

Algebra II Practice Quiz 1.9

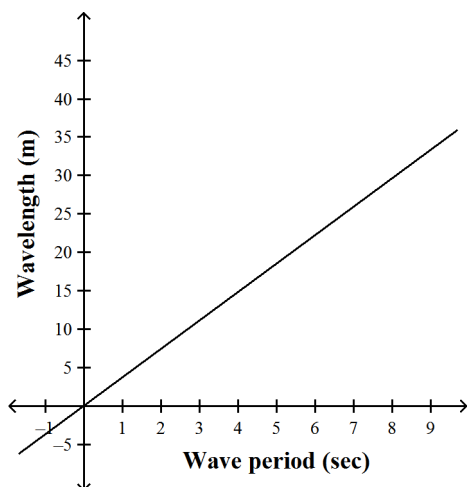
Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. (5 points) In the deep ocean, the length of a wave in meters is related to the period of the wave in seconds. Graph the relationship between wave period and wavelength and identify which parent function best describes it. (Hint: Although time cannot be negative, the negative portion of this function has been provided for you.)

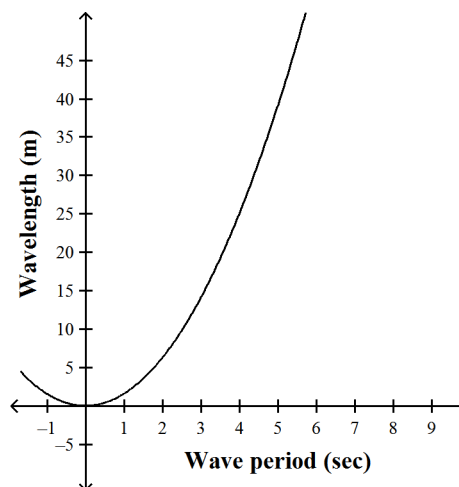
Wave period (sec)	Wavelength (m)
-1	1.56
1	1.56
2	6.24
3	14.04
5	39

A)



near parent function

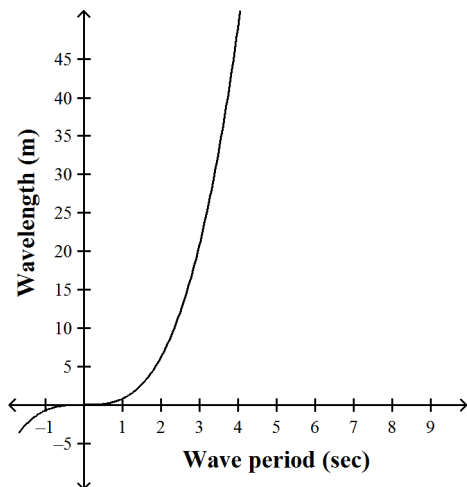
Li C)



uadratic parent function

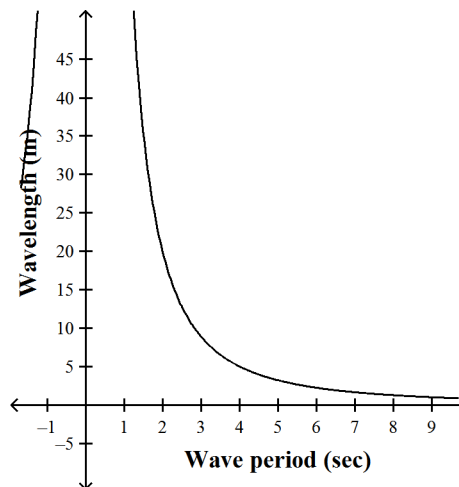
Q

B)



ubic parent function

C D)



uare-root parent function

Sq

Name: _____

ID: A

- _____ 2. (5 points) For which function is 3 NOT an element of the range?
- A) $y = -2x + 4$ C) $y = 3$
B) $y = x^5$ D) $y = -(-x)^2$

Short Answer

3. (5 points) Identify the parent function for $g(x) = (x + 3)^3$ and describe what transformation of the parent function it represents.

4. (5 points) Graph the data from the table. Describe the parent function and the transformation that best approximates the data set.

x	3	2	1	6	13
y	0	1	2	3	4

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Answer Section

MULTIPLE CHOICE

1. ANS: C PTS: 5 REF: Page 69
 2. ANS: D PTS: 5

SHORT ANSWER

3. ANS:

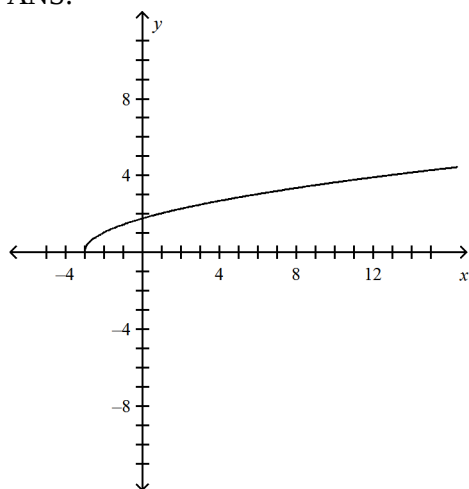
The parent function is the cubic function, $f(x) = x^3$.

$g(x) = (x + 3)^3$ represents a horizontal translation of the parent function 3 units to the left.

PTS: 5

REF: Page 67

4. ANS:



Square root function translated 3 units to the left.

PTS: 5

REF: Page 68