

HW 32

A2

1. B, IV

2. C, vi

3. F, iii

4. D, v

5. A, ii

6. E, i

Step 2

• geometric graphs are curved
whereas arithmetic are linear

• you multiply in the rule for
geometric vs. add/subtract
for arithmetic

$$\frac{u_{n+1}}{u_n} = \text{a number (geo)}$$

$$u_{n+1} - u_n = \text{a number (arith)}$$

Step 3

growth: vi & iii & v (increasing)

decay: iv & ii (decreasing)

Step 4

table: constant when dividing (G)
constant when subtracting (A)
or adding

graph: curved (G)
linear (A)

formula: multiply (G)
add/sub (A)

Example 1

100, 45, 20.25...

a) geometric

$$\frac{45}{100} = 0.45 \quad \frac{20.25}{45} = 0.45$$

decay \rightarrow decreasing

b) multiply by 0.45

c) $u_1 = 100$

$$u_n = 0.45 u_{n-1}$$

$$n \geq 2$$

example 2

a) Year	0	1	2	3	4	5	6	7	8
u_n	2000	2140	2289.8	2450	2621.59	2805.10	3001.46	3211.50	3436.37

b) multiplied by 1.07

• multiply by .07 & add to
previous

c) 11 years

d) $u_0 = 2000$

$$u_n = 1.07 u_{n-1}$$

$$n \geq 1$$

e) $y = 1.07x + 2000$