Oil Spills

•••

Z kdw#gr#|rx#nqrz B

Which do you choose?

Wkh#wdeohv#ehorz#vkrz#wkh#txp ehu#ri#eduuho#ri#rlo#/#wkdw#hp dq#diwhu#{gd|v#ri#fondqxs#iru#wz r#gliihuhqw#hp ryda#p hwkrgv#dv#sdw#ri#dq#h{shulp hqw#qyroylqj#d#vlp xodwhg#rl#vsloo1

Z klfk#p hwkrg#z rxog#|rx#fkrrvh#r#fondq xs#wkh#rl#vsloB

Z kdw#hdvrqv#p ljkw#|rx#xvh#r#xwli|#|rxu fkrlfhB

Method 1: Chemical Dispersants					
x	0	1	2	3	4
y	20	17.5	15	12.5	10

Method 2: Biological Agents					
x	0	1	2	3	4
y	20	16	12.8	10.24	8.192

Think About It

Z rxog#|rxu#dqvzhu#fkdqjh#li#|rx#kdg#wr#frqwuro#dq#rlo#vsloo#wkdw#zdv#wzlfh#dv#odujhB

Z kdw#zrxog#fkdqjh#li#hdfk#phwkrg#uhpryhg#wzlfh#dv#pxfk#rlo#dv#vkrzq#lq#wkh#wdeohB

Which is best and when?

Ighqwli|#wkh#p hwkrg#wkdw#hp ryhv#p ruh#ri#wkh#rg#ru#ndfk#qwhuydo

Interval	Chemical	Biological
$0 \le x \le 1$	-2.5	-4
$1 \le x \le 2$	-2.5	-3.2
$2 \le x \le 3$	-2.5	-2.56
$3 \le x \le 4$	-2.5, 10	-2.048
$4 \le x \le 5$	-2.5	6.5536
$5 \le x \le 6$	-2.5	5.24288
$6 \le x \le 7$	-2.5	4.1943
$7 \le x \le 8$	-2.5, 0	3.35544

Method 1: Chemical Dispersants					
x	0	1	2	3	4
y	20	17.5	15	12.5	10

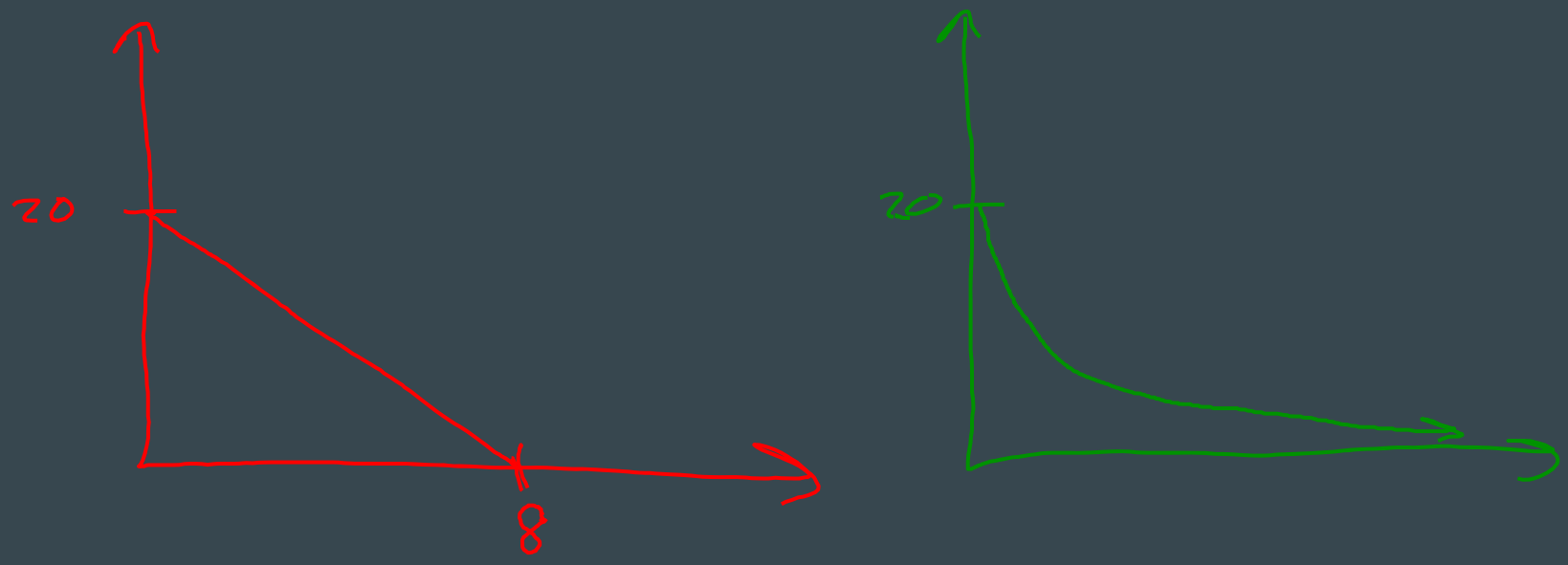
Method 2: Biological Agents					
x	0	1	2	3	4
y	20	16	12.8	10.24	8.192

