**Test Review : View answers and explanation for this test.**

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| 1. | The least number which when divided by 5, 6 , 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder, is: |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 1677 | | |  | B. | |  | | --- | | 1683 | | |  | C. | |  | | --- | | 2523 | | |  | D. | |  | | --- | | 3363 | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:  L.C.M. of 5, 6, 7, 8 = 840.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required number is of the form 840*k + 3*  Least value of *k* for which (840*k* + 3) is divisible by 9 is *k* = 2.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required number = (840 x 2 + 3) = 1683.  Learn more problems on : [Problems on H.C.F and L.C.M](https://www.indiabix.com/aptitude/problems-on-hcf-and-lcm/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-hcf-and-lcm/discussion-168) |

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| 2. | |  |  |  |  |  | | --- | --- | --- | --- | --- | | If | 144 | = | 14.4 | , then the value of *x* is: | | 0.144 | *x* | |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 0.0144 | | |  | B. | |  | | --- | | 1.44 | | |  | C. | |  | | --- | | 14.4 | | |  | D. | |  | | --- | | 144 | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **A**  Explanation:   |  |  |  | | --- | --- | --- | | 144 | = | 14.4 | | 0.144 | *x* |  |  |  |  |  | | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | 144 x 1000 | = | 14.4 | | 144 | *x* |  |  |  |  | | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x =* | 14.4 | = 0.0144 | | 1000 |   Learn more problems on : [Decimal Fraction](https://www.indiabix.com/aptitude/decimal-fraction/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/decimal-fraction/discussion-184) |

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| 3. | 617 + 6.017 + 0.617 + 6.0017 = ? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 6.2963 | | |  | B. | |  | | --- | | 62.965 | | |  | C. | |  | | --- | | 629.6357 | | |  | D. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:  617.00  6.017  0.617  + 6.0017  --------  629.6357  ---------  Learn more problems on : [Decimal Fraction](https://www.indiabix.com/aptitude/decimal-fraction/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/decimal-fraction/discussion-176) |

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| 4. | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 3 - | 1 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 2 | simplifies to: | | 3 | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | A. | |  |  |  | | --- | --- | --- | | |  | | --- | | 3 | | 4 | | | |  | B. | |  |  |  | | --- | --- | --- | | |  | | --- | | 4 | | 3 | | | |  | C. | |  |  |  | | --- | --- | --- | | |  | | --- | | 4 | | 3 | | | |  | D. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 3 - | 1 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 2 | = (3)2 + | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 2 | - 2 x 3 x | 1 | | 3 | 3 | 3 |  |  |  |  | | --- | --- | --- | | = 3 + | 1 | - 2 | | 3 |  |  |  | | --- | --- | | = 1 + | 1 | | 3 |  |  |  | | --- | --- | | = | 4 | | 3 |   Learn more problems on : [Square Root and Cube Root](https://www.indiabix.com/aptitude/square-root-and-cube-root/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/square-root-and-cube-root/discussion-224) |

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| 5. | The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. What is the average age of the team? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 23 years | | |  | B. | |  | | --- | | 24 years | | |  | C. | |  | | --- | | 25 years | | |  | D. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **A**  Explanation:  Let the average age of the whole team by *x* years.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif 11*x* - (26 + 29) = 9(*x* -1)  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 11*x* - 9*x* = 46  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 2*x* = 46  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 23.  So, average age of the team is 23 years.  Learn more problems on : [Average](https://www.indiabix.com/aptitude/average/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/average/discussion-243) |

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| 6. | The present ages of three persons in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years). |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 8, 20, 28 | | |  | B. | |  | | --- | | 16, 28, 36 | | |  | C. | |  | | --- | | 20, 35, 45 | | |  | D. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:  Let their present ages be 4*x*, 7*x* and 9*x* years respectively.  Then, (4*x* - 8) + (7*x* - 8) + (9*x* - 8) = 56  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 20*x* = 80  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 4.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Their present ages are 4*x* = 16 years, 7*x* = 28 years and 9*x* = 36 years respectively.  Learn more problems on : [Problems on Ages](https://www.indiabix.com/aptitude/problems-on-ages/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-ages/discussion-275) |

