

Notes 10/20WARM UP

1. for the following sequences find the recursive formula, geometric or arithmetic & the common difference or ratio. would these be linear or curved?

a) $\frac{2}{3}, 2, 6, 18, \dots$

b) $-34, -22, -10, \dots$

c) $53, 46, 39, \dots$

d) $100, 25, 6.25, \dots$

Notesgoal:

geometric sequence: always start with u_0 unless noted otherwise in the problem.

→ what does this mean for the constraint?

→ what's the rule called for a geometric sequence?

~~from~~

rate of growth/decay:

→ how do you tell if a sequence has growth or decay?

→ what are you multiplying by?

→ what will the graph look like?

activity : Think about a cell phone that's \$100 and depreciates by 10% each year.

- what's the value after 1 year? How did you get that answer?
- what's your common ratio?
- what's the recursive formula?
- how do your common ratio & percent depreciation relate?

Now how about a bank account with annual interest of 5%. You start with \$500 in the account.

- how much do you have after 1 year? How did you get this answer? What's another method?
- what's the CR?
- what's the recursive formula?

overall

discuss percent of growth & decay.

growth : rule -1

decay : 1 - rule

ex a & d from warm up.