

Show & label all work on additional paper and staple that paper to this worksheet.

Convert the following decimal (base 10) numbers to binary (base 2):

1.  $32 =$

2.  $110 =$

Convert the following decimal numbers to octal (base 8):

3.  $21 =$

4.  $58 =$

Convert the following decimal numbers to hexadecimal (base 16):

5.  $1113 =$

6.  $1029 =$

Convert the following binary numbers to decimals:

7.  $1111\ 1110 =$

8.  $10\ 0111 =$

Convert the following octal numbers to decimals:

9.  $11 =$

10.  $266 =$

Convert the following hexadecimal numbers to decimals

11.  $A11 =$

12.  $13 =$

Add the following binary numbers. Set each problem up 'vertically' first.

13.  $1000 + 11 =$

14.  $1010\ 1111 + 101\ 1111 =$

Add the following octal numbers. Set each problem up 'vertically' first.

15.  $362 + 17 =$

16.  $177 + 17 =$

Add the following hexadecimal numbers. Set each problem up 'vertically' first.

17.  $288 + F2 =$

18.  $EF0 + B9 =$

Subtract the following binary numbers. Set each problem up 'vertically' first.

19.  $1011 - 110 =$

20.  $110 - 11$

Subtract the following octal numbers. Set each problem up 'vertically' first.

21.  $23 - 7 =$

22.  $330 - 22 =$

Subtract the following hexadecimal numbers. Set each problem up vertically first.

23.  $B12 - 17 =$

24.  $98 - 12 =$

Convert the following binary numbers directly to hexadecimal numbers.

25.  $1011\ 1111 =$

26.  $1010 =$

27.  $11\ 0010 =$

28.  $1100\ 1010\ 1101 =$

Convert the following hexadecimal numbers directly to binary numbers.

29.  $C3 =$

30.  $F1F =$