Starting w/ 1 Zombie

Days	Zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
⋮	⋮
x	

$\cdot 2 = 2^1$

$\cdot 2$

$2 \cdot 2 = 2^2$

$2 \cdot 2 \cdot 2 = 2^3$

$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$

$= 2^6$

2^x = # of zombies

Starting w/ 2 Zombies

Days	Zombie 1	Zombie 2	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮			
x	2^x	2^x	$2(2^x)$

rate: how much the exponent is increasing or decreasing.

ex) # of people a zombie infects to stay alive.

Starting w/ 1 Zombie

Days	Zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
⋮	⋮
x	

2

2·2 = 4

2·2·2 = 8 = 2^3

2·2·2·2 = 16 = 2^4

2·2·2·2·2 = 32 = 2^5

2^x = # of zombies

Starting w/ 2 Zombies

Days	Zombie 1	Zombie 2	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮			
x	2^x	2^x	$2(2^x)$

Note: how much the exponent is increasing or decreasing.

(2) # of people a zombie infects it stay alive.

Exit Ticket

Answer these questions and hand in your paper before you leave.

1) How many days until <u>all</u> of Sexton is infected? Hints: There are about 800 students at Sexton. Assume it all starts with 1 zombie.

2) How many days until all of Lansing is infected?
(Lansing pop. = 114,000)

3) Write an equation to figure out how many zombies there will be after <u>any</u> (x) ~~amount~~ of days.

10/10 Alya

Days	
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1,024
x	2^x = # of

ex) # of people a zombie infects to stay alive

rate: how much the exponent is increasing or decreasing

Zombies

Days	Zombie 1	Zombie 2	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
6	64	64	128
x	2^x	2^x	$2(2^x)$

1) about nine days

2)

Day	
11	2048
12	4'096
13	8'192
14	16'384
15	62'768
16	125'536
17	251'072
18	
19	
20	

24'576

about 16 days

3) ~~~~~

2^x = # of zombies

= y

10/10

Buddhi Bhujel
3/9/2012.
6th hr.

Starting Zombie

Days	Zombies.
0	1
1	2
2	4
3	8
4	16
5	32
6	64
⋮	
x	
.	
.	
.	
y	

$2 \cdot 2 = 2^2$

$2 \cdot 2 \cdot 2 = 2^3$

$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$

$= 2^6$

$\therefore 2^n = \#$ of Zombies.

Days	Zombies 1	Zombies 2	Total
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
n	$\frac{n}{2}$	2^n	$2(2^n)$

rate: how much the exponent is increasing or decreasing.

Ex) # of people a zombies infects to stay alive.

1). How many days until all of sexton is infected? Hint: there are about 800 students at sexton Assume it all starts with 1 zombies.

2) How many days until all of lansing is infected?
(lansing pop = 114,000).

3) Write an equation to figure out how many zombies there will be after any (x) amount of days.

7/10

Kali Hogan

Day	Zombies
0	1 $1 \cdot 2 = 2^0$
1	2 $2 = 2^1$
2	4 $2 \cdot 2 = 2^2$
3	8 $2 \cdot 2 \cdot 2 = 2^3$
4	16 $2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32 $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64 $= 2^6$
.	.
.	.
.	.
.	.
.	.
X	.

2^x = # of zombies

Starting w/ 2 zombies

Days	1 zombie	1 zombie	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
.			
.			
.			
X	2^x	2^x	$2(2^x)$

rate: how much the exponet is increasing or decreasing

ex) # of people a zombie infects to stay Alive.

1. $2^{10} = 1024 = 800$ Almost

2 $2^{14} = 163,840$

3 $2^x = y$

Zombie Apocalypse 10/10

6th hour

Nick Carbonell

starting w/ 1 zombie

days	zombies	
0	1	$\cdot 2 = 2^0$
1	2	$\cdot 2 = 2^1$
2	4	$\cdot 2 \cdot 2 = 2^2$
3	8	$\cdot 2 \cdot 2 \cdot 2 = 2^3$
4	16	$\cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32	$\cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64	$\cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$
x		2^x = # of Zombies

starting with 2 zombies

days	Zombie1	Zombie2	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
6			
7			
x	2^x	2^x	$2(2^x)$

rate. How much the amount increases or decreases.

Ex: # of People A zombie infects to stay alive.

(1) x800

days	zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1024

(113)

$2^x = Y$

(About 10 days or less)

(2) Lansing

days	zombies		
0	1	11	2048
1	2	12	4096
2	4	13	8192
3	8	14	16384
4	16	15	32768
5	32	16	65536
6	64	17	131072
7	128	18	262144
8	256		
9	512		
10	1024		

(17 days)

(About 18 days or less)

(17 days)

6/10

MARCH 9th
Destiny M

Starting w/ zombie

Days	zombies	
0	1	$=2^0$
1	2	$=2^1$
2	4	$=2^2$
3	8	$=2^3$
4	16	$=2^4$
5	32	$=2^5$
6	64	$=2^6$
⋮	128	$=2^7$
⋮	⋮	
⋮	⋮	
⋮	⋮	
X	⋮	2^x = # of zombies

starting w/ 2 zombies

0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮			
⋮			
X	2^x	2^1	$2(2^x)$

rate: how much the exponent is increasing or decreasing

ex) # of people a zombie infects to stay alive

1. [illegible] $2(800^{x})=$

2.

