

The owner of the Quad City Mallards wants to build a new arena. It is a big project to complete, and he only has 2 weeks to get it finished. He's so desperate for workers that he has hired you and has even given you the choice on how you'd like to get paid.

Analyze the 2 options, and decide which payment plan you would like to receive for the job.

Option 1: \$1 on Day 1, \$3 on Day 2, and then continue to triple the pay each day
 Option 2: \$2000 on Day 1, with a \$1500 increase per day each day after the 1st

- Make your decision (circle one).
 Show your work to prove why you made your choice.

Option 1			Option 2	
Day	Pay	Running Total	Pay	Running Total
1	1	1	2000	2000
2	3	4	3500	5500
3	9	13	5000	10500
4	27	40	6500	17000
5	81	121	8000	25000
6	243	364	9500	34500
7	729	1093	11000	45500
8	2187	3280	12500	58000
9	6561	9841	14000	72000
10	19683	29524	15500	87500
11	59049	88573	17000	104500
12	177147	265720	18500	123000
13	531441	797161	20000	143000
14	1594323	2,391,484	21500	164500
x	3^{x-1}		$2000+1500(x-1)$	188500

2. Option 1 is Linear. True or False (circle one)

Option 2 is Linear True or False (circle one)

3. If this was only a 1 week job, would you still have chosen the same option?
Why?

no, option 2 would have been better

What if it was a 10-day job? Why?

option 2 still pays more

4. If a worker chose Option 1, when should the owner fire the worker in order to make sure he doesn't lose out on a lot of money? (When does this option become more expensive than the other option?)

after 11 days