | <p>c) 748 km d) None of these</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>In a game of 160 points, A can give 10 points to B and 30 points to C. How many points B can give C in a game of 60 ?</p> <p>a) 10 b) 15 c) 6 d) 8</p> <p>Ans (d)</p> |
| <p>Q.</p> | <p>A train leaves Delhi at 9 a.m. at a speed of 30 kmph. Another train leaves at 2 p.m. at a speed of 40 kmph on the same day and in the same direction. How far from Delhi, will the two trains meet?</p> <p>a) 400 km b) 300 km c) 600 km d) None of the above</p> <p>Ans (c)</p> |
| <p>Q.</p> | <p>The ratio of the speeds of a car, a jeeps and a tractor is 3 : 5 : 2. The speed of the jeep is 250 per cent of the speed of the tractor and tractor covers 360 km in 12 hours. What is the average speed of car and jeep together?</p> <p>a) 50 kmph b) 60 kmph c) 70 kmph d) 80 kmph</p> <p>Ans. (b)</p> |

Part - 4

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| <p>Q.</p> | <p>A thief goes away with a SANTRO car at a speed of 40 kmph. The theft has been discovered after half an hour and the owner sets off in a bike at 50 kmph when will the owner overtake the thief from the start?</p> <p>a) 4 hrs b) 2 hrs c) 4 hrs d) None of these</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>Running $\frac{3}{4}$th of his usual rate, a man is 15min late. Find his usual time in hours?</p> <p>a) $\frac{2}{3}$ hrs b) $\frac{1}{3}$ hrs c) $\frac{3}{4}$ hrs d) $\frac{1}{4}$ hrs</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>In a one km race A gives B a start of 100m and in a one km race B gives a start of 80 m to C. In a 1 km race who will win and by how much distance from the worst performer between two losers?</p> <p>a) A, by 172 m b) B, 172 m c) C, 172 m d) None of these</p> <p>Ans (a)</p> |
| <p>Q.</p> | <p>Two trains of equal length running in opposite directions, pass a Man standing by the side of railway line in 18 sec, and 12 sec respectively. The time that the two trains take to cross each other, is</p> |

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| | <p>a) 7.2 sec a) 9.6 sec b) 10.8 sec c) 14.4 sec</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>Ajay leaves Mumbai at 6 am and reaches Bangalore at 10 am. Prakash leaves Bangalore at 8 am and reaches Mumbai at 11:30 am. At what time do they cross each other?</p> <p>a) 10 am b) 8:32 am c) 8:56 am d) 9:20 am</p> <p>Ans. (c)</p> |
| <p>Q.</p> | <p>How long will a boy take to run round a square field of side 35 meters, if he runs at the rate of 9 km/hr?</p> <p>a) 50 s b) 52 s c) 54 s d) 56 s</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The speeds of three cars are in the ratio of 2:3:5. Find the ratio of the time taken by the above cars to travel the same distance.</p> <p>a) 15:10:6 b) 6:10:15 c) 10:15:6 d) 10:6:15</p> <p>Ans. (a)</p> |

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| Q. | <p>Rubi goes to a multiplex at the speed of 3 km/hr to see a movie and reaches 5 minutes late. If she travels at the speed of 4 Km/hr she reaches 5 minutes early. Then the distance of the multiplex from her starting point is</p> <ul style="list-style-type: none">a) 2 kmb) 5 kmc) 2md) 5m <p>Ans. (a)</p> |
| Q. | <p>If a man walks at the rate of 5 km/hour, he misses a train by 7 minutes. However, if he walks at the rate of 6 km/hour, he reaches the station 5 minutes before the arrival of the train. The distance covered by him to reach the station is</p> <ul style="list-style-type: none">a) 6 kmb) 7 kmc) 4 kmd) 6.25 km <p>Ans. (a)</p> |
| Q. | <p>A man starts from a place P and reaches the place Q in 7 hours. He travels 1/4th of the distance at 10 km/hour and the remaining distance at 12 km/hour. The distance, in kilometre, between P and Q is</p> <ul style="list-style-type: none">a) 72b) 80c) 90d) 70 <p>Ans. (b)</p> |

