

Name:

Key

Date:

Hour:

Algebra 1
WS PC #2 Review – Unit 3

1. A company's cost are \$400 a week and profit \$20 per item sold. Write a linear equation to represent the total profit per week if the companies sold x items.

$$y = 20x - 400$$

2. Draw a scatter plot for the age and tail length of some tadpoles.

Ages (days)	5	2	9	7	12	10	3	6
Tail (mm)	14	15	3	8	1	3	12	9

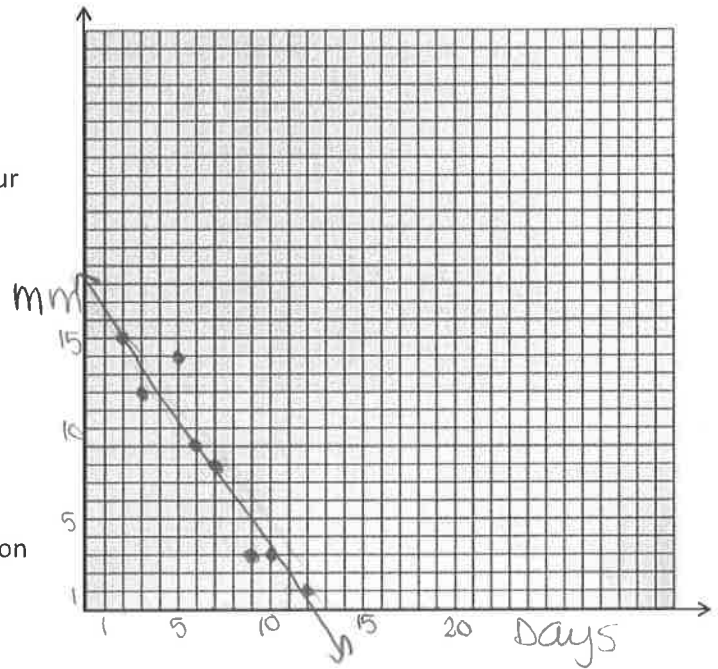
- a. Draw a line of best fit.
- b. Using your GDC, write the equation of your line of best fit.

$$y = -1.48x + 18.13$$

- c. Describe the correlation.
- d. Using your GDC, determine your correlation coefficient.

negative

$$r = -0.96$$



- e. Interpret the point (8, 10) for this situation.
- f. What does the slope of your line of best fit mean in this problem?

8 days → tail is 10mm

tail decreases about 1.5 mm per day

- g. What does the y-intercept of your line of best fit mean in this problem?

(0 days)
a new tadpole has about a 18mm long tail

Write a function to represent each table, pattern or sequence.

3.

x	0	2	4	6	8	10
$f(x)$	-4	-1	2	5	8	

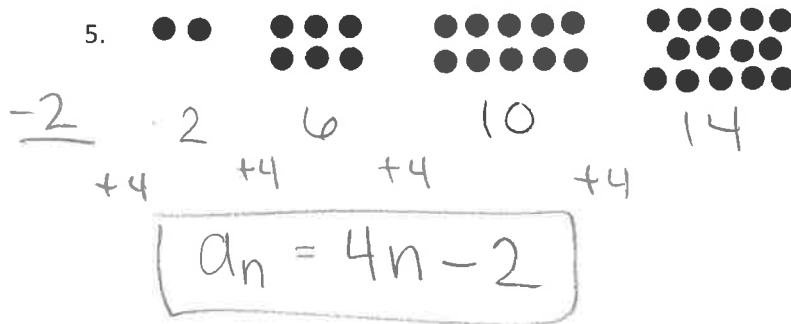
$+2$ $+2$ $+2$ $+2$ $+2$
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$$f(x) = \frac{3}{2}x - 7$$

4. $a_1 = 7, d = -2$

$$a_n = -2n + 9$$

9 7 5 3 1



6. For each of your equations from #3 – 5, find the 37th term.

a. Equation #3:

$$\frac{3}{2}(37) - 7 = \boxed{48.5}$$

$$f(37) = 48.5$$

b. Equation #4:

$$-2(37) + 9 = \boxed{-65}$$

$$a_{37} = -65$$

c. Equation #5:

$$4(37) - 2 = \boxed{146}$$

$$a_{37} = 146$$