

10.7

**Operations in
Scientific Notation
(Day 1)**

Today's Learning Goals:

- Add and subtract numbers written in scientific notation.

53,000

7,860

Rules for Operations

To make scientific notation have a bigger exponent:

- Move the decimal left
- Add the number of times you moved the decimal to the exponent.

1) 2.4×10^3

3) 8.2×10^{-9}

2) 7.1×10^7

4) 4.6×10^{-4}

Fixing non-scientific notation

1) 35×10^8

2) 215×10^9

3) $4,587 \times 10^2$

Fixing non-scientific notation

4) 0.15×10^7

5) 0.00057×10^9

6) $.05782 \times 10^2$

Find the sum or difference. Write your answer in scientific notation.

a. $(4.6 \times 10^3) + (8.72 \times 10^3)$

b. $(3.5 \times 10^{-2}) - (6.6 \times 10^{-3})$

Make sure they have the same exponent

Add/subtract the coefficient

Drop down the exponent part

Make sure it's in correct scientific notation

Find the sum or difference. Write your answer in scientific notation.

c. $(2.1 \times 10^{-4}) + (9.74 \times 10^{-4})$

d. $(4.7 \times 10^5) - (7.2 \times 10^3)$

Find the sum or difference. Write your answer in scientific notation.

e. $(8.2 \times 10^2) + (3.41 \times 10^{-1})$

Practice

1) $(17 \times 10^{12}) + (255 \times 10^{12})$

2) $(340 \times 10^{-6}) - (285 \times 10^{-6})$

Practice

3) $(7.545 \times 10^8) + (4.55 \times 10^7)$

4) $(8.7 \times 10^7) - (5.5 \times 10^6)$