Binary and Number Bases Other Than Ten

Problem 1. Count from zero to twenty in base 2.

Problem 2. Convert:

26 base 10 into base 2:

69 base 10 into base 2:

99 base 10 into base 2:

101001 base 2 into base 10:

111111 base 2 into base 10:

10000001 base 2 into base 10:

Problem 3. Compute in binary and then convert to decimal to see if you get the same answer:

$1001 + 1011 =$

$1001101 + 101111 =$

$111111 + 11111 =$

$10011 - 1011 =$

$100000 - 1111 =$

Problem 4. Count from zero to twenty in base 3.

Problem 5. Convert:

26 base 10 into base 3:

69 base 10 into base 3:

99 base 10 into base 3:

102021 base 3 into base 10:

22222 base 3 into base 10:

100000 base 3 into base 10:

Problem 6. Compute in base 3 and then convert to decimal to see if you get the same answer:

$2002 + 1022 =$

$20200 + 2211 =$

$22222 + 22222 =$

$10022 - 1121 =$

$100000 - 22222 =$

Problem 7. Convert:

26 base 8 into base 4:

68 base 9 into base 3:

99 base 12 into base 2: