

MATH 100 Class Session 10/23/08

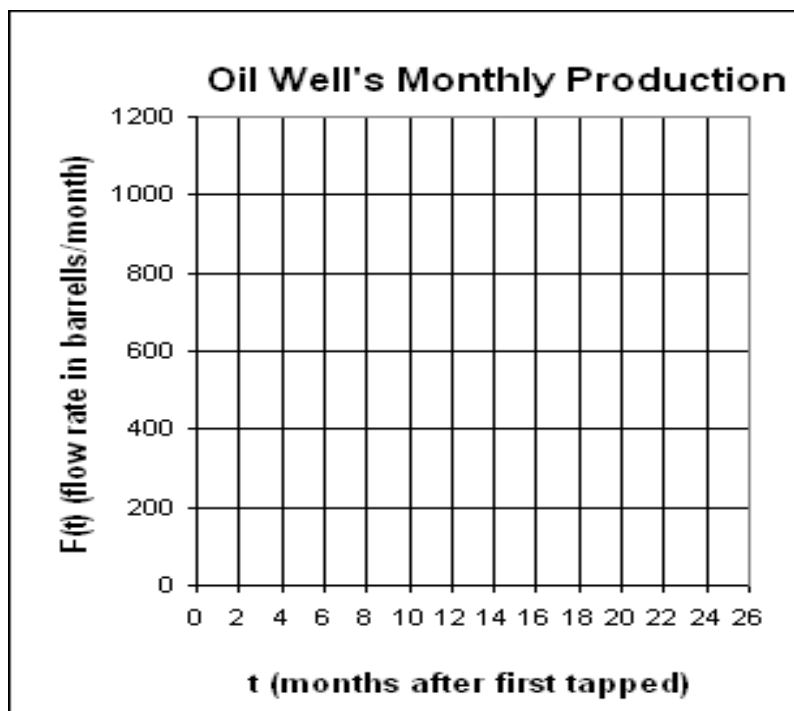
1. The oil flow from a well is highest when the well is first tapped and decreases over time by a specific percentage each month that the well is tapped. Suppose a particular well had a flow of 1000 barrels per day when it was first tapped and that its flow has been decreasing by 6% per month since then. Express the relationship between the flow rate in barrels/day and the number of months since the well was first tapped.

Let t = the number of months since the well was first tapped.

$F(t)$ = the flow rate, in barrels/day, after t months of production

What flow rate would you expect the well to show after 2 years of production?

t	$F(t)$
0	1000.00
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
24	



2. The net annual income of the Acme Co. was \$240 million in 1990 and has been increasing at the rate of 10% per year since. If we let t = the number of years since 1990 and $A(t)$ = Acme Co.'s net annual income t years after 1990, can we represent $A(t)$ as a function of t ?

Complete the table below and plot $A(t)$ vs t using the grid below.

Years Since 1990 t	Acme Co.'s Net Annual Income (\$millions) $A(t)$	$\Delta A(t)$	Ratio $\frac{A(t)}{A(t-1)}$
0	240.00		
1			
2			
3			
4			
5			
6			