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| **Direction (for Q.No. 7):**  Each of the questions given below consists of a statement and / or a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement(s) is / are sufficient to answer the given question. Read the both statements and   * Give answer (A) if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question. * Give answer (B) if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question. * Give answer (C) if the data either in Statement I or in Statement II alone are sufficient to answer the question. * Give answer (D) if the data even in both Statements I and II together are not sufficient to answer the question. * Give answer(E) if the data in both Statements I and II together are necessary to answer the question. | |
| 7. | |  |  | | --- | --- | | Divya is twice as old as Shruti. What is the difference in their ages? | | | I. | Five years hence, the ratio of their ages would be 9 : 5. | | II. | Ten years back, the ratio of their ages was 3 : 1. | |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | I alone sufficient while II alone not sufficient to answer | | |  | B. | |  | | --- | | II alone sufficient while I alone not sufficient to answer | | |  | C. | |  | | --- | | Either I or II alone sufficient to answer | | |  | D. | |  | | --- | | Both I and II are not sufficient to answer | | |  | E. | |  | | --- | | Both I and II are necessary to answer | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:  Let Divya's present age be D years and Shruti's present age b S years  Then, D = 2 x S    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    D - 2S = 0 ....(i)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | I. | D + 5 | = | 9 | ....(ii) | | S + 5 | 5 |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | II. | D - 10 | = | 3 | ....(iii) | | S - 10 | 1 |   From (ii), we get : 5D + 25 = 9S + 45    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    5D - 9S = 20 ....(iv)  From (iii), we get : D - 10 = 3S - 30    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    D - 3S = -20 ....(v)  Thus, from (i) and (ii), we get the answer.  Also, from (i) and (iii), we get the answer.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif I alone as well as II alone give the answer. Hence, the correct answer is (C).  Learn more problems on : [Problems on Ages](https://www.indiabix.com/aptitude/problems-on-ages/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-ages/discussion-288) |

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| 8. | (256)0.16 x (256)0.09 = ? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 4 | | |  | B. | |  | | --- | | 16 | | |  | C. | |  | | --- | | 64 | | |  | D. | |  | | --- | | 256.25 | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **A**  Explanation:  (256)0.16 x (256)0.09 = (256)(0.16 + 0.09)     = (256)0.25     = (256)(25/100)     = (256)(1/4)     = (44)(1/4)     = 44(1/4)     = 41     = 4  Learn more problems on : [Surds and Indices](https://www.indiabix.com/aptitude/surds-and-indices/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/surds-and-indices/discussion-295) |

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| 9. | Three partners shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 5 : 7 : 8 | | |  | B. | |  | | --- | | 20 : 49 : 64 | | |  | C. | |  | | --- | | 38 : 28 : 21 | | |  | D. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:  Let their investments be Rs. *x* for 14 months, Rs. *y* for 8 months and Rs. *z* for 7 months respectively.  Then, 14*x* : 8*y* : 7*z* = 5 : 7 : 8.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Now, | 14*x* | = | 5 | https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    98*x* = 40*y*    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    *y* = | 49 | *x* | | 8*y* | 7 | 20 |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | And, | 14*x* | = | 5 | https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    112*x* = 35*z*    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    *z* = | 112 | *x* = | 16 | *x*. | | 7*z* | 8 | 35 | 5 |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif *x* : *y* : *z* = *x* : | 49 | *x* | : | 16 | *x* | = 20 : 49 : 64. | | 20 | 5 |   Learn more problems on : [Partnership](https://www.indiabix.com/aptitude/partnership/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/partnership/discussion-374) |

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| 10. | A starts business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2 : 3. What is B's contribution in the capital? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | Rs. 7500 | | |  | B. | |  | | --- | | Rs. 8000 | | |  | C. | |  | | --- | | Rs. 8500 | | |  | D. | |  | | --- | | Rs. 9000 | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **D**  Explanation:  Let B's capital be Rs. *x*.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Then, | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 3500 x 12 | = | 2 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 7*x* | 3 |   https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 14*x* = 126000  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 9000.  Learn more problems on : [Partnership](https://www.indiabix.com/aptitude/partnership/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/partnership/discussion-372) |

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| **Direction (for Q.No. 11):**  Each of the questions given below consists of a statement and / or a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement(s) is / are sufficient to answer the given question. Read the both statements and   * Give answer (A) if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question. * Give answer (B) if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question. * Give answer (C) if the data either in Statement I or in Statement II alone are sufficient to answer the question. * Give answer (D) if the data even in both Statements I and II together are not sufficient to answer the question. * Give answer(E) if the data in both Statements I and II together are necessary to answer the question. | |
| 11. | |  |  | | --- | --- | | Ravi, Gagan and Nitin are running a business firm in partnership. What is Gagan's share in the profit earned by them? | | | I. | Ravi, Gagan and Nitin invested the amounts in the ratio of 2 : 4 : 7. | | II. | Nitin's share in the profit is Rs. 8750. | |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | I alone sufficient while II alone not sufficient to answer | | |  | B. | |  | | --- | | II alone sufficient while I alone not sufficient to answer | | |  | C. | |  | | --- | | Either I or II alone sufficient to answer | | |  | D. | |  | | --- | | Both I and II are not sufficient to answer | | |  | E. | |  | | --- | | Both I and II are necessary to answer | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **E**  Explanation:  Let us name Ravi, Gagan and Nitin by R, G and N respectively.  **I.** R : G : N = 2 : 4 : 7.  **II.** N = 8750..  From I and II, we get:  When N = 7, then G = 4.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | When N = 8750, then G = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 4 | x 8750 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = 5000. | | 7 |   Thus, both I and II are needed to get the answer.  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Correct answer is (E).  Learn more problems on : [Partnership](https://www.indiabix.com/aptitude/partnership/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/partnership/discussion-376) |

