**Scientific Notation: Adding and Subtracting**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

Solve the following problems by adding or subtracting the numbers expressed in scientific notation. Simplify your answers and express them in scientific notation.

 **Open Ended Questions**

1. Add the following numbers: $3.2×10^{5}+4.8×10^{5}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Subtract the following numbers: $7.5×10^{6}−2.5×10^{6}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Add the following numbers: $1.7×10^{4}+3.3×10^{4}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Subtract the following numbers: $9.6×10^{3}−4.6×10^{3}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Add the following numbers: $2.4×10^{7}+5.6×10^{7}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Subtract the following numbers: $6.3×10^{8}−1.3×10^{8}$

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Multiple Choice Questions**

1. Add the following numbers and express the result in scientific notation: $3.2×10^{4}+4.5×10^{4}$

a) $7.7×10^{4}$

b) $7.7×10^{5}$

c) $7.7×10^{3}$

d) $7.7×10^{6}$

2. Subtract the following numbers and express the result in scientific notation: $6.1×10^{6}−2.3×10^{6}$

a) $3.8×10^{6}$

b) $3.8×10^{5}$

c) $3.8×10^{7}$

d) $3.8×10^{4}$

3. Convert the standard number 45,000 into scientific notation.

a) $4.5×10^{4}$

b) $4.5×10^{5}$

c) $4.5×10^{3}$

d) $4.5×10^{6}$

4. Express the number $7.2×10^{−3}$ in standard form.

a) 0.0072

b) 0.072

c) 0.00072

d) 0.72

5. Add the following numbers and express the result in scientific notation: $2.5×10^{3}+3.5×10^{3}$

a) $6.0×10^{3}$

b) $6.0×10^{4}$

c) $6.0×10^{2}$

d) $6.0×10^{5}$

6. Subtract the following numbers and express the result in scientific notation: $9.0×10^{5}−3.0×10^{5}$

a) $6.0×10^{5}$

b) $6.0×10^{4}$

c) $6.0×10^{6}$

d) $6.0×10^{3}$

**Scientific Notation: Adding and Subtracting - Answers**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

Solve the following problems by adding or subtracting the numbers expressed in scientific notation. Simplify your answers and express them in scientific notation.

 **Open Ended Questions**

1. Add the following numbers: $3.2×10^{5}+4.8×10^{5}$

$3.2×10^{5}+4.8×10^{5}=(3.2+4.8)×10^{5}=8.0×10^{5}$

2. Subtract the following numbers: $7.5×10^{6}−2.5×10^{6}$

$7.5×10^{6}−2.5×10^{6}=(7.5−2.5)×10^{6}=5.0×10^{6}$

3. Add the following numbers: $1.7×10^{4}+3.3×10^{4}$

$1.7×10^{4}+3.3×10^{4}=(1.7+3.3)×10^{4}=5.0×10^{4}$

4. Subtract the following numbers: $9.6×10^{3}−4.6×10^{3}$

$9.6×10^{3}−4.6×10^{3}=(9.6−4.6)×10^{3}=5.0×10^{3}$

5. Add the following numbers: $2.4×10^{7}+5.6×10^{7}$

$2.4×10^{7}+5.6×10^{7}=(2.4+5.6)×10^{7}=8.0×10^{7}$

6. Subtract the following numbers: $6.3×10^{8}−1.3×10^{8}$

$6.3×10^{8}−1.3×10^{8}=(6.3−1.3)×10^{8}=5.0×10^{8}$

 **Multiple Choice Questions**

1. Add the following numbers and express the result in scientific notation: $3.2×10^{4}+4.5×10^{4}$

a) $7.7×10^{4}$

b) $7.7×10^{5}$

c) $7.7×10^{3}$

d) $7.7×10^{6}$

2. Subtract the following numbers and express the result in scientific notation: $6.1×10^{6}−2.3×10^{6}$

a) $3.8×10^{6}$

b) $3.8×10^{5}$

c) $3.8×10^{7}$

d) $3.8×10^{4}$

3. Convert the standard number 45,000 into scientific notation.

a) $4.5×10^{4}$

b) $4.5×10^{5}$

c) $4.5×10^{3}$

d) $4.5×10^{6}$

4. Express the number $7.2×10^{−3}$ in standard form.

a) ***0.0072***

b) 0.072

c) 0.00072

d) 0.72

5. Add the following numbers and express the result in scientific notation: $2.5×10^{3}+3.5×10^{3}$

a) $6.0×10^{3}$

b) $6.0×10^{4}$

c) $6.0×10^{2}$

d) $6.0×10^{5}$

6. Subtract the following numbers and express the result in scientific notation: $9.0×10^{5}−3.0×10^{5}$

a) $6.0×10^{5}$

b) $6.0×10^{4}$

c) $6.0×10^{6}$

d) $6.0×10^{3}$