Let’s discuss.

```
41 Z kdw#z huh#|rx#frqvlghulqj#z khq#|rx#fodvvlilhg#hdfk#lqwhuydo3
51 K rz #glg#|rx#ghwhup lqh#z klfk#lv#wkh#ehwwhu#p hwkrg#ru#hdfk#jlyhq#vhw#ri#fulwhuld3
61 Lv#wkh#bq|#srlqw#q#wlp h#z khuh#erwk#p hwkrgv#uh#txdoo|#iihfwlyh3#
71 K rz #z rxog#|rx#ghflgh#z klfk#p hwkrg#wr#hfrp p hqg#li#|rx#z dqwhg#wr#hp ryh#oo#
   ri#wkh#rl3
    d1 Doo#exw#43#jdorqv#ri#wkh#rl3
    e1 Dq|#ip rxqw#ri#rl3
```

Graph it!

Dqdo|}h#kh#qxp hulf#gdwd#dqg#d#judsk#ri#kh#qxp hulf#gdwd,#kdw#ghilqhv#kh#bp rxqw#ri#rl#hp dlqlqj#hodwlyh#r#kh#qxp ehu#ri#gd|v#ru#hdfk#p hwkrg1



Analyze & Interpret

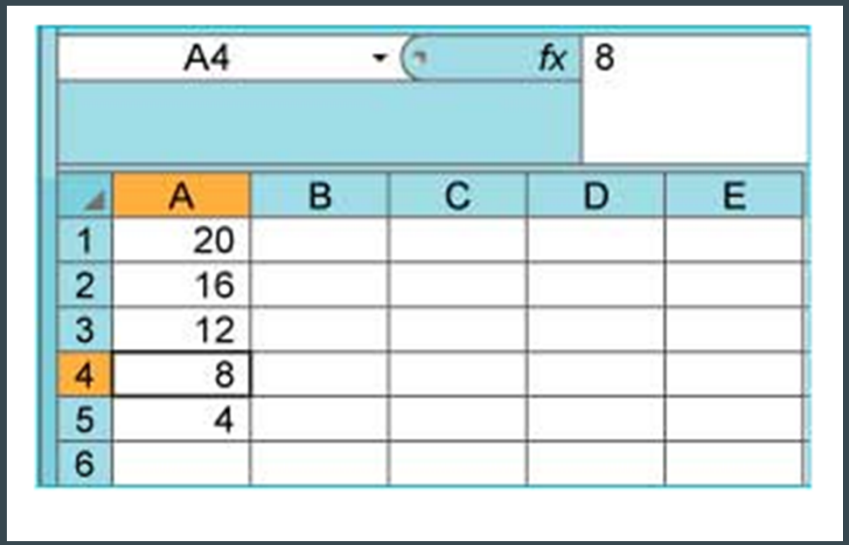
```
Fkhp lfd#G lvshuvdqw#kdyh#d#+frqwdqw#fkdqjlqj, udw#ri#fkdqjh#ghilqhg#e|#d#
+frp p rq#dwlr/#frp p rq#gliihuhqfh, vr#wklv#p hwkrg#ri#fdqdq#xs#fdq#eh#p rghqg#z lwk#d#
+dqhdu#xdgudwlf/#n{srqhqwldo, ixqfwlrq1#Wklv#lv#q#n{dp sdn#ri#d#+dulwkp hwlf/#
jhrp hwulf,#vhtxhqfh1

Wkh#Elrorjlfd#Djhqw#kdyh#d#+frqwdqw#fkdqjlqj, udw#ri#fkdqjh#ghilqhg#e|#d#
+frp p rq#dwlr/#frp p rq#gliihuhqfh, vr#wklv#p hwkrg#ri#fdqdq#xs#fdq#eh#p rghqg#z lwk#d#
+dqhdu#xdgudwlf/#n{srqhqwldo, ixqfwlrq1#Wklv#lv#q#n{dp sdn#ri#d#+dulwkp hwlf/#
jhrp hwulf,#vhtxhqfh1
```