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| 12. | A wheel that has 6 cogs is meshed with a larger wheel of 14 cogs. When the smaller wheel has made 21 revolutions, then the number of revolutions mad by the larger wheel is: |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 4 | | |  | B. | |  | | --- | | 9 | | |  | C. | |  | | --- | | 12 | | |  | D. | |  | | --- | | 49 | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:  Let the required number of revolutions made by larger wheel be *x*.  Then, *More cogs, Less revolutions (Indirect Proportion)*  https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif 14 : 6 **::** 21 : *x*    https://www.indiabix.com/_files/images/aptitude/1-sym-bim.gif    14 x *x* = 6 x 21   |  |  | | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = | 6 x 21 | | 14 |   https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 9.  Learn more problems on : [Chain Rule](https://www.indiabix.com/aptitude/chain-rule/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/chain-rule/discussion-388) |

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| 13. | 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 3 | | |  | B. | |  | | --- | | 5 | | |  | C. | |  | | --- | | 7 | | |  | D. | |  | | --- | | Cannot be determined | | |  | E. | |  | | --- | | None of these | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:   |  |  | | --- | --- | | 1 woman's 1 day's work = | 1 | | 70 |  |  |  | | --- | --- | | 1 child's 1 day's work = | 1 | | 140 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | (5 women + 10 children)'s day's work = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 5 | + | 10 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | + | 1 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = | 1 | | 70 | 140 | 14 | 14 | 7 |   https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif 5 women and 10 children will complete the work in 7 days.  Learn more problems on : [Time and Work](https://www.indiabix.com/aptitude/time-and-work/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/time-and-work/discussion-408) |

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| 14. | Two pipes can fill a tank in 20 and 24 minutes respectively and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is: |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 60 gallons | | |  | B. | |  | | --- | | 100 gallons | | |  | C. | |  | | --- | | 120 gallons | | |  | D. | |  | | --- | | 180 gallons | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | Work done by the waste pipe in 1 minute = | 1 | - | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | + | 1 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 15 | 20 | 24 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | - | 11 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | | 15 | 120 |  |  |  |  | | --- | --- | --- | | = - | 1 | .    [-ve sign means emptying] | | 40 |  |  |  |  | | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Volume of | 1 | part = 3 gallons. | | 40 |   Volume of whole = (3 x 40) gallons = 120 gallons.  Learn more problems on : [Pipes and Cistern](https://www.indiabix.com/aptitude/pipes-and-cistern/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/pipes-and-cistern/discussion-428) |

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| 15. | A train 240 m long passes a pole in 24 seconds. How long will it take to pass a platform 650 m long? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 65 sec | | |  | B. | |  | | --- | | 89 sec | | |  | C. | |  | | --- | | 100 sec | | |  | D. | |  | | --- | | 150 sec | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:   |  |  |  |  | | --- | --- | --- | --- | | Speed = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 240 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifm/sec = 10 m/sec. | | 24 |  |  |  |  |  | | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required time = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 240 + 650 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifsec = 89 sec. | | 10 |   Learn more problems on : [Problems on Trains](https://www.indiabix.com/aptitude/problems-on-trains/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-trains/discussion-455) |

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| 16. | A jogger running at 9 kmph alongside a railway track in 240 metres ahead of the engine of a 120 metres long train running at 45 kmph in the same direction. In how much time will the train pass the jogger? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 3.6 sec | | |  | B. | |  | | --- | | 18 sec | | |  | C. | |  | | --- | | 36 sec | | |  | D. | |  | | --- | | 72 sec | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:  Speed of train relative to jogger = (45 - 9) km/hr = 36 km/hr.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 36 x | 5 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifm/sec | | 18 |      = 10 m/sec.  Distance to be covered = (240 + 120) m = 360 m.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Time taken = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifsec | = 36 sec. | | 10 |   Learn more problems on : [Problems on Trains](https://www.indiabix.com/aptitude/problems-on-trains/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-trains/discussion-459) |

