# Algebra 1 Bellwork Tuesday, February 2, 2016

Use this table and the graph given.

| Age(yrs) | 1 | 3 | 4 | 9 | 11 | 12 |
|---|---|---|---|---|---|---|
| Length(cm) | 15 | 21 | 28 | 52 | 75 | 83 |

1. Make a scatter plot of this data.
2. Draw a trend line. A trend line is a single line that passes through the "middle" of the data.

3. Use this trend line to make the following predictions.

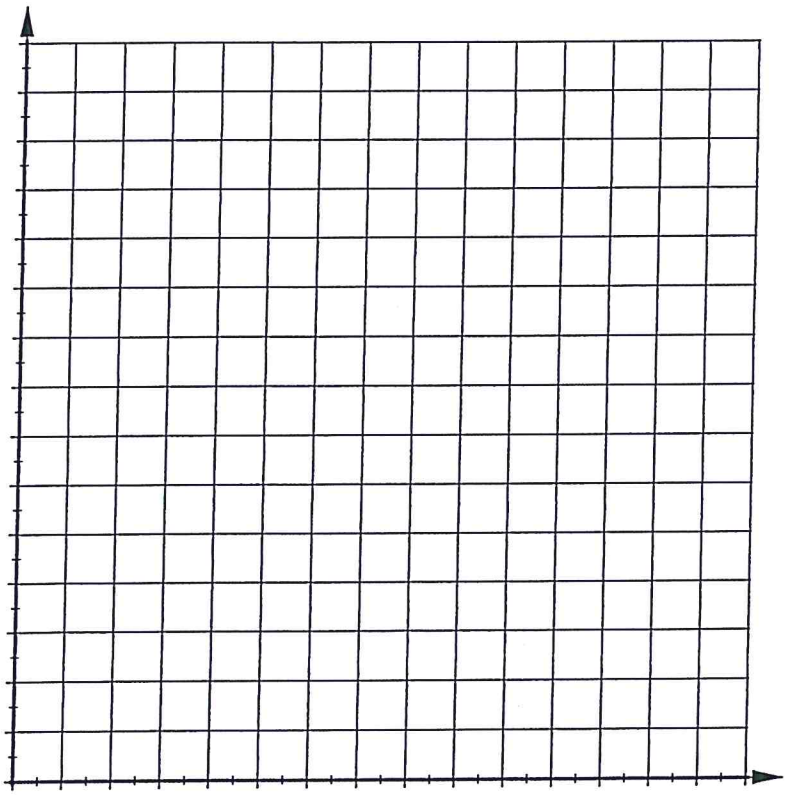
a) Estimate the length of a 6 year old snake.

b) Estimate the age of a snake that is ~~110~~ 100 cm long.

4. Pick two points on the trend line and write the equation of the trend line.

Points used: Equation:

5. Use this equation to predict the age of a snake that is 200cm long.



Algebra 1 Bellwork Tuesday, February 2, 2016 Answers

Use this table and the graph given.

| Age(yrs) | 1 | 3 | 4 | 9 | 11 | 12 |
|---|---|---|---|---|---|---|
| Length(cm) | 15 | 21 | 28 | 52 | 75 | 83 |

1. Make a scatter plot of this data.
2. Draw a trend line. A trend line is a single line that passes through the "middle" of the data.

3. Use this trend line to make the following predictions.

a) Estimate the length of a 6 year old snake. ≈ 41 cm

b) Estimate the age of a snake that is ~~100~~ 100 cm long. ≈ 15 yrs old

4. Pick two points on the trend line and write the equation of the trend line.

Points used: (1, 10) & (11, 75)

$m = \frac{75-10}{11-1} = \frac{65}{10} = 6.5$

Equation:

$y - 10 = 6.5(x - 1)$

$y - 10 = 6.5x - 6.5$

$y = 6.5x + 3.5$

5. Use this equation to predict the age of a snake that is 200cm long.

$200 = 6.5x + 3.5$

$-3.5 \quad -3.5$

$196.5 = 6.5x$

$x = \frac{196.5}{6.5}$

$y = 200$

≈ 14.85 yrs old