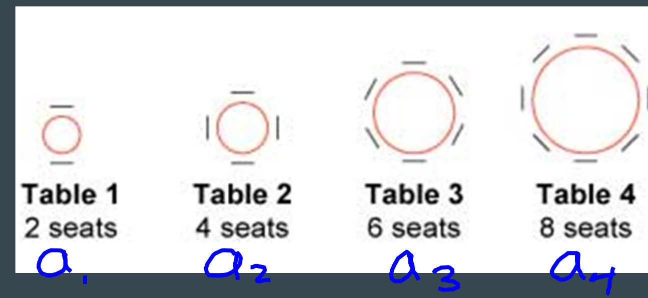
Moving On...

K rz #p ljkw#|rx#lghqwli|#d#ydoxh#lq#wkv#vuhdgvkhhw#Z lwkrxw#qdp lqj#wkh#ydoxhB

K rz #p ljkw#|rx#bsso|#wkv#bssurdfk#wr#wkh#whup v#ri#d#vhtxhqfh#Z ulwwhq#lq#d#lw#qvwhdg# ri#d#vuhdgvkhhwB



Dining at the Bistro



Wkh#gldjudp#vkrzv#wkh#qxpehu#ri#vhdwv#dydlodeoh#dw d#elvwurïv#irxu#vpdoo#flufxodu#wdeohv1

Zrun#zlwk#d#sdwwhuq#wr#h{suhvv#wkh#qxpehu#ri#vhdwv#dw#wkh#gliihuhqw#vl}hv#ri#wdeohv#dv#d# vhtxhqfh#ri#qxpehuv1#Wkhq#dqvzhu#wkhvh#txhvwlrqv#wrjhwkhu1

- Write the sequence of numbers a_1, a_2, a_3, a_4.
- What value would be in the fifth position? $a_5 = 10$
- How would you represent the number in the sequence at the 10th position? a_{10}
- How would you represent the number in the sequence at the nth position? a_n
- What does a_{n-1} represent?
- What is the value of a_{n-1} when $n = 3$?

Determine whether each sequence is arithmetic. Write *yes* or *no*.

1. 8, −2, −12, −22,

2. −19, −12, −5, 2, 9

3. 1, 2, 4, 8, 16

4. 0.6, 0.9, 1.2, 1.8, ...

Find the next four terms of each arithmetic sequence.

5. 6, 18, 30, …

6. 15, 6, −3, …

7. −19, −11, −3, …

8. −26, −33, −40, …

9. **FINANCIAL LITERACY** Kelly is saving her money to buy a car. She has $250, and she plans to save $75 per week from her job as a waitress.

a. How much will Kelly have saved after 8 weeks?

b. If the car costs $2000, how long will it take her to save enough money at this rate?

Recursive Formula for Arithmetic Sequence

$$a_n = a_{n-1} + d$$

distance between #s

change

$a_5 = a_{5-1} +$ ___

$a_4 +$ ___

Ex 1: Write a recursive formula for each sequence.

d, 5, 13, 21, 29, 37, ...

42 50

$a_8 = a_7 + 8$

$a_n = a_{n-1} + 8$

$a_8 = 50 + 8$

$= 58$

e, 4, 13, 22, 31, 40, ...

$a_n = a_{n-1} + 9$

Ex 2: Find the first 5 terms of each sequence.

d, $a_1 = 16 \qquad a_{n+1} = a_n + 4$

e, $a_1 = -2 \qquad a_{n+1} = a_n - 5$