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| <p>Q.</p> | <p>Walking at the rate of 4 kmph a man covers certain distance in 2hrs 45 min. Running at a speed of 16.5 kmph the man will cover the same distance in how many minutes?</p> <p>a) 35 min b) 45 min c) 40 min d) 50 min</p> <p>Ans (c)</p> |
| <p>Q.</p> | <p>A ship after sailing 12km towards south from a particular place covered 5 km more towards east. Then the straightway distance of the ship from that place is</p> <p>a) 18 km b) 15 km c) 13 km d) 11km</p> <p>Ans (c)</p> |
| <p>Q.</p> | <p>Two men starting from the same place walk at the rate of 5 km/h and 5.5 km/h respectively. What time will they take to be 8.5 km apart, if they walk in the same direction?</p> <p>a) 16 h b) 8 h 30 min c) 4h 5 min d) 17 h</p> <p>Ans (d)</p> |
| <p>Q.</p> | <p>Rahul can row a certain distance downstream in 6 hours and return the same distance in 9 hours. If the speed of Rahul in still water is 12 km/hr, find the speed of the stream.</p> <p>a) 2 km/hr</p> |

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| | <p>b) 2.4 km/hr c) 3 km/hr d) Data Inadequate</p> <p>Ans (b)</p> |
| <p>Q.</p> | <p>Two trains are 2 km apart and their lengths are 200 m and 300m. They are approaching towards each other with a speed of 20 m/s and 30 m/s, respectively. After how much time will they cross each other?</p> <p>a) 50 s b) 100 s c) 25/3 s d) 150 s</p> <p>Ans (a)</p> |
| <p>Average</p> | |
| <p>Q.</p> | <p>Out of 40 boys in a class, average weight of 30 is 60 kg and the average weight of the remaining is 56 kg. The average weight (in kilogram) of the whole class is</p> <p>a) 58.5 b) 58 c) 57 d) 59</p> <p>Ans. (d)</p> |
| <p>Q.</p> | <p>The average age of A and B is 20 years. If C were to replace A, the average would be 19 and if C were to replace B, the average would be 21. What are the age of A, B and C?</p> <p>a) 22, 18, 20 b) 20, 20, 18 c) 18, 22, 20</p> |

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| | <p>d) None of these</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>3 years ago the average age of a family of 5 members was 17 years. With the birth of a new baby, the average age of six members remains the same even today. Find the age of the new baby.</p> <p>a) 1 year b) 2 years c) 3 years d) cannot be determined</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The average age of 36 students in a group is 14 years. When teacher's age is included to it, the average increases by one. What is the teacher's age in years?</p> <p>a) 31 b) 36 c) 51 d) cannot be determined</p> <p>Ans(c)</p> |
| <p>Q.</p> | <p>In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach a target of 282 runs?</p> <p>a) 6.25 b) 6.50 c) 6.75 d) 7.00</p> <p>Ans(a)</p> |

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| Q. | <p>The average attendance in a school for the first 4 days of the week is 30 and for the first 5 days of the week is 32. The attendance on the fifth day is</p> <ul style="list-style-type: none">a) 32b) 40c) 38d) 36 <p>Ans(b)</p> |
| Q. | <p>Last year, a Home Appliance Store sold an average of 42 microwave ovens per month. In the first 10 months of this year, the store has sold an average of only 20 microwave ovens per month. What was the average number of microwave ovens sold per month during the entire 22 months period?</p> <ul style="list-style-type: none">a) 21b) 30c) 31d) 32 <p>Ans(d)</p> |
| Q. | <p>The captain of a cricket team of 11 players is 25 years old and the wicket - keeper is 3 years older. If the age of these two players are replaced by that of another two players, the average of the cricket team drops by 2 years. Find the average age of these two players.</p> <ul style="list-style-type: none">a) 15 yearsb) 15.5 yearsc) 17 yearsd) 16.5 years <p>Ans(b)</p> |

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| <p>Q.</p> | <p>In Arun's opinion, his weight is greater than 65 kg but less than 72 kg. His brother does not agree with Arun and he thinks that Arun's weight is greater than 60 kg but less than 70 kg. His mother's view is that his weight cannot be greater than 68 kg. If all of them are correct in their estimation, what is the average of different probable weights of Arun?</p> <p>a) 67 kg b) 68 kg c) 69 kg d) None of these</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>The average weight of 45 students in a class is 52 kg. 5 of them whose average weight is 48 kg leave the class and other 5 students whose average weight is 54 kg join the class. What is the new average weight (in kg) of the class?</p> <p>a) 52.1 b) $2370/45$ c) $2369/45$ d) None of these</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The average monthly sales for the first eleven months of the year of a certain salesman were Rs 12000, but due to his illness during the last month, the average monthly sales for the whole year came down to Rs 11375. What was the value of sales during the last month?</p> <p>a) 2100 b) 875 c) 700 d) 4500</p> <p>Ans(d)</p> |

