Convert the following Binary numbers to Decimal:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (0001100)2 |  | ( 12 ) 10 |
| b. | (00110101) 2 |  | ( 53 ) 10 |
| c. | (11011011) 2 |  | ( 219 ) 10 |
| d. | (01101001) 2 |  | ( 105 ) 10 |

State whether the following statements are True or False:

1. (1000)2 < (4)10 T
2. (0111)2 = (0111)1 F
3. (0010)2 > (3)10 T
4. (1001)2 < (1101)2 T

Convert the following Decimal numbers to their equivalent in Binary system:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (25)10 |  | ( 11001 ) 2 |
| b. | (37) 10 |  | ( 100101 ) 2 |
| c. | (35) 10 |  | ( 100011 ) 2 |
| d. | (400) 10 |  | ( 110010000 ) 2 |
| e. | (547) 10 |  | ( 1000100011 ) 2 |

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (26.75)10 |  | ( 11010.11 ) 2 |
| b. | (37.375) 10 |  | ( 100101.011 ) 2 |
| c. | (59.625) 10 |  | ( 111011.101 ) 2 |
| d. | (63.125) 10 |  | ( 111111.001 ) 2 |
| e. | (78.875) 10 |  | ( 1001110.111 ) 2 |

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (0.2)10 |  | ( 0.0011 ) 2 |
| b. | (0.3) 10 |  | ( 0.010011 ) 2 |
| c. | (0.4) 10 |  | ( 0.01100 ) 2 |

Convert the following numbers octal and hexadecimal bases to decimal:

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | (72)8 |  | ( 58 ) 10 |
| 2. | (72) 16 |  | ( 114 ) 10 |
| 3. | (DE1) 16 |  | ( 3553 ) 10 |
| 4. | (11001) 8 |  | ( 4609 ) 10 |
| 5. | (ACE) 16 |  | ( 2766 ) 10 |
| 6. | (1001) 16 |  | ( 4097 ) 10 |
| 7. | (37.7) 8 |  | ( 31.875 ) 10 |
| 8. | (132.F) 16 |  | ( 306.9375 ) 10 |