Scientific Notation

Simplify and express in scientific notation:

Example 1

$(8 \times 10^2) + (4 \times 10^5)$

$= (8 \times 10^2) + (4 \times 10^2) \times 10^3$

$= (8 \times 10^2) + (4000 \times 10^2)$

$= 4008 \times 10^2$

$= \mathbf{4.008 \times 10^5}$

Example 2

$(6 \times 10^7) - (2 \times 10^6)$

$= (6 \times 10^6) \times 10 - (2 \times 10^6)$

$= (60 \times 10^6) - (2 \times 10^6)$

$= 58 \times 10^6$

$= \mathbf{5.8 \times 10^7}$

Simplify each problem and express the answer in scientific notation.

1) $(3 \times 10^8) + (5 \times 10^7)$

Answer : _____

2) $(9 \times 10^4) - (7 \times 10^2)$

Answer : _____

3) $(6 \times 10^6) - (5 \times 10^5)$

Answer : _____

4) $(2 \times 10^5) + (8 \times 10^4)$

Answer : _____

5) $(3 \times 10^9) + (7 \times 10^7)$

Answer : _____

6) $(5 \times 10^8) - (10 \times 10^6)$

Answer : _____

7) $(4 \times 10^6) - (2 \times 10^5)$

Answer : _____

8) $(6 \times 10^9) + (4 \times 10^8)$

Answer : _____

Answer key

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Example 2

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Simplify each problem and express the answer in scientific notation.

1) $(3 \times 10^8) + (5 \times 10^7)$

Answer : **3.5×10^8**

2) $(9 \times 10^4) - (7 \times 10^2)$

Answer : **8.93×10^4**

3) $(6 \times 10^6) - (5 \times 10^5)$

Answer : **5.5×10^6**

4) $(2 \times 10^5) + (8 \times 10^4)$

Answer : **2.8×10^5**

5) $(3 \times 10^9) + (7 \times 10^7)$

Answer : **3.07×10^9**

6) $(5 \times 10^8) - (10 \times 10^6)$

Answer : **4.9×10^8**

7) $(4 \times 10^6) - (2 \times 10^5)$

Answer : **3.8×10^6**

8) $(6 \times 10^9) + (4 \times 10^8)$

Answer : **6.4×10^9**