

2.4 Modeling Data with Quadratic Functions DAY TWO CYU

Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Quadratic Model from the calculator	4 - 6, 10b	1 - 3	
Quadratic Model from a graph		7 - 9	
Finite Differences	10a		
Prediction	10c		
Domain/Range	10d		

Find a quadratic model for each set of values.

1. $(-1, 1), (1, 1), (3, 9)$

2. $(-4, 8), (-1, 5), (1, 13)$

3. $(-1, 10), (2, 4), (3, -6)$

4.

x	-1	0	2
$f(x)$	1	-1	7

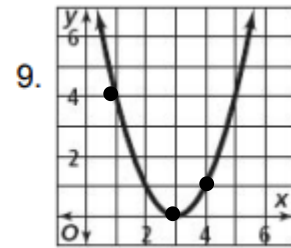
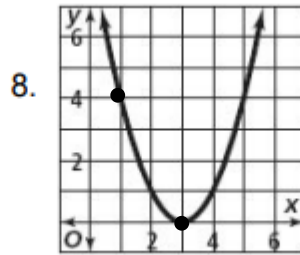
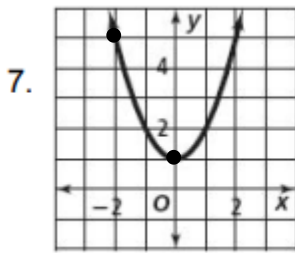
5.

x	-4	0	1
$f(x)$	1	9	16

6.

x	-1	2	3
$f(x)$	12	3	4

Identify the vertex and the axis of symmetry of each parabola. Then write the equation for the given graph.



10. A toy rocket is shown upward from ground level. The table shows the height of the rocket at different times.

Time (in seconds)	0	1	2	3	4
Height (feet)	0	256	480	672	832

- Use finite difference to prove this rocket data is quadratic (degree of two).
- Find a quadratic model for this data using the calculator. Check your data entries!
- Use the model to estimate the height of the rocket after 1.5 seconds.
- Describe appropriate domain and range in interval notation.

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 yourself.

