**Percent Change Situations**

**For each problem:**

A. Decide whether each situation is growth or decay and explain how you know.

B. Decide whether each situation is linear or exponential and explain how you know.

C. Identify your variables and write an equation for the function.

D. Answer the related question(s).

1. My pet iguana was 20 cm long when I got him. Then each month his length was 8% longer than the month before.

A.

B.

C.

D. How long was he after a year?

1. Tom’s ATV (all-terrain vehicle) was worth $800 when he purchased it. Each year it lost 16% of its value.

A.

B.

C.

D. How much was it worth after 4 years?

1. Sue’s scarf was only 8 inches long. Her grandmother took it and each day she knitted 75% of its original length.

A.

B.

C.

D. How long was the scarf after 5 days?

1. Aunt Amy starts feeding four seagulls at the beach. Each minute the number of seagulls wanting to feed from her is about 50% more than the number there the minute before.

A.

B.

C.

D. How many seagulls is she feeding eight minutes later?

1. You lend $75 to your brother, and each month for a year he will pay you only simple interest of 5%. Then at the end of the year he will have to pay you the $75 back.

First find out what simple interest means. Explain it here.

A.

B.

C.

D. How much total interest will your brother have paid you at the end of the year?

1. A local pond started with about 2400 fish. Due to contamination, the number of fish in the pond decreased. Each week the lake lost about 12% of the fish from the week before.

A.

B.

C.

D. How long until there is less than half of the original fish population left?