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| <p>Q.</p> | <p>The average temperature for Monday, Tuesday and Wednesday was 55°, the average for Tuesday, Wednesday and Thursday was 60°, that for Thursday being 56°, what was the temperature on Monday?</p> <p>a) 39° b) 41° c) 45° d) None of these</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>In preparing a meal for 4 people, a housewife uses 600 grams of sprouts, 1 kg of potatoes, 1 cauliflower weighing $\frac{1}{2}$ kg each and 700 grams of meat. If one quarter of the weight is lost in preparation and cooking, then what is the average weight in grams, of each person's meal?</p> <p>a) 2100 b) 875 c) 700 d) 525</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>The respective ratio between the speed of a car, a train and a bus is 5 : 9 : 4. The average speed of the car the bus and the train is 72 km/h together. What is the average speed of the car and the train together?</p> <p>a) 82 km/h b) 78 km/h c) 84 km/h d) cannot be determined</p> <p>Ans(c)</p> |

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| <p>Q.</p> | <p>The average of 5 consecutive numbers is n. If the next two numbers are also included, the average of the 7 numbers will</p> <ul style="list-style-type: none"> a) increase by 2 b) increase by 1 c) remain the same d) increase by 1.4 <p>Ans(b)</p> |
| <p>Q.</p> | <p>A family consists of grandparents, parents and three grandchildren. The average age of the grandparents is 60 years, that of the parents is 30 years and that of the grandchildren is 10 years. What is the average age of the family?</p> <ul style="list-style-type: none"> a) 25 years b) 26 years c) 24 years d) 30 years <p>Ans(d)</p> |
| <p>Q.</p> | <p>The average marks scored by 60 pupils in a class were 32.5. The marks of the first pupil were altered from 88 to 78, the marks of the last pupil were altered from 13 to 43. Then the new average will be</p> <ul style="list-style-type: none"> a) 32.83 b) 33.97 c) 34.12 d) 36.23 <p>Ans(a)</p> |
| <p>Q.</p> | <p>The average weight of 3 men A, B and C is 84 kg. Another man D joins the group and the average of the group becomes 80 kg. If another men E whose weight is 3 kg more than that of D replace A, then the average weight of B, C, D and E becomes 79 kg. Find the weight of A.</p> |

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| | <p>a) 75 kg b) 65 kg c) 55 kg d) 50 kg</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>In an exam, the average was found to be 50 marks. After deducting computational errors, the marks of the 100 candidates had to be changed from 90 to 60 each and the average came down to 45 marks. The total number of candidates who took the exam were</p> <p>a) 3000 b) 600 c) 200 d) 150</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>A company produces on an average 4000 items per month for the first 3 months. How many items it must produce on an average per month over the next 9 months, to average 4375 items per month over the whole?</p> <p>a) 4500 b) 4600 c) 4680 d) 4710</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>In an examination, a Rohan's average marks were 63 per paper. If he had obtained 20 more marks for his Geography paper and 2 more marks for his History paper, his average per paper would have been 65. How many papers were there in the examination?</p> <p>a) 8</p> |

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| | <p>b) 9 c) 10 d) 11</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>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</p> <p>a) 1 : 2 b) 2 : 3 c) 3 : 4 d) 3 : 5</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The average of 10 numbers is 40.2. Later it is found that two numbers have been wrongly copied. The first is 18 greater than the actual number and the second number added is 13 instead of 31. Find the correct average.</p> <p>a) 40.2 b) 40.4 c) 40.6 d) 40.8</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>How much tea at Rs 9 per kg must be mixed with 100 kg of superior tea at Rs 13.50 per kg to give an average price of Rs 11 per kg?</p> <p>a) 85 kg b) 120 kg c) 125 kg d) 130 kg</p> |

