Linear vs. Exponential Functions

9) Matt wants to buy a new car that costs $14, 546. It is depreciating at a rate of 15.5% a year.

a) Is the situation linear or exponential? and why?

b) Write an equation to model the situation.

c) How much will the car be worth in 4 years?

10) Earl buys a piece of land for $52,000. It is appreciating at a rate of 4.2% a year.

a) Is the situation linear or exponential? and why?

b) Write an equation to model the situation.

c) How much will the land be worth in 12 year?

11) Addy is going to the Fall Festival at Millbridge Elementary. It cost $5 to get in plus $0.25 a ticket for rides.

a) Is the situation linear or exponential? and why?

b) Write an equation to model the situation.

c) Addy needs 20 tickets. How much money does she need to bring?

12) Cindy has $400 in her savings accounts. She withdraws $16 a week to pay for her music lessons.

a) Is the situation linear or exponential? and why?

b) Write an equation to model the situation.

c) Cindy wants to attend 15 lessons. How much money will she have left after the 15 lessons?

Troy has $200 he keeps under his mattress. He puts another $50 under his mattress each year.
JP invests $200 in a hot stock that is consistently earning 15% annually.

What's up with my money?

Is that linear or exponential?

THINKING CAP

Whoa.

Troy
1. Write a rule using NOW and NEXT to represent the situation.
2. Write a rule using "y =" to represent the situation.

JP
1. Write a rule using NOW and NEXT to represent the situation.
2. Write a rule using "y =" to represent the situation.

Years	Value	Years	Value

Graph with y-axis labeled 1,000, 750, 500, 250 and x-axis labeled 0 1 2 3 4 5 6 7 8 9 10