

Binary Number Arithmetic

January 3, 2014

Name: _____ Period: _____

1. Solve the following binary addition problems.

a. $101 + 11$

c. $101110 + 1011$

b. $1111 + 1011$

d. $111111 + 111111$

2. Solve the following binary multiplication problems.

a. 101101×111

c. 1110×100

b. 111111×1000

d. 110011×101

3. Convert each decimal number in the following problems to binary, using 2's complement for any negative numbers. Then solve using binary addition.

REMEMBER to use an 8 digit representation for all binary numbers.

a. $47 + (-27)$

c. $20 + (-45)$

b. $67 + (-20)$

d. $(-56) + (-100)$