

BE-1B WEDNESDAY 3-28-07

① GRAPH $y = 2 \cdot 3^x$

② Use THE graph from #1
AND ESTIMATE THE VALUE of
 y WHEN x is 1.5

(1.)

Finding "Any" term, that is,
the " N "th term of a
geometric sequence. LOOK AT third term

EX) 3, 6, 12, 24, ... $\boxed{r=2}$

$a_1, a_2, a_3, a_4, \dots$

$$\begin{array}{cccc} \downarrow & \downarrow & \downarrow & \downarrow \\ 3 \cdot (2)^0 & 3 \cdot (2)^1 & 3 \cdot (2)^2 & 3 \cdot (2)^3 \end{array}$$

↑↑

IN GENERAL, THE term
YOU ARE INTERESTED IN,
LET'S SAY THE 3RD term,
is found ~~by~~ multiplying
the first term ($a_1 = 3$)
by the base ($r = 2$) raised
to one less than the term
number

$$a_3 = 3 \cdot 2^{(3-1)}$$

$$\boxed{a_N = a_1 \cdot r^{N-1}}$$

(2)

Ex) find the 6th term of
3, -15, 75, ...

$$a_1 = 3 \quad r = -5$$

$$a_n = a_1 r^{n-1}$$

$$N=6 \quad a_6 = 3 \cdot (-5)^{6-1}$$

$$a_6 = 3 \cdot (-5)^5$$

$$a_6 = 3 \cdot (-3125)$$

$$\boxed{a_6 = -9375}$$

$$5 \cdot 5 \cdot 5 = 125$$

$$\cdot 5 = 625$$

$$\begin{array}{r} \times 5 \\ \hline 3125 \end{array}$$

$$\uparrow$$

$$5^5$$

HW: Pg 570 #1, 7, 8, 10, 12, 16