

Algebra 1 Review Sec 8-1 to 8-5 Spring 2015

1. Evaluate each expression for $A = -8$ $B = 4$ $C = 6$

Give fractional answers in reduced form (NO DECIMALS)

a) $B^3 \cdot C^{-2}$

b) $-3A^{-2}B$

c) $\frac{5B^{-2}C^0}{A^{-2}}$

Simplify each. Give answers without negative exponents and fractional answers in reduced form (NO DECIMALS)

2. $5A^{-3}$

3. $-7k^6m^4km^{-2}$

4. $(10A^6)^2$

5. $(8d^3)^1$

6. $E^4 \cdot F^{-3} \cdot G^{-8} \cdot E^{-4} \cdot G^5 \cdot F^9$

7. $\frac{-2}{w^{-7}}$

8. $(2a^4b^{-5})^3$

9. $(5B^{-7}C^4)^0$

10. $(M^{-2}K^4R)^{-4}$

11. $\left(\frac{-9R^{-5}}{c^7}\right)^{-1}$

12. $\left(\frac{m^4}{4h^3}\right)^2$

13. $(5H^3K^{-9})^2(2H^5K^3)^4$

14. $\frac{8^{-2}e^{-8}g^5h^0}{w^7x^{-1}}$

15. $\left(\frac{5N^6Q^{-4}}{w^7}\right)^{-2}$

16. $(15r^8w^7j^{12})^0(5r^{-3}w^4r^{-2}w)^2$

17. Write each in scientific notation.

a) 45,6000

b) 0.000000002178

18. Write each in standard notation.

a) 8.617×10^{-5}

b) 5.337×10^5

19. Find the value of each. Give your answer in both scientific notation and standard notation.

a) $(2.75 \times 10^{-8})(3.2 \times 10^3)$

b) $\frac{7.2 \times 10^{11}}{2.4 \times 10^5}$

Simplify each. Give answers without negative exponents and fractional answers in reduced form (NO DECIMALS)

20. $\frac{40R^9}{8R^5}$

21. $\frac{a^5b^3c^{-4}}{a^{15}b^3c}$

22. $\frac{3m^9}{18m^{-2}}$

23. $\left(\frac{4b^5c^{-4}}{b^3c^{-6}}\right)^2$

24. $\left(\frac{3x^4z^5}{w^2y^9}\right)\left(\frac{w^7y}{6x^8z^4}\right)$

25. $\left(\frac{k^{-5}n^{12}}{k^3n^6}\right)^{-3}$

26. $\left(\frac{c^6e^{-3}}{d^4}\right)^4(c^2d^3e^6)^5$

27. A company produces 2.75×10^7 parts for computers each year. If each part is sold for \$6.50 how much revenue does the company generate each year selling these parts? Give your answer in both Scientific Notation and Standard Notation.

28. The following numbers aren't in Scientific Notation. Explain why and then write them in proper Scientific notation.

a) 576.2×10^{-6}

b) 0.00031×10^8

1. a) $\frac{16}{9}$

b) $\frac{-3}{16}$

c) 20

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

3. $-7k^7m^2$

4. $100A^{12}$

5. $8d^3$

6. $\frac{F^6}{G^3}$

7. $-2w^7$

8. $\frac{8a^{12}}{b^{15}}$

9. 1

10. $\frac{M^8}{K^{16}R^4}$

11. $\frac{c^7R^5}{-9}$

12. $\frac{m^8}{16h^6}$

13. $\frac{400H^{26}}{K^6}$

14. $\frac{g^5x}{64e^8w^7}$

15. $\frac{Q^8w^{14}}{25N^{12}}$

16. $\frac{25w^{10}}{r^{10}}$

17. a) 4.56×10^5

b) 2.178×10^{-9}

18. a) 0.00008617

b) 533,700

19. a) $8.8 \times 10^{-5} = 0.000088$

b) $3 \times 10^6 = 3,000,000$

20. $5R^4$

21. $\frac{1}{a^{10}c^5}$

22. $\frac{m^{11}}{6}$

23. $16b^4c^4$

24. $\frac{w^5z}{2x^4y^8}$

25. $\frac{k^{24}}{n^{18}}$

26. $\frac{c^{34}e^{18}}{d}$

27. $\$178,750,000 = \1.7875×10^8

28. a) 576.2 is larger than 10. Proper Scientific Notation is: 5.762×10^{-4}

b) 0.00031 is less than 1. Proper Scientific Notation is: 3.1×10^4