ALGEBRA 1 · HOMEWORK · ADVANCED

Determine Which Function Type Represents Data

SCORE / 25

01 Part A · Practice

For equally spaced x-values: equal first differences → linear; equal second differences → quadratic; equal ratios → exponential.

1 ●○○ Find the first and second differences of the y-values. What type of function is it?

x	0	1	2	3	4	5
y	−10	−11	−12	−13	−14	−15

2 ●○○ Is $y = -3x^2 + 8x - 1$ linear, exponential, or quadratic?

3 ●○○ Does the table show a linear, exponential, or quadratic function? Explain.

x	0	1	2	3	4	5
y	32	48	72	108	162	243

4 ●○○ Does the table show a linear, exponential, or quadratic function? Explain.

x	0	1	2	3	4	5
y	−6	−4	−4	−6	−10	−16

5 ●○○ Is $y = 2(2)^x$ linear, exponential, or quadratic?

6 ●○○ Find the ratio of each y-value to the one before it. Is the function exponential?

x	1	2	3	4	5	6
y	6	18	54	162	486	1458

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Preview - the full worksheet and its answer key are at primeworksheet.com