Algebra Practice

# 30 Minutes – (Don’t skip any questions)

1. A certain number consists of digits whose sum is . If the order of digits is reversed, the new number is less than the original number. The original number is:

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1. A positive number when decreased by is equal to times the reciprocal of the number. The number is:

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1. If is a -digit number and is a number obtained by permuting (changing) the digits of in any manner, then is always divisible by:

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1. Four-fifth of a number is more than three-fourth of the number by . Find the number:

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1. A number whose fifth part increased by is equal to its fourth part diminished by , is:

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1. A number is as much greater than as it is less than . The number is:

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1. If a number is subtracted from the square of its half, the result is . The square root of the number is :

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1. On dividing into two parts such that the sum of their reciprocals is , we get the parts as:

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1. If is added to times a certain number, the result is less than times the number. The number is:

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1. If is a positive integer, and is the cube of an integer, then what is the least possible value of ?

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1. The denominator of a rational number is more than its numerator. If the numerator is increased by and the denominator is decreased by , we obtain . The rational number is:

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1. The number which when added to itself times gives as result, is:

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1. If a two digit number is times the sum of its digits, then the number formed by interchanging the digits is the sum of the digits multiplied by:

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1. If , and are real numbers such that and , then the statement which is true is:

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|  |  |  |  | 1. None |

1. If is a prime number, then the LCM of and is

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1. When simplified, the product equals

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|  |  |  |  | 1. None |

1. The integers are consecutive and and , which of the following could be the value of ?

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1. Each of charities in Bharat Estate has persons serving on its board of directors. If exactly persons serve on boards each and each pair of charities has persons in common, how many distinct persons serve on one or more boards?

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1. If and are positive integers such that is a factor of and is a multiple of , which of the following is NOT necessarily an integer?

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