Practice Questions for Average

|  |  |
| --- | --- |
| Question | The average weight of a group of 30 friends increases by 1 kg when the weight of their football coach was added. If average weight of the group after including the weight of the football coach is 31kgs, what is the weight of their football coach in kgs? |
| Option A | 31 kgs |
| Option B | 61 kgs |
| Option C | 60 kgs |
| Option D | 62 kgs |
| Answer | Option B |
| Explanation | The new average weight of the group after including the football coach = 31  As the new average is 1kg more than the old average, old average without including the football coach = 30 kgs.  The total weight of the 30 friends without including the football coach = 30 \* 30 = 900.  After including the football coach, the number people in the group increases to 31 and the average weight of the group increases by 1kg.  Therefore, the total weight of the group after including the weight of the football coach = 31 \* 31 = 961 kgs.  Therefore, the weight of the football coach = 961 - 900 = 61 kgs. |

|  |  |
| --- | --- |
| Question | The average wages of a worker during a fortnight comprising 15 consecutive working days was $ 90 per day. During the first 7 days, his average wages was $ 87/day and the average wages during the last 7 days was $ 92 /day. What was his wage on the 8th day? |
| Option A | $ 83 |
| Option B | $ 92 |
| Option C | $ 90 |
| Option D | $ 97 |
| Answer | Option D |
| Explanation | The total wages earned during the 15 days that the worker worked = 15 \* 90 = $ 1350.  The total wages earned during the first 7 days = 7 \* 87 = $ 609.  The total wages earned during the last 7 days = 7 \* 92 = $ 644.  Total wages earned during the 15 days = wages during first 7 days + wage on 8th day + wages during the last 7 days.  => 1350 = 609 + wage on 8th day + 644  => wage on 8th day = 1350 - 609 - 644 = $ 97. |

|  |  |
| --- | --- |
| Question | The average of 5 quantities is 6. The average of 3 of them is 8. What is the average of the remaining two numbers? |
| Option A | 4 |
| Option B | 5 |
| Option C | 3 |
| Option D | 4.5 |
| Answer | Option C |
| Explanation | The average of 5 quantities is 6.  Therefore, the sum of the 5 quantities is 5 \* 6 = 30.  The average of three of these 5 quantities is 8.  Therefore, the sum of these three quantities = 3 \* 8 = 24  The sum of the remaining two quantities = 30 - 24 = 6.  Average of these two quantities = 6/2 = 3 |

|  |  |
| --- | --- |
| Question | The average age of a group of 10 students was 20. The average age increased by 2 years when two new students joined the group. What is the average age of the two new students who joined the group? |
| Option A | 22 years |
| Option B | 30 years |
| Option C | 40 years |
| Option D | 32 years |
| Answer | Option D |
| Explanation | The average age of a group of 10 students is 20.  Therefore, the sum of the ages of all 10 of them = 10 \* 20 = 200  When two new students join the group, the average age increases by 2. New average = 22  Now, there are 12 students.  Therefore, the sum of the ages of all 12 of them = 12 \* 22 = 264  Therefore, the sum of the ages of the two new students who joined = 264 - 200 = 64  And the average age of each of the two new students = 64/2 = 32 years. |

|  |  |
| --- | --- |
| Question | A grocer has a sale of Rs. 6435, Rs. 6927, Rs. 6855, Rs. 7230 and Rs. 6562 for 5 consecutive months. How much sale must he have in the sixth month so that he gets an average sale of Rs. 6500? |
| Option A | Rs. 4991 |
| Option B | Rs. 5991 |
| Option C | Rs. 6001 |
| Option D | Rs. 6991 |
| Answer | Option A |
| Explanation | Total sale for 5 months = Rs. (6435 + 6927 + 6855 + 7230 + 6562) = Rs. 34009.  Required sale = Rs. [ (6500 x 6) - 34009 ]  = Rs. (39000 - 34009)  = Rs. 4991. |

|  |  |
| --- | --- |
| Question | Distance between two stations A and B is 778 km. A train covers the journey from A to B at 84 km per hour and returns back to A with a uniform speed of 56km per hour. Find the average speed of the train during the whole journey? |
| Option A | 67.0 km /hr |
| Option B | 67.2 km /hr |
| Option C | 69.0 km /hr |
| Option D | 69.2 km /hr |
| Answer | Option B |
| Explanation | Required average speed =(2xy / x+y)km/hr  = 2 x 84 x 56 /(84 + 56)  = (2 x 84 x 85 /140)  = 67.2 km/hr. |

