Name: _____ Date: _____ Period: _____

5.2 Polynomial Functions DAY ONE CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Writing polynomials in standard form	1 – 7(a)		
Determining the degree of expressions and terms	1 – 7 (b)		
Labeling monomial, binomial, trinomial, & polynomial	1 – 7 (c)		
Real-World Application	14 a - d	15	16
Synthetic Substitution	8 - 13		

a) Write each expression in standard form.
b) Find the degree of each expression.
c) Label the expression as a monomial, binomial, trinomial, or polynomial.

1. $x + 2$

2. $-6y^2 + 4$

3. $9m^3 - 5m^2 + 4m - 8$

4. $a + 5a^2 + 3a^3 - 4a^4$

5. $12x^4y - x^2y^2 - 12x^2y^4$

6. $7r^2s^2 + 2rs - 3rs^5$

7. $3 - 5x^8$

If $P(x) = x^2 + x + 1$ and $Q(x) = 5x^2 - 1$, find the following. Write out the set-up and your answer two ways. Show all work to earn full credit.

8. P(7)

9. Q(- 10)

10. P(0)

11. $Q\left(\frac{1}{4}\right)$

12. Q(4)

13. P(- 4)

14. *The CN Tower in Toronto, Ontario, is 1821 feet tall and is the world's tallest self-supporting structure. An object is dropped from the Skypod of the Tower, which is at 1150 feet. Neglecting air resistance, the height of the object at time t seconds is given by the polynomial function P(t) = - 16t² + 1150. Find the height of the object at the given times.*

a) 1 second　　　　b) 7 seconds　　　　c) 3 seconds　　　　d) 6 seconds

15. The polynomial – 7.5x² + 103x + 2000 models the yearly number of visitors (in thousands) x years after 2006 at Acadia National Park in Maine. Use this polynomial to estimate the number of visitors to the park in 2016.

16. The polynomial – 0.13x² + x + 827 models the yearly number of visitors (in thousands) x years after 2006 at Canyon De Chelly National Monument in Arizona. Use the polynomial to estimate the number of visitors to the park in 2010.

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yours elf.

1　2	3　4　5	6　7	8
Basic	Intermediate	Advanced	Solved ALL!