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| | Ans(c) |
| Q. | <p>In an examination, 40% of the candidates wrote their answers in Hindi and the others in English. The average marks of the candidates written in Hindi is 74 and the average marks of the candidates written in English is 77. What is the average marks of all the candidates?</p> <p>a) 75.5 b) 75.8 c) 76.0 d) 76.8</p> <p>Ans(b)</p> |
| Algebra | |
| Q. | <p>The product of two consecutive odd numbers is 4899. What is the smaller number?</p> <p>a) 59 b) 69 c) 96 d) 70</p> <p>Ans. (b)</p> |
| Q. | <p>The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?</p> <p>a) 4 years b) 10 years c) 8 years d) 9 years</p> <p>Ans(a)</p> |

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| <p>Q.</p> | <p>A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B?</p> <p>a) 18 yrs b) 20 yrs c) 16 yrs d) 10 yrs</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>A student was asked to divide a number by 6 and add 12 to the quotient. He, however first added 12 to the number and then divided it by 6, getting 112 as the answer. What is the correct answer?</p> <p>a) 123 b) 122 c) 124 d) 144</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The sum of the digits of a two-digit number is 16. If the number formed by reversing the digits is less than the original number by 18. Find the original number.</p> <p>a) 79 b) 97 c) 87 d) 78</p> <p>Ans(b)</p> |
| <p>Part - 5</p> | |
| <p>Q.</p> | <p>Find the values of x and y which satisfy the equations: $4x + 3y = 25$ and $x + 5y = 19$.</p> <p>a) $X=4, y=3$ b) $X=3, y=4$</p> |

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| | <p>c) $X=3, y=3$ d) $X=4, y=4$</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>If a number is decreased by 4 and divided by 6, the result is 8. What would be the result if 2 was subtracted from the number and then it was divided by 5?</p> <p>a) 10 b) 12 c) 14 d) 20</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>If three numbers are added in pairs, the sums equal 10, 19 and 21. The numbers are</p> <p>a) 4, 5, 12 b) 6, 4, 15 c) 6, 6, 18 d) 12, 6, 4</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The sum of third, fourth and fifth part of a number exceeds half of the number by 34. Find the number.</p> <p>a) 150 b) 50 c) 90 d) 120</p> <p>Ans(d)</p> |

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| Q. | The sum of three consecutive multiples of 3 is 72. What is the largest number? a) 21 b) 24 c) 27 d) 36 Ans(c) |
| Q. | A number is doubled and 9 is added. If the resultant is trebled, it becomes 75. What is that number? a) 3.5 b) 6 c) 8 d) 10 Ans(c) |
| Q. | Father's age is 4 less than five times the age of his son and the product of their ages is 288. Find the father's age. a) 40 yrs b) 36 yrs c) 26 yrs d) 42yrs Ans(b) |
| Q. | A natural number when increased by 12, equals 160 times its reciprocal. Find the number a) 20 b) 12 c) 10 d) 8 |

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| | Ans(d) |
| Q. | <p>When $f(x) = x^3 - 3x^2 + 4x + 50$ is divided by $(x + 3)$, the remainder is</p> <p>a) 16 b) -16 c) 15 d) -15</p> <p>Ans(b)</p> |
| Q. | <p>If $x = 2 + \sqrt{3}$, then $x^2 + \frac{1}{x^2}$ is equal to</p> <p>a) 10 b) 12 c) -12 d) 14</p> <p>Ans(d)</p> |
| Q. | <p>When $x^5 + 1$ is divided by $(x - 2)$, the remainder is:</p> <p>a) 15 b) 17 c) 31 d) 33</p> <p>Ans(d)</p> |
| Q. | <p>If $x \geq 0$, $y \geq 0$ and $(x + y) \leq 1$, then the maximum value of $(2x + 3y)$ is</p> <p>a) 2 b) 3 c) 4</p> |

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| | <p>d) 5</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>If $x + y + z = 0$, then the value of $\frac{x^2 + y^2 + z^2}{x^2 - yz}$ is</p> <p>a) -1 b) 0 c) 1 d) 2</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>If $3^{x+y} = 81$ and $81^{x-y} = 3$, then the value of x is</p> <p>a) 42 b) 48 c) 15/8 d) 17/8</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>If $x = 3^{1/3} - 3^{-1/3}$ then $3x^3 + 9x$ is equal to</p> <p>a) 5 b) 6 c) 7 d) 8</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>If $3x + 5y + 7z = 49$ and $9x + 8y + 21z = 126$, then what is the value of y?</p> <p>a) 3 b) 2</p> |

