

## G9. Quiz#1. Exponents.

1. Find the power of 2 in each of the following (write only the exponent, 5 pts. each):

A)  $(2^3)^4 = 2^?$  ? =

B)  $4 \times 4 \times 4 \times 4 \times 4 = 2^?$  ? =

C)  $2^{40} \times 2^{13} \div 2^6 = 2^?$  ? =

D)  $2^{10} \times 4^{20} \times 8^{30} = 2^?$  ? =

E)  $4^4 \times 8^8 \times 16^{16} = 2^?$  ? =

F)  $4^3 \div 2^2 = 2^?$  ? =

G)  $\frac{1}{2} \times 8^{50} = 2^?$  ? =

H)  $256 = 2^?$  ? =

I)  $2^{50} + 2^{50} + 2^{50} + 2^{50} = 2^?$  ? =

J)  $2^{20} - 2^{19} = 2^?$  ? =

2. Evaluate each of the following expressions (5 pts. each)

A)  $7^4(8 - 2^3) + 11^{4 \times 8 - 32} =$

B)  $7^0 + 3^2 \times 4 - 2(14 - 8 \div 2) =$

C)  $2^{(-1)^{11}} =$

D)  $3^7 \times 3^{-4} =$

E)  $1 \div 5^{-2} =$

F)  $\left(\frac{1}{4}\right)^{-3} \times 8^{-2} =$

3. Write these as ordinary numbers (2 pts. each):

(a)  $3.6 \times 10^4 =$

(b)  $4.76 \times 10^7 =$

(c)  $2.41 \times 10^{-3} =$

(d)  $9.02 \times 10^{-5} =$

(e)  $8.77 \times 10^3 =$

4. Simplify giving your answers in standard form (5 pts. each):

A)  $(3.6 \times 10^5) \div (6 \times 10^{-2}) = a \times 10^n$

$a =$                        $n =$

B)  $5.8 \times 10^{-3} - 8 \times 10^{-5} = a \times 10^n$

$a =$                        $n =$