SCIENTIFIC NOTATION

(I) Express the following numbers in scientific notation standard form:

1)   43151   _____

2)   .0500   _____

3)   .200   _____

4)   63   _____

5)   .0000087 _____

6)   802   _____

7)   10.50   _____

8)   300.2   _____

9)   .003   _____

10)   .002555 _____

11) 60200000000000000000000

_____

12) 00000000000000000000602

_____

(II) Change to decimals or whole numbers.

1) 4×10^{4} _____

2) $.05 \times 10^{2}$ _____

3) 5.0×10^{-3} _____

4) 1.23×10^{6} _____

5) $.87 \times 10^{-4}$ _____

6) $.004 \times 10^{5}$ _____

7) 800×10^{2} _____

8) 623.0×10^{-5} _____

9) 123×10^{6} _____

10) $.87 \times 10^{-1}$ _____

11) 9.6×10^{2} _____

12) 3.05×10^{-4} _____

13) 3.756×10^{3} _____

14) 0.23×10^{3} _____

15) 0.57×10^{-2} _____

(III) Perform the following calculations. Change the numbers in the problem to scientific notation before you perform the calculation (Rewrite problem in scientific notation). Write the answer in the scientific notation standard form.

1. $(6.22)(13.11)$

2. $(45.6 \times 10^3)(1.25 \times 10^5)$

3. $.0056 + (6.2 \times 10^{-3})$

4. $.06 + (2.2 \times 10^{-3})$

5. $(1.561 \times 10^3) - (1.80 \times 10^2)$

6. $(23 \times 10^{15}) + (4.5 \times 10^{14}) + (.25 \times 10^{16})$

7. $(102 \times 10^3) \div (51 \times 10^2)$

8. $(4560) \div (25 \times 10^2)$

9. $.0056 \div (7 \times 10^{-3})$

Please show all intermediate steps (10 - 12):

10. $\dfrac{240.6 + (6.2 \times 10^2)}{50 \times 10^2}$

11. $\dfrac{(6.18 \times 10^3) - (1.8 \times 10^2)}{2.0 \times 10^{-10}}$

12. $\dfrac{(2.3 \times 10^{16})(.25 \times 10^{14})}{6.02 \times 10^{23}}$