

Name: _____ Class: _____ Date: _____

8th Grade Pre-Algebra Chapter 4 Test Review Worksheet

Simplify each expression.

Write each number in standard format.

1. $8z \cdot 4z^2$

7. 2.0871×10^{-9}

2. $\left(\frac{6y}{9y^6}\right)^3$

8. 5.151×10^1

3. $9 \cdot 9^7$

9. 7.563×10^0

4. $\frac{8y^{-2}r^5}{7y^3r^{-4}}$

10. 4.354×10^{-8}

5. $\frac{2s^2}{3s^5}$

11. 7.39×10^{-3}

6. $(4n^3)^6$

Write each number in scientific notation.

12. 0.0005234

13. 42,700

14. 0.914

15. 8,349.2

16. 7,749,000,000

18. $(9 \times 10^3)(9.6 \times 10^6)$

19. $\frac{9.5 \times 10^{-4}}{1.9 \times 10^{-5}}$

20. $\frac{9.2 \times 10^6}{23 \times 10^3}$

21. $\frac{1.25 \times 10^4}{2.5 \times 10^6}$

**Calculate each scientific notation expression.
Write your answer in (a) scientific notation and
(b) standard form.**

17. $(5 \times 10^{-6})(7 \times 10^{-5})$

22. $(6.1 \times 10^2)(9.95 \times 10^6)$

Write the square or cube root of each number.

23. a.) $\sqrt{144}$

b.) $\sqrt[3]{125}$

c.) $\sqrt[3]{216}$

d.) $\sqrt{324}$

e.) $\sqrt[3]{4913}$

Is each statement TRUE or FALSE?

25. a.) All integers are rational numbers.

b.) All negative numbers are integers.

c.) 3.87655 is a rational number.

d.) $\sqrt{7}$ is a whole number.

e.) All fractions are integers.

Classify each number as rational, irrational,
integer, whole, or natural.

24. a.) $\frac{-5}{6}$

b.) 0

c.) $\sqrt{5}$

d.) $\frac{12}{3}$

e.) $-\sqrt{4}$

f.) 3π