Practice Questions for Percentages

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| Question | A batsman scored 110 runs which included 3 boundaries and 8 sixes. What percent of his total score did he make by running between the wickets? |
| Option A | 45% |
| Option B | 45% |
| Option C | 55% |
| Option D | 54% |
| Answer | Option B |
| Explanation | Number of runs made by running = 110 - (3 x 4 + 8 x 6)  = 110 - (60)  = 50.  So required % is ( X 100)% = 45%   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  | |

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| Question | Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are: |
| Option A | 39, 30 |
| Option B | 41, 32 |
| Option C | 42, 33 |
| Option D | 43, 34 |
| Answer | Option C |
| Explanation | Let their marks be (*x* + 9) and *x*.   |  |  |  | | --- | --- | --- | | Then, *x* + 9 = | 56 | (*x* + 9 + *x*) | | 100 |   http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 25(*x* + 9) = 14(2*x* + 9)  http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif 3*x* = 99  http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 33  So, their marks are 42 and 33. |

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| Question | What percentage of numbers from 1 to 70 have 1 or 9 in the unit's digit? |
| Option A | 1 |
| Option B | 14 |
| Option C | 20 |
| Option D | 21 |
| Answer | Option C |
| Explanation | Clearly, the numbers which have 1 or 9 in the unit's digit, have squares that end in the digit 1. Such numbers from 1 to 70 are 1, 9, 11, 19, 21, 29, 31, 39, 41, 49, 51, 59, 61, 69.  Number of such number =14   |  |  |  |  |  | | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required percentage = | ( X 100)% = 20% |  |  |  | |  | |

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| Question | In a certain school, 20% of students are below 8 years of age. The number of students above 8 years of age is http://www.indiabix.com/_files/images/aptitude/1-div-2by3.gif of the number of students of 8 years of age which is 48. What is the total number of students in the school? |
| Option A | 72 |
| Option B | 80 |
| Option C | 120 |
| Option D | 100 |
| Answer | Option D |
| Explanation | Let the number of students be *x*. Then,  Number of students above 8 years of age = (100 - 20)% of *x* = 80% of *x*.   |  |  |  | | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif 80% of *x* = 48 + | 2 | of 48 | | 3 |  |  |  |  | | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | 80 | *x* = 80 | | 100 |   http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = 100. |

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| Question | |  |  |  |  |  | | --- | --- | --- | --- | --- | | A student multiplied a number by | 3 | instead of | 5 | . | | 5 | 3 |   What is the percentage error in the calculation? |
| Option A | 34% |
| Option B | 44% |
| Option C | 54% |
| Option D | 64% |
| Answer | Option D |
| Explanation | Let the number be *x*.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Then, error = | 5 | *x* - | 3 | *x* = | 16 | *x*. | | 3 | 5 | 15 |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Error% = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 16*x* | x | 3 | x 100 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif% = 64%. | | 15 | 5*x* | |

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| Question | In an election between two candidates, one got 55% of the total valid votes, 20% of the votes were invalid. If the total number of votes was 7500, the number of valid votes that the other candidate got, was: |
| Option A | 2700 |
| Option B | 2900 |
| Option C | 3000 |
| Option D | 3100 |
| Answer | Option A |
| Explanation | Number of valid votes = 80% of 7500 = 6000.  http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Valid votes polled by other candidate = 45% of 6000   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 45 | x 6000 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | = 2700. | | 100 | |

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| Question | Three candidates contested an election and received 1136, 7636 and 11628 votes respectively. What percentage of the total votes did the winning candidate get? |
| Option A | 57% |
| Option B | 60% |
| Option C | 65% |
| Option D | 90% |
| Answer | Option A |
| Explanation | Total number of votes polled = (1136 + 7636 + 11628) = 20400.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required percentage = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 11628 | x 100 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif% = 57%. | | 20400 | |

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| Question | Two tailors X and Y are paid a total of Rs. 550 per week by their employer. If X is paid 120 percent of the sum paid to Y, how much is Y paid per week? |
| Option A | 200 |
| Option B | 250 |
| Option C | 300 |
| Option D | 400 |
| Answer | Option B |
| Explanation | Let the sum paid to Y per week be Rs. *z*.  Then, *z* + 120% of *z* = 550.   |  |  |  | | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *z* + | 120 | *z* = 550 | | 100 |  |  |  |  | | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | 11 | *z* = 550 | | 5 |  |  |  |  |  | | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *z* = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 550 x 5 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif  = 250. | | 11 | |

