

Express each number in standard notation.

1) 4.62×10^8 = 462,000,000

2) 1.2561×10^{-5} = 0.000012561

Express each number in scientific notation.

3) 0.0000056 = $5.6 \cdot 10^{-6}$

4) 90,825,000 = $9.0825 \cdot 10^7$

5) 745,000 = $7.45 \cdot 10^5$

6) 0.0000000377 = $3.77 \cdot 10^{-8}$

7) 100,000,000 = $1 \cdot 10^8$

8) Liz saw the number shown on the calculator screen.

Which number represents the number Liz saw?

- A. 0.0000006
B. 0.00000006
C. -6,000,000
D. -60,000,000



9. Laurie entered the mass, in kilograms, of four substances into a spreadsheet. Her spreadsheet automatically converted the masses into scientific notation.

	A	B
	Substance	Mass (kilogram)
1	Substance A	2.45 E 4
2	Substance B	6.8 E 3
3	Substance C	7.125 E -5
4	Substance D	9.0 E 4

24,500
6,800
0.00007125
90,000

Put the substances in order from **least** to **greatest**.

Substance C, B, A, D

10. For each number below, give the base, give the expanded form, and give the standard form.

a. $12 \cdot 4^5$

base: 4
expand: $12 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot 4$
std: 12,288

b. $\frac{1}{2} \cdot 6^4$

base: 6
expand: $\frac{1}{2} \cdot 6 \cdot 6 \cdot 6 \cdot 6$
std: 648

c. $4.02 \cdot 10^7$

base: 10
expand: $4.02 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$
std: 40,200,000

d. $5 \cdot 2^3$

base: 2
expand: $5 \cdot 2 \cdot 2 \cdot 2$
std: 40

*e. $2x^5$

base: x
expand: $2 \cdot x \cdot x \cdot x \cdot x \cdot x$
std: it's not a "number" it's a term
so $2x^5$ is the best answer