

**Algebra 1**  
Practice Quiz 7.1-7.4

NAME

KEY

**Simplify. (2 Points)**

1.  $(a^4)(a^7)$

$4+7$   
 $a^{11}$

2.  $(b^6)(b)(b^2)$

$6+1+2$   
 $b^9$

3.  $(2c^3)(3c^4)$

$6c^7$

4.  $(-2d^4)(4d^3e)$

$-8d^7e$

5.  $(4g^4h^3)(6g^3h^2)$

$24g^7h^5$

6.  $(k^2)^5$

$2 \times 5$   
 $k^{10}$

7.  $(3p^3)^4$

$81p^{12}$

8.  $(2m^5n^3)^4$

$16m^{20}n^{12}$

9.  $((q^3)^4)^5$

$q^{60}$

10.  $(2r^4t^5)^3(-4r^2t^5)^2$

$(8r^{12}t^{15})(16r^4t^{10})$   
 $128r^{16}t^{25}$

11.  $\frac{v^7w^3}{v^4w}$   $3-1$

$v^3w^2$

12.  $\frac{x^9y^2}{x^3y^6}$

$\frac{x^6}{y^4}$

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

Points (24) \_\_\_\_\_

**Simplify. (2 Points)**

13.  $\frac{4a^{-3}b^5c^4}{12a^2b^3c^{-2}} = \frac{b^2c^6}{3a^5}$

14.  $\frac{-8a^{-5}b^{-4}e^{-6}}{6a^{-8}b^9c^4} = -\frac{4a^3}{3b^{13}c^{10}}$

15.  $\left(\frac{-16a^5b^6c^5}{12a^{-1}b^{-3}c^7}\right)^0 = 1$

Anything to 0 power equals 1

16.  $\left(\frac{3a^4b^7c^{-3}}{2a^3b^5c^3}\right)^2 = \frac{9a^8b^{14}c^{-6}}{4a^6b^{10}c^6} = \frac{9a^2b^4}{4c^{12}}$

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

**Write in Scientific Notation. (2 Points)**

17. 3,760,000

$3.76 \times 10^6$

18. .00009017

$9.017 \times 10^{-5}$

17. \_\_\_\_\_

18. \_\_\_\_\_

**Write in Standard Form. (2 Points)**

19.  $8.26 \times 10^{-3}$

0.00826

20.  $8.27 \times 10^7$

82,700,000

19. \_\_\_\_\_

20. \_\_\_\_\_

**Determine whether each expression is a polynomial and if so, identify as a monomial, binomial, or trinomial. (2 Points)**

21.  $3x^2 - 4x + 9$

Trinomial

22.  $x^2 - 9$

Binomial

21. \_\_\_\_\_

22. \_\_\_\_\_

**Find the degree of the polynomial. (2 Points)**

23.  $2x^6 - 9x^2 + 11$

6

24.  $-4x^9 + 3x^5 - 2x^4$

9

23. \_\_\_\_\_

24. \_\_\_\_\_

**Write each polynomial in standard form. (2 Points)**

25.  $9x + 5x^4 + 13$

$5x^4 + 9x + 13$

26.  $7x^2 - 14 + 5x^3 - 8x$

$5x^3 + 7x^2 - 8x - 14$

Points (28) \_\_\_\_\_