Pair 1:
  input 1: 1010011010101001 (Decimal: 42,665)
    Worthless zeros: 0
    Efficient 8 bits: 10100110 (Decimal: 166)

  input 2: 0010010001000110 (Decimal: 9,286)
    Worthless zeros: 2
    Efficient 8 bits: 10010001 (Decimal: 145)

  Total Worthless zeros added to left: 2
  Product of Efficient 8-bit numbers: 0101111000000110 (Decimal: 24,070)
  Final 32-bit Approximate multiplication: 00010111100000011000000000000000
  Final 32-bit decimal Approximate multiplication: 394,362,880
  Exact multiplication: 396,187,190
  Error percent: 0.00460%

Pair 2:
  input 1: 1101000111010111 (Decimal: 53,719)
    Worthless zeros: 0
    Efficient 8 bits: 11010001 (Decimal: 209)

  input 2: 1100010111101010 (Decimal: 50,666)
    Worthless zeros: 0
    Efficient 8 bits: 11000101 (Decimal: 197)

  Total Worthless zeros added to left: 0
  Product of Efficient 8-bit numbers: 1010000011010101 (Decimal: 41,173)
  Final 32-bit Approximate multiplication: 10100000110101010000000000000000
  Final 32-bit decimal Approximate multiplication: 2,698,313,728
  Exact multiplication: 2,721,726,854
  Error percent: 0.00860%

Pair 3:
  input 1: 0110110000011111 (Decimal: 27,679)
    Worthless zeros: 1
    Efficient 8 bits: 11011000 (Decimal: 216)

  input 2: 1110110010111000 (Decimal: 60,600)
    Worthless zeros: 0
    Efficient 8 bits: 11101100 (Decimal: 236)

  Total Worthless zeros added to left: 1
  Product of Efficient 8-bit numbers: 1100011100100000 (Decimal: 50,976)
  Final 32-bit Approximate multiplication: 01100011100100000000000000000000
  Final 32-bit decimal Approximate multiplication: 1,670,381,568
  Exact multiplication: 1,677,347,400
  Error percent: 0.00415%

Pair 4:
  input 1: 0001010011000001 (Decimal: 5,313)
    Worthless zeros: 3
    Efficient 8 bits: 10100110 (Decimal: 166)

input 2: 1000011111010100 (Decimal: 34,772)
    Worthless zeros: 0
    Efficient 8 bits: 10000111 (Decimal: 135)

  Total Worthless zeros added to left: 3
  Product of Efficient 8-bit numbers: 0101011110001010 (Decimal: 22,410)
  Final 32-bit Approximate multiplication: 00001010111100010100000000000000
  Final 32-bit decimal Approximate multiplication: 183,582,720
  Exact multiplication: 184,743,636
  Error percent: 0.00628%

Pair 5:
  input 1: 0011000011001011 (Decimal: 12,491)
    Worthless zeros: 2
    Efficient 8 bits: 11000011 (Decimal: 195)

  input 2: 0110111101011110 (Decimal: 28,510)
    Worthless zeros: 1
    Efficient 8 bits: 11011110 (Decimal: 222)

  Total Worthless zeros added to left: 3
  Product of Efficient 8-bit numbers: 1010100100011010 (Decimal: 43,290)
  Final 32-bit Approximate multiplication: 00010101001000110100000000000000
  Final 32-bit decimal Approximate multiplication: 354,631,680
  Exact multiplication: 356,118,410
  Error percent: 0.00417%

Pair 6:
  input 1: 1001000010010010 (Decimal: 37,010)
    Worthless zeros: 0
    Efficient 8 bits: 10010000 (Decimal: 144)

  input 2: 1111111100011010 (Decimal: 65,306)
    Worthless zeros: 0
    Efficient 8 bits: 11111111 (Decimal: 255)

  Total Worthless zeros added to left: 0
  Product of Efficient 8-bit numbers: 1000111101110000 (Decimal: 36,720)
  Final 32-bit Approximate multiplication: 10001111011100000000000000000000
  Final 32-bit decimal Approximate multiplication: 2,406,481,920
  Exact multiplication: 2,416,975,060
  Error percent: 0.00434%

Pair 7:
  input 1: 0101101101101010 (Decimal: 23,402)
    Worthless zeros: 1
    Efficient 8 bits: 10110110 (Decimal: 182)

  input 2: 1101110111000010 (Decimal: 56,770)
    Worthless zeros: 0
    Efficient 8 bits: 11011101 (Decimal: 221)

  Total Worthless zeros added to left: 1

Product of Efficient 8-bit numbers: 1001110100011110 (Decimal: 40,222)
Final 32-bit Approximate multiplication: 01001110100011110000000000000000
Final 32-bit decimal Approximate multiplication: 1,317,994,496
Exact multiplication: 1,328,531,540
Error percent: 0.00793%

Pair 8:
 input 1: 1111101000010000 (Decimal: 64,016)
  Worthless zeros: 0
  Efficient 8 bits: 11111010 (Decimal: 250)

 input 2: 1100001101010111 (Decimal: 50,007)
  Worthless zeros: 0
  Efficient 8 bits: 11000011 (Decimal: 195)

 Total Worthless zeros added to left: 0
 Product of Efficient 8-bit numbers: 1011111001101110 (Decimal: 48,750)
 Final 32-bit Approximate multiplication: 10111110011011100000000000000000
 Final 32-bit decimal Approximate multiplication: 3,194,880,000
 Exact multiplication: 3,201,248,112
 Error percent: 0.00199%