9/10

Anthony Hoyle
3-8-12

(1)

Day	Zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1,024
11	2,048
12	4,096
13	8,192
14	16,384
15	32,768
16	65,536
17	131,072

Day 10

(2)

$2^{x} = 9$

10/10

Nitenia Roland
3.9.12
6th Hr

Zombie Activity

Starting w/ 1 zombie

Days	Zombies
0	$1 = 2^0$
1	$2 = 2^1$
2	$4 = 2^2$
3	$8 = 2^3$
4	$16 = 2^4$
5	$32 = 2^5$
6	$64 = 2^6$
.	.
.	.
.	.
.	.
x	. $= 2^x$: number of

Days	Zombies	Zombies/2	Total
11	2048	2048	4096
12	4096	4096	8192
13	8192	8192	16384
14	16384	16384	32768
15	32768	32768	65536
16	65536	65536	131072
17	131072	131072	262144
18	262144	262144	524288

Starting w/ 2 zombies

Day	zombie 1	zombie 2	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
6	64	64	128
7	128	128	256
8	256	256	512
9	512	512	1024
10	1024	1024	2048 → on day 10

Rate: is how much the exponent is increasing or decreasing. (10:1)

Ex # of people a zombie needs to stay alive

- Exit Ticket -

1) $2(300^x)$ = a day?
2) $2(1.14.2x^x)$ = 16 days
3) 2^x = the number of zombies.

Homework 10/16

Jacquay Jones
3-9-12

starting w/ 1 zombie

Days	zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64

2^x # of zombie

Days	zombie	zombie	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
X	2^x	2^x	$2(2^x)$

rate: how much the exponent is increasing or decreasing.

ex) # of people a zombie infects to stay alive.

1. 800 = 9 days $256 \cdot 2 = 512$

2. 114,000 = 15 days $8192 \cdot 2 = 16384$

4096

3. $(x)^2 = 0$

B

10/15

10/10

Saving the Earth
6th nar

Starting w/ 1 Zombie

Days	Zombies
0	2^0
1	2^1
2	$4 \quad 2 \cdot 2 = 2^2$
3	$8 \quad 2 \cdot 2 \cdot 2 = 2^3$
4	$16 \quad 2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	$32 \quad 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	$64 \quad 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$
...	
X	2^X = # of zombie

Starting w/ 2 Zombie

Days	Zombie	Zombie 2	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
X	2^x	2^x	$2(2^x)$

rate = how much the exponent is increasing or decreasing.

Ex) # of people of zombie needs to stay alive.

Exit - Ticket

1)

Days	zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1,024

At day 10

3) $2^x = y$

2)

Days	zombies
10	1,024
11	2048
12	4096
13	8192
14	16384
15	32768
16	65536
17	131072
18	262144

At day 17

10/10

3/9/12

Destiny T. Davis

Zombie Activity

Starting W/ 1 Zombie

Days	Zombies	
0	1	) ·2
1	2	
2	4	$2 \cdot 2 = 2^2$
3	8	$2 \cdot 2 \cdot 2 = 2^3$
4	16	$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$
∘	∘	
∘	∘	
∘	∘	
∘	∘	
X		

64

· 8

starting w/ 2 zombies

Days	zombie	zombie	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮	⋮	⋮	
	x	2^x	2^x $2(2^x)$

2^x = # of zombies

rate: How much the exponent is increasing or decreasing

Ex) # of people a zombie needs to stay alive.

Questions

1. about 12 days
2. about 36 days
3. $2x^2$

10/10

Vily Vue
6th hour
March 9, 2012

Starting 1 Zombie

Days	Zombies	
0	1	
1	2	$\cdot 2$
2	4	$\cdot 2$, $2 \cdot 2 = 2^2$
3	8	$2 \cdot 2 \cdot 2 = 2^3$
4	16	$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64	$= 2^6$
⋮	⋮	
X	⋮	2^x = # of zombies

Starting w/ 2 Zombies

Days	Zombie	zombie	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮	↓	↓	↓
X	2^x	2^x	$2(2^x)$

rate: how much the exponent is increasing or decreasing

Ex) # of people a zombie infects to stay alive.

1.

Zombies	Sexton
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1024

9 or 10 day until Sexton get infected.

3. $2^x = 4$

2.

Zombies	Lansing
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
10	1024
11	2048
12	4096
13	8192
14	16384
15	32768
16	65536
17	131072
18	262144

12 or 18 day until Lansing get infected.

DEQUON KOVAR
3-4-12

~~18~~ 6/10

Starting w/ 1 zombie

days	zombies	
0	1	2^0
1	2	2^1
2	4	$2 \cdot 2 = 2^2$
3	8	$2 \cdot 2 \cdot 2 = 2^3$
4	16	$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64	2^6
.	.	
.	.	
.	.	
x		

Starting w/ 2 zombie

days	zombie	zombie	total
0	1	1	2
1	2	2	4
2	4	4	8
4	8	8	16
5	16	16	32
6	32	32	64
.			
.			
.			