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| Question | Gauri went to the stationers and bought things worth Rs. 25, out of which 30 paise went on sales tax on taxable purchases. If the tax rate was 6%, then what was the cost of the tax free items? |
| Option A | 15 |
| Option B | 15.70 |
| Option C | 19.70 |
| Option D | 20 |
| Answer | Option C |
| Explanation | Let the amount taxable purchases be Rs. *x*.   |  |  | | --- | --- | | Then, 6% of *x* = | 30 | | 100 |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif *x* = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 30 | x | 100 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif = 5. | | 100 | 6 |   http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Cost of tax free items = Rs. [25 - (5 + 0.30)] = Rs. 19.70 |

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| Question | 8 is 4% of a, and 4 is 8% of b. c equals b/a. What is the value of c? |
| Option A | 1/32 |
| Option B | 1/4 |
| Option C | 1 |
| Option D | 4 |
| Answer | Option B |
| Explanation | 4% of a is  = 4a/100  Since this equals 8, we have 4a/100 = 8  Solving for a yields a=8×(100/4) = 200  Also, 8% of b equals = 8b/100, and this equals 4  Hence, we have (8/100) X b = 4 Solving for b yields  b = 50. Now, c= b/a = 50/200 = 1/4 |

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| Question | If A = x% of y and B = y% of x, then which of the following is true? |
| Option A | A is smaller than B. |
| Option B | A is greater than B. |
| Option C | Relationship between A and B cannot be determined. |
| Option D | A and B are equal |
| Answer | Option D |
| Explanation | x% of y =(x/100) X y = (y/100) X x =y% of x ⇒ **A = B** So, (D) is correct. |

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| Question | If 50% of x equals the sum of y and 20, then what is the value of x – 2y? |
| Option A | 20 |
| Option B | 40 |
| Option C | 60 |
| Option D | 80 |
| Answer | Answer B |
| Explanation | 50% of x equals the sum of y and 20. Expressing this as an equation yields: (50/100) X x=y+20  x/2 = y+20 x=2y+40 x–2y=**40** |

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| Question | A vendor sells 60 percent of apples he had and throws away 15 percent of the remainder. Next day he sells 50 percent of the remainder and throws away the rest. What percent of his apples does the vendor throw? |
| Option A | 17 |
| Option B | 23 |
| Option C | 77 |
| Option D | None of these |
| Answer | Option B |
| Explanation | Let the number of apples be 100. On the first day he sells 60% apples i.e.,60 apples. Remaining apples =40. He throws 15% of the remaining i.e., 15% of 40 = 6.Now he has 40−6=34apples The next day he throws 50% of the remaining 34 apples i.e., 17. Therefore in total he throws6+17= **23 apples**. |

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| Question | When processing flower-nectar into honeybees' extract, a considerable amount of water gets reduced. How much flower-nectar must be processed to yield 1kg of honey, if nectar contains 50% water, and the honey obtained from this nectar contains 15% water? |
| Option A | 1.5 kgs |
| Option B | 1.7 kgs |
| Option C | 3.33 kgs |
| Option D | 1.8 kgs |
| Answer | Option B |
| Explanation | Flower-nectar contains 50% of non-water part.  In honey this non-water part constitutes 85% (100-15). Therefore 0.5 X Amount of flower-nectar = 0.85 X Amount of honey = 0.85 X 1 kg  Therefore amount of flower-nectar needed =[(0.85/0.5) X 1]kg  =**1.7 kgs** |

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| Question | 30% of the men are more than 25 years old and 80% of the men are less than or equal to 50 years old. 20% of all men play football. If 20% of the men above the age of 50 play football, what percentage of the football players are less than or equal to 50 years? |
| Option A | 25% |
| Option B | 20% |
| Option C | 30% |
| Option D | 70% |
| Answer | Option C |
| Explanation | 20% of the men are above the age of 50 years. 20% of these men play football. Therefore, 20% of 20% or 4% of the total men are football players above the age of 50 years.   20% of the men are football players. Therefore, 16% of the men are football players below the age of 50 years.  Therefore, the % of men who are football players and below the age of50=(16/20) X 100= **80%** |