

- (b) Spacing out hexadecimal digits gives:      A      6  
and converting each into binary gives:      1010    0110  
from Table 5.2

**Thus,  $A6_{16} = 10100110_2$**

*Problem 19.* Convert the following hexadecimal numbers into their binary equivalents: (a)  $7B_{16}$  (b)  $17D_{16}$

- (a) Spacing out hexadecimal digits gives:      7      B  
and converting each into binary gives:      0111    1011  
from Table 5.2

**Thus,  $7B_{16} = 1111011_2$**

- (b) Spacing out hexadecimal digits gives:    1      7      D  
and converting each into binary gives:      0001   0111   1101  
from Table 5.2

**Thus,  $17D_{16} = 101111101_2$**

### Now try the following exercise

In Problems 1 to 4, convert the given hexadecimal numbers into their decimal equivalents.

1.  $E7_{16}$    2.  $2C_{16}$    3.  $98_{16}$    4.  $2F_{16}$

In Problems 5 to 8, convert the given decimal numbers into their hexadecimal equivalents.

5.  $54_{10}$    6.  $200_{10}$    7.  $91_{10}$    8.  $238_{10}$

In Problems 9 to 12, convert the given binary numbers into their hexadecimal equivalents.

9.  $11010111_2$    10.  $11101010_2$   
11.  $10001011_2$    12.  $10100101_2$

In Problems 13 to 16, convert the given hexadecimal numbers into their binary equivalents.

13.  $37_{16}$    14.  $ED_{16}$    15.  $9F_{16}$    16.  $A2_{16}$