|  |  |
| --- | --- |
| Question | The average of a non zero number and its square is 5 times the number. The number is |
| Option A | 9 |
| Option B | 17 |
| Option C | 29 |
| Option D | 295 |
| Answer | Option A |
| Explanation | Let the number be x. Then,  x + x2 / 2 = 5x  ‹=› x2 – 9x = 0  ‹=› x (x - 9) = 0  ‹=› x = 0 or x = 9.  So, the number is 9. |

|  |  |
| --- | --- |
| Question | The average salary of all the workers in a workshop is Rs. 8000. The average salary of 7 technicians is Rs. 12000 and the average salary of the rest is Rs. 6000. The total number of workers in the workshop is |
| Option A | 20 |
| Option B | 21 |
| Option C | 22 |
| Option D | 23 |
| Answer | Option B |
| Explanation | **Sol.** Let the total number of workers be x. Then, 8000x = (12000 × 7) + 6000 ( x – 7) ‹=› 2000x = 42000 ‹=› x = 21. |

|  |  |
| --- | --- |
| Question | The average weight of 16 boys in a class is 50.25 kg and that of the remaining 8 boys is 45.15 kg. Find the average weights of all the boys in the class. |
| Option A | 47.55 kg |
| Option B | 48 kg |
| Option C | 48.55 kg |
| Option D | 49.25 kg |
| Answer | Option **C** |
| Explanation | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Required average | |  |  |  |  | | --- | --- | --- | --- | | = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 50.25 x 16 + 45.15 x 8 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 16 + 8 | | |  | |  |  |  |  | | --- | --- | --- | --- | | = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 804 + 361.20 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 24 | | |  | |  |  | | --- | --- | | = | 1165.20 | | 24 | | |  | = 48.55 | |

|  |  |
| --- | --- |
| Question | If the average of 5 positive integers is 40 and the difference between the largest and the smallest of these 5 numbers is 10, what is the maximum value possible for the largest of these 5 integers? |
| Option A | 50 |
| Option B | 52 |
| Option C | 49 |
| Option D | 48 |
| Answer | Option D |
| Explanation | The average of 5 positive integers is 40. i.e., the sum of these integers = 5\*40 = 200  Let the least of these 5 numbers be x.  Then the largest of these 5 numbers will be x + 10.  If we have to maximize the largest of these numbers, we have to minimize all the other numbers.  That is 4 of these numbers are all at the least value possible = x.  So, x + x + x + x + x + 10 = 200  Or x = 38.  So, the largest of these 5 integers is 48. |

|  |  |
| --- | --- |
| Question | The age of five numbers is 27. If one number is excluded, the average becomes 25. The excluded number is |
| Option A | 25 |
| Option B | 27 |
| Option C | 30 |
| Option D | 35 |
| Answer | Option D |
| Explanation | Sol.  Therefore excluded number  = (27 × 5) - ( 25 × 4)  = 135 – 100  = 35. |

|  |  |
| --- | --- |
| Question | The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero? |
| Option A | 0 |
| Option B | 1 |
| Option C | 10 |
| Option D | 19 |
| Answer | Option **D** |
| Explanation | Average of 20 numbers = 0.  http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Sum of 20 numbers (0 x 20) = 0.  It is quite possible that 19 of these numbers may be positive and if their sum is *a*then 20th number is (-*a*). |

|  |  |
| --- | --- |
| Question | The average weight of 8 persons increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What might be the weight of the new person |
| Option A | 76 kg |
| Option B | 76.5 kg |
| Option C | 85 kg |
| Option D | 90 kg |
| Answer | Option C |
| Explanation | Sol.  Total weight increased  = (8 × 2.5) kg  = 20 kg.  Weight of new person  = (65 + 20) kg  = 85 kg. |

|  |  |
| --- | --- |
| Question | If the average marks of three batches of 55, 60 and 45 students respectively is 50, 55, 60, then the average marks of all the students is |
| Option A | 53.33 |
| Option B | 54.68 |
| Option C | 55 |
| Option D | None of these |
| Answer | Option **B** |
| Explanation | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Required average | |  |  |  |  | | --- | --- | --- | --- | | = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 55 x 50 + 60 x 55 + 45 x 60 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 55 + 60 + 45 | | |  | |  |  |  |  | | --- | --- | --- | --- | | = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 2750 + 3300 + 2700 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 160 | | |  | |  |  | | --- | --- | | = | 8750 | | 160 | | |  | = 54.68 | |

|  |  |
| --- | --- |
| Question | The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is: |
| Option A | 35 years |
| Option B | 40 years |
| Option C | 50 years |
| Option D | None of these |
| Answer | Option **B** |
| Explanation | Sum of the present ages of husband, wife and child = (27 x 3 + 3 x 3) years = 90 years.  Sum of the present ages of wife and child = (20 x 2 + 5 x 2) years = 50 years.  http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Husband's present age = (90 - 50) years = 40 years. |