

What Is Special About a Radioactive Cat?

Choose the correct answer for each exercise and circle the letter pair next to it. Write the uppercase letter in the box containing the lowercase letter.

In Exercises 1–2, choose the number that is written in scientific notation.

1. **R · Y** 34.5×10^5 **m · E** 3.45×10^6 **y · P** 0.345×10^7
 2. **b · G** 0.77×10^{-3} **i · R** 7.7×10^{-4} **s · L** 7.7×10^{-4}

In Exercises 3–6, find the value of n .

3. $94,000,000 = 9.4 \times 10^n$ **n · O** 8 **e · A** 7
 4. $555,500,000,000 = 5.555 \times 10^n$ **i · I** 11 **k · C** 10
 5. $0.00006 = 6 \times 10^n$ **w · S** -4 **j · G** -11
 6. $0.00000000375 = 3.75 \times 10^n$ **f · U** -12 **y · E** -5

In Exercises 7–12, write the number in decimal form.

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|---------------------------|-------------------------|--------------------------|
| 7. 3.8×10^5 | r · A 38,000,000 | p · R 0.00038 |
| 8. 3.8×10^{-5} | d · L 3,800,000 | w · I 380,000 |
| 9. 3.80×10^7 | b · T 0.000038 | o · D 38,000 |
| 10. 6.25×10^4 | a · A 0.00000625 | n · E 62,500 |
| 11. 6.25×10^{-3} | v · M 625,000 | k · H 0.000000625 |
| 12. 6.25×10^{-8} | z · S 0.00625 | h · L 0.00062 |

In Exercises 13–18, write the number in scientific notation.

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|-----------------------|-------------------------------------|-------------------------------------|
| 13. 72,000 | q · F 7.2×10^{10} | q · W 7.2×10^5 |
| 14. 7,200,000,000,000 | f · S 7.2×10^{12} | o · N 7.2×10^{-7} |
| 15. 0.00000072 | a · I 7.2×10^4 | t · D 7.2×10^{-6} |
| 16. 41,900,000 | v · L 4.19×10^{-3} | x · T 4.19×10^{-5} |
| 17. 0.00419 | l · R 4.19×10^{-10} | d · H 4.19×10^7 |
| 18. 0.00000000419 | c · S 4.19×10^6 | h · E 4.19×10^{-11} |

In Exercises 19–22, write the number in scientific notation.

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|---------------------------|------------------------------------|------------------------------------|
| 19. 22.2×10^3 | p · O 2.22×10^5 | l · T 2.22×10^7 |
| 20. 0.222×10^8 | t · F 2.22×10^4 | c · S 2.22×10^9 |
| 21. 0.54×10^{-4} | g · L 5.4×10^{-6} | u · P 5.4×10^{-16} |
| 22. 54×10^{-15} | q · H 5.4×10^{-14} | x · V 5.4×10^{-5} |

