NAME   **DATE**

Module Test B   **Module 2**

1. Identify the coefficient of each monomial.

    a. $-5k^3$ **–5**　　　　　　　　　　　　　　**b.** $\frac{5p}{6}$ **$\frac{5}{6}$**

    c. $-0.25x$ **–0.25**　　　　　　　　　　　**d.** B **1**

2. Write an algebraic expression for each word phrase. **possible answers given**

    a. has a coefficient of -7 with one variable **$-7w$**

    b. has a cubed variable with a coefficient of $-\frac{3}{4}$ **$-\frac{3}{4}r^3$**

    c. has a decimal coefficient with two variables **$5.7xy^2$**

    d. is a constant **0**

3. Identify each polynomial as a *monomial, binomial,* or *trinomial.*

    a. $5x + 3y^2 + 4xz$ **trinomial**　　　　　**b.** $5e + 11d^2$ **binomial**

    c. $r^3 - 5r^2v + 9z$ **trinomial**　　　　　**d.** $-2d^5$ **monomial**

4. Find the degree of each polynomial.

    a. -12 **0**　　　　　　　　　　　　　　**b.** $-15x^5y + y^4$ **6**

    c. $5a^7b + 3a^3b^3 - 2a^2b + 1$ **8**　　　**d.** $\frac{2}{3}g^3h - 9g^2h^3$ **5**

5. Give an example for each of the following. **possible answers given**

    a. monomial **$7m$**　　　　　　　　　　**b.** binomial **$4t + 11$**

    c. trinomial **$6g + 11h - 5j$**　　　　**d.** monomial with two variables **$2xy$**

Write an algebraic expression for each word phrase.

6. eight more than the reciprocal of y **$\frac{1}{y} + 8$**

7. the sum of a number and sixteen **$x + 16$**

8. nine less than negative twelve times x **$-12x - 9$**

9. -19 times the difference V minus 11 **$-19(V - 11)$**

10. one third the product of a variable k and 37 **$\frac{1}{3}(37k)$**

Name the property each statement illustrates.

11. $3T + (-3T) = 0$ **Additive Inverse Property**

12. $4(g - 3) = 4g - 12$ **Distributive Property of Multiplication over Addition**

13. $9 + (3 + 5) = (3 + 5) + 9$ **Commutative Property of Addition**

14. $a \cdot (b \cdot c) = (a \cdot b) \cdot c$ **Associative Property of Multiplication**

Write the opposite and reciprocal of each expression.

15. a. $-\dfrac{7w}{5}$ **opposite:** $\dfrac{7w}{5}$**;   reciprocal:** $-\dfrac{5}{7w}$

　　b. 1 **opposite: –1;   reciprocal: 1**

Simplify each expression.

16. $7h + h$ **8h**

17. $5 - x^3 + 7x^2 - 9 - 2x^3 + 3x^2$ **$-3x^3 + 10x^2 - 4$**

18. $h^2(5h + 7) - 11h + 2(6h - 2)$ **$5h^3 + 7h^2 + h - 4$**

19. $m^3 + 7m^3 - 3u - 16m + 3m^2 + 7u$ **$8m^3 + 3m^2 - 16m + 4u$**

20. $7 - 2(5y - 3x)$ **$-10y + 6x + 7$**

21. Evaluate $t^3v^2 - t + 13v^2$ for $t = -2$ and $v = 1$ **7**

Evaluate the expression $\sqrt{b^2 - 4ac}$ for the given values of the variables.

22. $a = 4, b = 4, c = 1$ **0**

23. $a = -2, b = -1, c = 6$ **7**

Evaluate each expression when $x = 0$, $y = -3$, and $z = -2$.

24. $\dfrac{4z + xy^2 - 2x}{3z + 2x - 7y}$ **$-\dfrac{8}{15}$**

25. $x^2 + y^3 - 2z + |3xy^3 - xz|$ **-23**