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| | <p>c) 4 d) 5</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>If $a - b = 5$ and $ab = 6$, then $(a^3 - b^3)$ is equal to:</p> <p>a) 225 b) 155 c) 90 d) 215</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>The cost of 2 chairs and 3 tables is Rs.1300. The cost of 3 chairs and 2 tables is Rs.1200. The cost of each table is more than that of each chair by?</p> <p>a) 120 b) 300 c) 200 d) 100</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>The tens digit of a two-digit number is two more than its unit digit. The two-digit number is 7 times the sum of the digits. Find the units digits?</p> <p>a) 1 b) 3 c) 2 d) 4</p> <p>Ans(c)</p> |
| <p>Q.</p> | <p>In a series of six consecutive even numbers, the sum of the second and sixth numbers is 24. What is the fourth number?</p> |

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| | <p>a) 10 b) 14 c) 12 d) 24</p> <p>Ans(c)</p> |
| <p>Number systems, Decimal Fractions & simplifications</p> | |
| <p>Q.</p> | <p>$9 - 1\frac{2}{9}$ of $3\frac{3}{11} \div 5\frac{1}{7}$ of $\frac{7}{9} = ?$</p> <p>a) 5/4 b) 8 c) 9 d) 10/5</p> <p>Ans. (b)</p> |
| <p>Q.</p> | <p>The smallest number, which should be added to 756896 so as to obtain a multiple of 11, is</p> <p>a) 2 b) 1 c) 4 d) 3</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>By which least number should 5000 be divided so that it becomes a perfect square?</p> <p>a) 3 a) 2 b) 4 c) 6</p> |

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| | Ans(b) |
| Q. | <p>The value of $4.5 - (3.2 \div 0.8 \times 5) + 3 \times 4 + 6$ is:</p> <p>a) 13 b) 14 c) -13.5 d) -14.5</p> |
| | Ans(c) |
| Q. | <p>A boy was asked to multiply a number by 25. Instead, he multiplied the number by 52 and got the answer 324 more than the correct answer. The number to be multiplied was</p> <p>a) 12 b) 15 c) 25 d) 32</p> |
| | Ans(a) |
| Q. | <p>If $a/b = 3/4$ and $8a + 5b = 22$, then the value of 'a' is</p> <p>a) 1 b) $3/2$ c) $1/2$ d) $3/4$</p> |
| | Ans(a) |
| Q. | <p>A vessel, full of water, weighs 27.5 kg. when the vessel is $1/4$ full, it weighs 12.26 kg. Find the weight of empty vessel?</p> <p>a) 4.18 kg b) 7.18 kg c) 8.08 kg</p> |

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| | <p>d) None of these</p> <p>Ans(b)</p> |
| <p>Q.</p> | <p>The sum of two numbers is equal to thrice their difference. If the smaller of the numbers is 10 find the other number</p> <p>a) 20 b) 30 c) 40 d) None of these</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>If 381A is divisible by 9, what is the least natural number A?</p> <p>a) 6 b) 1 c) 9 d) 4</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>If the numerator and the denominator of a proper fraction are increased by the same quantity, then the resulting fraction is :</p> <p>a) always greater than the original fraction b) always less than the original fraction c) always equal to the original fraction d) None of these</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>One-fourth of Nikhil's money is equal to one-sixth of Yogesh's money. If both together have Rs 600, what is the difference between their amounts?</p> <p>a) RS. 120 b) RS. 240</p> |

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| | <p>c) RS, 200 d) RS. 160</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>Out of a group of swans, $7/2$ times the square root of the number is playing on the shore of the pond. The two remaining are inside the pond. What is the total number of swans?</p> <p>a) 10 b) 14 c) 12 d) 16</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>What is the missing figure in the expression given below ?</p> $\frac{16}{7} \times \frac{16}{7} - \frac{*}{7} \times \frac{9}{7} + \frac{9}{7} \times \frac{9}{7} = 1$ <p>a) 1 b) 7 c) 4.57 d) 32</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>$2.002 + 7.9 \{(2.8 - 6.3(3.6 - 1.5) + 15.6)\} = ?$</p> <p>a) 2.002 b) 4.2848 c) 40.843 d) 42.845</p> <p>Ans(d)</p> |