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| 17. | Two goods train each 500 m long, are running in opposite directions on parallel tracks. Their speeds are 45 km/hr and 30 km/hr respectively. Find the time taken by the slower train to pass the driver of the faster one. |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 12 sec | | |  | B. | |  | | --- | | 24 sec | | |  | C. | |  | | --- | | 48 sec | | |  | D. | |  | | --- | | 60 sec | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:   |  |  | | --- | --- | | Relative speed = | = (45 + 30) km/hr | |  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | = | ( | 75 x | 5 | ( | m/sec | | 18 | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | | = | ( | 125 | ( | m/sec. | | 6 | |   We have to find the time taken by the slower train to pass the DRIVER of the faster train and not the complete train.  So, distance covered = Length of the slower train.  Therefore, Distance covered = 500 m.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Therefore Required time = | ( | 500 x | 6 | ( | = 24 sec. | | 125 |   Learn more problems on : [Problems on Trains](https://www.indiabix.com/aptitude/problems-on-trains/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/problems-on-trains/discussion-804) |

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| 18. | A boatman goes 2 km against the current of the stream in 1 hour and goes 1 km along the current in 10 minutes. How long will it take to go 5 km in stationary water? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 40 minutes | | |  | B. | |  | | --- | | 1 hour | | |  | C. | |  | | --- | | 1 hr 15 min | | |  | D. | |  | | --- | | 1 hr 30 min | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **C**  Explanation:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Rate downstream = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | x 60 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifkm/hr = 6 km/hr. | | 10 |   Rate upstream = 2 km/hr.   |  |  |  | | --- | --- | --- | | Speed in still water = | 1 | (6 + 2) km/hr = 4 km/hr. | | 2 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required time = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 5 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gifhrs = 1 | 1 | hrs = 1 hr 15 min. | | 4 | 4 |   Learn more problems on : [Boats and Streams](https://www.indiabix.com/aptitude/boats-and-streams/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/boats-and-streams/discussion-478) |

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| 19. | 8 litres are drawn from a cask full of wine and is then filled with water. This operation is performed three more times. The ratio of the quantity of wine now left in cask to that of water is 16 : 65. How much wine did the cask hold originally? |
| |  |  |  |  | | --- | --- | --- | --- | |  | A. | |  | | --- | | 18 litres | | |  | B. | |  | | --- | | 24 litres | | |  | C. | |  | | --- | | 32 litres | | |  | D. | |  | | --- | | 42 litres | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **B**  Explanation:  Let the quantity of the wine in the cask originally be *x* litres.   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Then, quantity of wine left in cask after 4 operations = | https://www.indiabix.com/_files/images/aptitude/1-sym-obracket-h1.gif | *x* | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 - | 8 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 4 | https://www.indiabix.com/_files/images/aptitude/1-sym-cbracket-h1.gif litres. | | *x* |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | *x*(1 - (8/*x*))4 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = | 16 | | *x* | 81 |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 - | 8 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 4 | = | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 2 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | 4 | | *x* | 3 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | https://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | *x* - 8 | https://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = | 2 | | *x* | 3 |   https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 3*x* - 24 = 2*x*  https://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 24.  Learn more problems on : [Alligation or Mixture](https://www.indiabix.com/aptitude/alligation-or-mixture/)  Discuss about this problem : [Discuss in Forum](https://www.indiabix.com/aptitude/alligation-or-mixture/discussion-507) |

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| 20. | A bag contains 2 red, 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue? |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | A. | |  |  |  | | --- | --- | --- | | |  | | --- | | 10 | | 21 | | | |  | B. | |  |  |  | | --- | --- | --- | | |  | | --- | | 11 | | 21 | | | |  | C. | |  |  |  | | --- | --- | --- | | |  | | --- | | 2 | | 7 | | | |  | D. | |  |  |  | | --- | --- | --- | | |  | | --- | | 5 | | 7 | | |   Your Answer: Option **(Not Answered)**  Correct Answer: Option **A**  Explanation:  Total number of balls = (2 + 3 + 2) = 7.  Let S be the sample space.   |  |  | | --- | --- | | Then, *n*(S) | = Number of ways of drawing 2 balls out of 7 | |  | = 7C2 ` | |  | |  |  | | --- | --- | | = | (7 x 6) | | (2 x 1) | | |  | = 21. |   Let E = Event of drawing 2 balls, none of which is blue.   |  |  | | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif *n*(E) | = Number of ways of drawing 2 balls out of (2 + 3) balls. | |  | = 5C2 | |  | |  |  | | --- | --- | | = | (5 x 4) | | (2 x 1) | | |  | = 10. |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | https://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif P(E) = | *n*(E) | = | 10 | . | | *n*(S) | 21 |   Learn more problems on : [Probability](https://www.indiabix.com/aptitude/probability/) |