## 5.2 Polynomial Functions DAY ONE CYU

☑ Use when you get it right all by yourself

SUse when you did it all by yourself, but made a silly mistake HUse when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

XUse when a question was attempted but wrong (get help)

NUse when a question was not even attempted

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	
al	x+2 1 binomial	
3	1	
ןמ		
c)	binomial	
,		

2. 
$$-6y^2 + 4$$
a)  $-by + 4$ 
b) 2
c) binomial
c) polynomial
3.  $9m^3 - 5m^2 + 4m - 8$ 
a)  $-4a^3 + 3a^3 + 5a^3 + 5a$ 

5. 
$$12x^4y - x^2y^2 - 12x^2y^4 + 6$$
 6 thinomial

5. 
$$12x^4y - x^2y^2 - 12x^2y^4$$
  
a)  $-12x^2y^4 + 12x^4y - x^2y^2$   
b) 6  
c) thinomial

6.  $7r^2s^2 + 2rs - 3rs^5$   
a)  $-3rs^5 + 7rs^2 + 2rs$   
b) 6  
c) thinomial

c) binomial

7.3-5
$$x^{8}$$
  
a) -5 $x^{8}$ +3  
b) 8  
c) binomia

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)

PG)=57
$$(7,57)$$

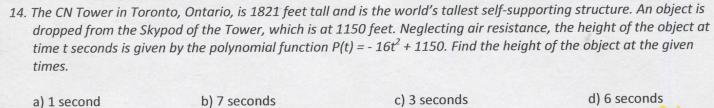
$$11.Q(\frac{1}{4})$$

$$Q(\frac{1}{4}) = -\frac{11}{16}$$

(4, -11)

$$Q(-10)=499$$
  
 $(-10,499)$   
 $12.Q(4)$   
 $Q(4)=79$   
 $(4,79)$ 

9. Q(-10)



a) 1 second

366 ft

1006 H

d) 6 seconds 574 f+

15. The polynomial  $-7.5x^2 + 103x + 2000$  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.

## 2280 thousand visitors in 2016.

16. The polynomial  $-0.13x^2 + x + 827$  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.

828.92 mousand in 2010 was the estimated number of visitors.

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.