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| <p>Q.</p> | <p>What is the square root of $\frac{0.324 \times 0.64 \times 129.6}{0.729 \times 1.024 \times 36}$?</p> <p>a) 4 b) 3 c) 2 d) 1</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>Minimum difference between x and y such that $1x71y61$ is exactly divisible by 11 is</p> <p>a) 2 b) 3 c) 1 d) 0</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>There is one number which is formed by writing one digit 6 times (e.g. 111111, 444444 etc.). Such a number is always divisible by</p> <p>a) 7 and 11 b) 11 and 13 c) 7, 11 and 13 d) None of these</p> <p>Ans(c)</p> |
| <p>Q.</p> | <p>If a, a + 2 and a + 4 are prime numbers, then the number of possible solutions for a is</p> <p>a) 1 b) 2 c) 3 d) More than 3</p> |

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| | Ans(a) |
| Q. | <p>$7^{10} - 5^{10}$ is divisible by</p> <p>a) 10 b) 12 c) 5 d) 11</p> <p>Ans(b)</p> |
| Q. | <p>The difference between the squares of two consecutive odd integers is always divisible by</p> <p>a) 3 b) 7 c) 8 d) 16</p> <p>Ans(c)</p> |
| Q. | <p>Which one of the following is the least?</p> <p>$\sqrt{3}$, $\sqrt[3]{2}$, $\sqrt{2}$ and $\sqrt[3]{4}$</p> <p>a) $\sqrt{3}$ b) $\sqrt[3]{2}$ c) $\sqrt{2}$ d) $\sqrt[3]{4}$</p> |

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| | <p>Ans(b)</p> |
| <p>Q.</p> | <p>When $\left(\frac{1}{2} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6}\right)$ is divided by $\left(\frac{2}{5} - \frac{5}{9} + \frac{3}{5} - \frac{7}{18}\right)$ the result is :</p> <p>a) $2\frac{1}{18}$ b) $3\frac{1}{6}$ c) $3\frac{3}{10}$ d) $5\frac{1}{10}$</p> <p>Ans(d)</p> |
| <p>Q.</p> | <p>The smallest positive integer which when multiplied by 392, gives a perfect square is</p> <p>a) 2 b) 3 c) 5 d) 7</p> <p>Ans(a)</p> |
| <p>Q.</p> | <p>What is the least fraction which, when added to or subtracted from $\frac{29}{12} + \frac{15}{16}$ will make the result a whole number?</p> <p>a) $21/38$</p> |

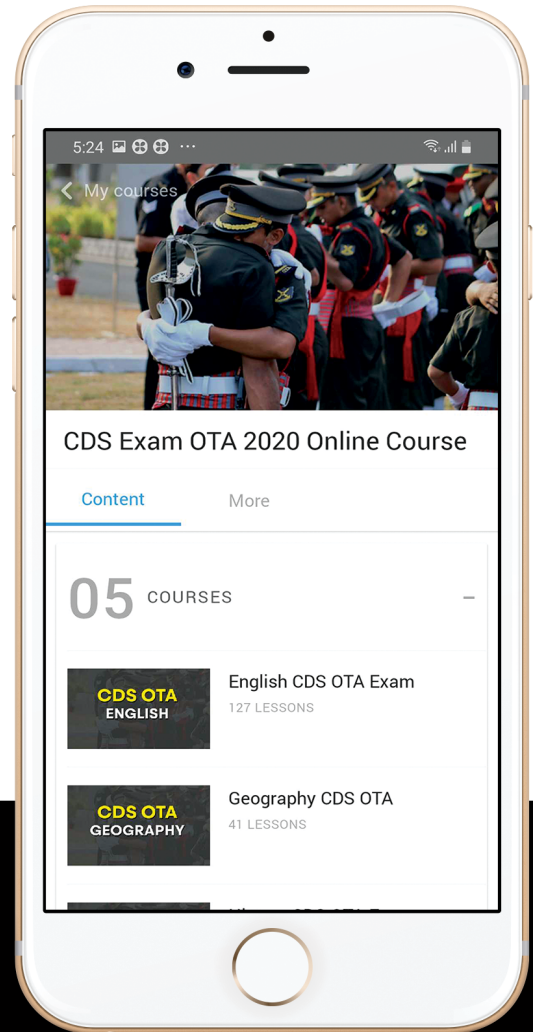
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| | <p>b) $31/38$ c) $31/48$ d) $17/48$</p> <p>Ans(d)</p> |
| Q. | <p>Two numbers are such as that square of one is 224 less than 8 times the square of the other. If the numbers are in the ratio of 3 : 4, they are:</p> <p>a) 12, 16 b) 6, 8 c) 9, 12 d) None of these</p> <p>Ans(b)</p> |



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