Adding in Scientific Notation

Procedure:

1. **Increase the smaller exponent to have the same exponent as the other.**
2. **The amount the exponent increases is the number of places the decimal point must move to the left for that coefficient.**
3. **Add normally while keeping the same power of ten in the sum.**

Example: $3.123 \times 10^4 + 9.17 \times 10^7$

Since both numbers must have the same power of 10, the first exponent must increase by three.

$$\text{So, } 3.123 \times 10^4 = .003123 \times 10^7.$$

Now that they have the same exponent, the numbers can be added normally.

$$.003123 \times 10^7 + 9.17 \times 10^7 = 9.173123 \times 10^7.$$

Add.

1. $8.32 \times 10^5 + 6.232 \times 10^8$

2. $4.7 \times 10^6 + 1.932 \times 10^8$

3. $6.239 \times 10^7 + 4.05 \times 10^3$

4. $8.535 \times 10^5 + 2.914 \times 10^6$

5. $3.567 \times 10^{12} + 6.1 \times 10^9$

6. $7.003 \times 10^8 + 1.77 \times 10^4$

7. $3.26 \times 10^{13} + 1.983 \times 10^{14}$

8. $3.497 \times 10^{10} + 8.6 \times 10^8$

9. $1.9 \times 10^7 + 7.345 \times 10^{11}$

10. $4.3561 \times 10^{16} + 6.2 \times 10^{11}$