

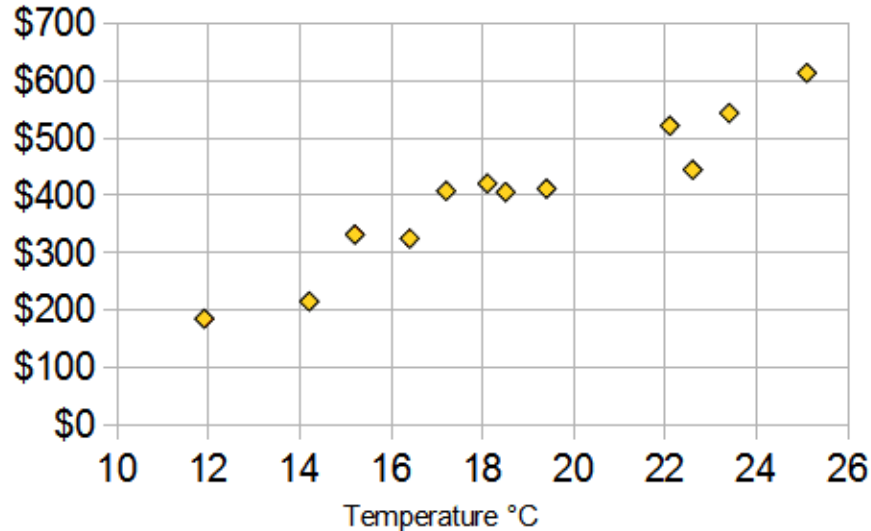
NAME _____

DATE _____

PER. _____

RETEST REVIEW: SCATTER PLOTS & REGRESSIONS

A local ice cream shop keeps track of how much ice cream they sell versus the noon temperature on that day. The scatterplot below shows their sales over the last 12 days. Use this graph to answer questions 1-4.



	<p>1. What type of correlation does the scatter plot show?</p> <p>A. Positive B. Negative C. No correlation D. Constant</p>
	<p>2. Which of the following is closest to the ice cream sales when the temperature is 25°C?</p> <p>F. 500 G. 200 H. 700 J. 600</p>
	<p>3. At what temperature were the ice cream sales closest to \$450?</p> <p>A. 20 B. 24.5 C. 25 D. 22.5</p>
	<p>4. Draw a trend line and predict the sales when the temperature is 21°C.</p> <p>F. 550 G. 460 H. 325 J. 625</p>

Circle whether each relationship is linear, quadratic, or exponential. Then, find the equation that represents each situation.

5.

x	y
-1	1.5
0	3
1	6
2	12

Lin / Quad / Exp

Equation: _____

6.

x	y
-2	4
-1	-2
0	-4
1	-2
4	28

Lin / Quad / Exp

Equation: _____

7.

x	-2	-1	0	4
y	-3	-6	-5	39

Lin / Quad / Exp

Equation: _____

8.

x	-2	-1	0	4
y	10	6	2	-14

Lin / Quad / Exp

Equation: _____

Circle what type of function includes each of the following sets of points.

9. $\{(-4, 10), (2, -8), (4, -14), (6, -20)\}$

Lin / Quad / Exp

What is the parent function of this relation?

10. $\{(-3, 11), (2, 6), (5, 27)\}$

Lin / Quad / Exp

What is the parent function of this relation?

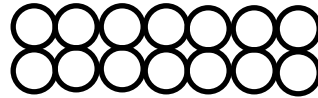
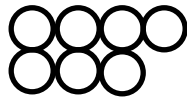
The table below shows the approximate heights, y , for a ball thrown by a shot-putter as it travels a distance of x meters horizontally.

Distance (m)	7	20	33	47	60	67
Height (m)	8	15	24	26	24	21

11. A graph of the data shows that a quadratic function is the best representation of the data. Using regression in the calculator, determine which of the following is a reasonable estimate of the height of a ball thrown a horizontal distance of 80 meters.

- A. 14 meters
- B. 29 meters
- C. 25 meters
- D. 8 meters

12. The given set of circles form a pattern.



If the pattern continues, which of the following expressions can be used to find how many circles are in the n^{th} figure?

How many circles are in the 9^{th} figure?

13. The first 4 terms in a pattern are shown below.

2, 4, 8, 16,...

If this pattern continues what expression can be used to find the n^{th} term?

What is the 10^{th} term?

14. Which statement comparing the linear and quadratic parent functions is false?

- F. Both parent functions have a domain of all real numbers
- G. Both parent functions contain the point (0, 0)
- H. The linear parent function is a line; the quadratic parent function is a parabola.
- J. Both parent functions have a range of all real numbers.