

Name: _____

Date: _____

Polynomial Review #2

HW# _____

1. $(5x^2 - 7x - 4) + (2x^2 + 9x + 7) + (-8x^2 - 2x - 9)$	2. Subtract: $(4x + y - 3) - (6x - 3y + 1)$
3. Simplify: $6a(a^2 + 4a - 2) - 3a$	4. Simplify: $-20 - (7m - 6)$
5. Subtract $(5y^2 - 8y + 3)$ from $(7y^2 - 3y - 4)$	6. Multiply: a) $(2x - 3)(x + 4)$ b) $(x - 6)^2$
7. Multiply the following by its conjugate and express answer in standard form. a) $(5 - m)$	8. Divide: a) $\frac{a + abc}{a}$ b) $\frac{9x^2y - 12xy^2}{xy}$

9. Express in standard form: $5x - x^2 + 3 + x^7$ _____

Degree of above polynomial: _____

10. Simplify:

a) $(-3x^5)^2$

b) $(2x^2y^3)^4$

c) 5^{-3}

d) $6(3^{-3})$

e) $(-2x)^0$

f) $-2x^0$

11. What is the value of $5^0 + 6^{-2}$?

12. If the expression $(2y^a)^4$ is equivalent to $16y^8$, what is the value of a ?

13. Simplify: a) $(2x^2 - 4x + 1) - 2(x^2 - 3x + 2)$

b) $(6d^8)(-8d^9)(6d)$

14. The expression $3^2 \cdot 3^3 \cdot 3^4$ is equivalent to:

15. Simplify the expressions below:

a) $\frac{(4x^3)^2}{2x}$

b) $5c^{-3}d^{-6}e^2 \cdot -2c^4d^2e^{-2}$

c) $\frac{a^2b^3c^5}{a^5b^2c^5}$

d) $\frac{-30x^2y^{-5}z^4}{15x^5y^4z^2}$

Word Problems:

16. For a square whose side is $(x - 5)$ feet, find the:

a) perimeter

b) area

17. The side of a hexagon (6 sides) is represented by $4x - 3$. How would you represent the perimeter of the hexagon in terms of x ?

18. The lengths of the sides of a triangle are $x - y$, $x + y$, and $3x + y$. Find the perimeter of the triangle in terms of x and y .

19. The area of a rectangle is $10x^2 - 20x$. Find the width given the length is $5x$.

***20. The perimeter of a rectangle is represented by $24x - 8$. If the length is represented by $3x + 5$, how would you represent the width in terms of x ?

Identify the property illustrated by each example:

21. $3 + 4 = 4 + 3$ _____

22. $(2 \cdot 3) \cdot 4 = 2 \cdot (3 \cdot 4)$ _____

23. $e(f + g) = e(f) + e(g)$ _____

24. $(8)(5) = (5)(8)$ _____

25. $5(4 - 9) = 5(4) - 5(9)$ _____

26. $1 + (2 + 3) = (2 + 3) + 1$ _____