Name _____
Date _____

Scientific Notation

KEY IDEA
A number in scientific notation is written as $a \times 10^n$, where $1 \leq a < 10$ and n is an integer. To convert to standard form, move the decimal point n places: right if n is positive, left if n is negative, filling any empty places with zeros.

How to do it

1. Identify a (the number in front) and n (the exponent on 10).
2. If n is positive, move the decimal point n places to the right, making the number larger.
3. If n is negative, move the decimal point n places to the left, making the number smaller.
4. Fill any empty places with zeros, and drop the $\times 10^n$ once the decimal point is in its final position.

Worked examples

Example 1. 5.22×10^{3}

5220

Example 2. 5.47×10^{-4}

0.000547

Example 3. 6.69×10^{-3}

0.00669

Example 4. 3.84×10^{-3}

0.00384

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Directions: Write each number in standard form.

1. 8.25×10^{-4}	**2.** 5.01×10^{4}	**3.** 7.11×10^{5}
4. 5.26×10^{-3}	**5.** 5.10×10^{4}	**6.** 1.65×10^{-3}
7. 6.47×10^{5}	**8.** 7.58×10^{5}	**9.** 7.83×10^{4}
10. 4.73×10^{3}	**11.** 3.38×10^{4}	**12.** 7.12×10^{-4}
13. 8.72×10^{6}	**14.** 4.01×10^{5}	**15.** 4.58×10^{5}
16. 1.62×10^{-5}	**17.** 5.27×10^{4}	**18.** 7.92×10^{6}
19. 4.96×10^{-3}	**20.** 4.62×10^{-4}	**21.** 4.47×10^{5}
22. 2.96×10^{6}	**23.** 7.50×10^{-5}	**24.** 5.26×10^{4}
25. 2.14×10^{5}	**26.** 9.65×10^{6}	**27.** 5.85×10^{-5}
28. 5.17×10^{4}	**29.** 5.90×10^{4}	**30.** 6.37×10^{-5}