Basic Math and Algebra Practice

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

1. How many of the positive divisors of 192 are also multiples of 6?

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1. If , for all positive numbers n. What is the value of ?

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1. If and are distinct factors of and if is an odd integer and is a prime integer, what is the greatest possible value of ?

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1. If and are integers, and if , what are the greatest and smallest values of ?

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1. Lines l and m intersect at a point to form four angles. If one of the angles formed is 15 times as large as an adjacent angle, what is the measure in degrees, of the smaller angle?

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1. A certain phone call costs 75 cents for the first three minutes plus 15 cents for each additional minute. If the call lasted x minutes and x is an integer greater than 3, which of the following expresses the cost of the call, in dollars?

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1. If , then x =

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1. Two hotdogs and a soda cost $ 3.25. If three hotdogs and a soda cost $ 4.50, what is the cost of two sodas?

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1. The ratio of x to y to z is . If , what is the value of ?

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| 1. 11 | 1. 33 | 1. 44 | 1. 66 | 1. 88 |

1. What was the initial weight, in pounds, of a person who gained pounds, then lost pounds, and now weighs pounds?

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1. The relation between and , if divides and divides , is:

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| 1. I only | 1. II only | 1. I and II only | 1. III only | 1. None |

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

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|  |  |  |  | 1. None |

1. How many prime numbers are of the form , where is a whole number such that ?

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| 1. 2 | 1. 3 | 1. 4 | 1. 5 | 1. 6 |

1. Two numbers are in the ratio . If each is increased by , the ratio becomes . The numbers are:

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| 1. 3 and 5 | 1. 15 and 25 | 1. 12 and 20 | 1. 30 and 50 | 1. 60 and 100 |

1. If , find

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| 1. 2034 | 1. 2304 | 1. 6444 | 1. 8596 | 1. 14448 |

1. The difference between the squares of two consecutive odd integers is . What is the larger of the integers?

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| 1. 37 | 1. 39 | 1. 41 | 1. 43 | 1. 45 |

1. How many positive 3-digit integers have an odd digit in both the ten’s and unit’s place?

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| 1. 25 | 1. 225 | 1. 250 | 1. 275 | 1. 350 |