Water

2

10/10

Screamlee
6th hour
03/09/12

Starting w/ 1 Zombie

Days	Zombie	
0	1	$= 2^0$
1	2	$= 2^1$
2	4	$= 2^2$
3	8	$= 2^3$
4	16	$= 2^4$
5	32	$= 2^5$
6	64	$= 2^6$
⋮	⋮	
x		$= 2^x$ → #'s of zombie

Starting w/ 2 Zombie

Days	Zombie 1	zombie 2	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
⋮			

x	$2x$	$2x$

$= 2(2x)$

1.) $2^{10} = 1024$, 9 days wasn't enough

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$ so 10 days.

$2 \cdot 2 \cdot 2 \cdot \ldots = 1024$

2.) $2^{17} = 131072$, 16 days wasn't enough

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot \ldots$ to infect all of Lansing so

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot \ldots$ 17 days did the job.

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot \ldots = 131072$

3.) numbers of zombies $= 2^x$

10/10

Cristina Gomez
6th hr.

Exit ticket

1. Day 7 $64 \cdot 2 = 128$
   Day 8 $128 \cdot 2 = 256$
   Day 9 $256 \cdot 2 = 512$
   Day 10 $512 \cdot 2 = 1024$

   9 days wasn't enough 10 day will at least infect 800 people.

2. Day 11 $1024 \cdot 2 = 2048$
   Day 12 $2048 \cdot 2 = 4096$
   Day 14 $4096 \cdot 2 = 8192$
   Day 15 $8192 \cdot 2 = 16,384$
   Day 16 $16,384 \cdot 2 = 32,768$
   Day 17 $32,768 \cdot 2 = 65,536$
   Day 18 $65,536 \cdot 2 = 131,072$

   17½ days wasn't enough 17 day will at least infect 114,000 people.

3. # of zombies = 2 to the number of days

Cristina Gomez

Math

Starting w/ Zombie

Days	Zombie	
0	1	$\cdot 2$ 2^0
1	2	$\cdot 2$ $2 \cdot 2 = 2^2$ 2^1
2	4	$\cdot 2$ $2 \cdot 2 \cdot 2 = 2^3$ 2^2
3	8	$\cdot 2$ $2 \cdot 2 \cdot 2 \cdot 2 = 2^4$ 2^3
4	16	$\cdot 2$ $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$ 2^4
5	32	$\cdot 2$ $2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$ 2^5
6	64	
.	.	
.	.	2^{100}
.	.	
.	.	2^x = # of zombies
X	.	

$64 \cdot 2 = 128$
$128 \times 2 = 256$
$256 \cdot 2 = 512$
$512 \cdot 2 = 1024$

Starting w/ 2 zombies

Days	Zombie	Zombie	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
X	2^x	2^x	$2(2^x)$

$\therefore$

rate: how much the exponent is increasing or decreasing.

Ex.: # of people a zombie infects to stay alive.

CALEB 5/10 6th hour Algebra

Washington Mrs. Scott/O'Reilly

Starting W/ Zombie

Days | Zombies

Days	Zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
.	.
.	.
.	.
X	

2 x the # of zombies

Starting W/ 2 Zombies

rate: how much

The exponents

Days	combo	combo	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64

1 I think it would take up to 50 days

2 I think it would take 100 days

3 idk

10/10

Lakrawn Wade

Zombie.

Starting w/ 1 zombie

Days	Zombie
0	1 $2^0 = 1$
1	2 $\cdot 2$
2	4 $\cdot 2 \cdot 2 = 2^2$
3	8 $\cdot 2 \cdot 2 \cdot 2 = 3^3$
4	16 $\cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32 $\cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64
⋮	⋮
⋮	⋮
⋮	⋮
⋮	⋮
X	

2^x = # of zombie

Starting w/ 2 zombies

Days	zombie 1	zombie 2	total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
6	64	64	128
7	128	128	256
8	256	256	512
9	512	512	1024
x	2^x	2^x	$2(2^x)$

Day	
11	2048
12	4'096
13	8'192
14	16,384
15	62,768
16	125,536

rate: how much the exponent is increasing or decreasing.
ex) # of people a zombie infects to stay alive.

1. 9 days
2. About 16 days
3. $2x$ = number of zombie

Tavern
October
3-9-12
6th

10/10

Starting w/1 zombie

Days	Zombie	
0	1	2
1	2	2
2	4	2
3	8	2
4	16	2
5	32	2
6	64	
.	.	
.	.	
.	.	
.	.	
x		

Starting w/2 zombies

Days	Zombies	Zombies	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64

1)

7	128
8	256
9	512
10	1024

A bout 9 Days and a few Hours

2)

		13	8192	16	65,536
10	1024	14	16384	17	131,072
11	2048	15	32768	18	262,144

A bout 17 Days and some Hours.

1) 10 days

$2^{10} = 1024$

$2^9 = 512$ ← Too small

2) ~~21 days~~

~~$2^{21} = 1,63$~~

17 days

$2^{17} = 131,072$

$2^{16} = 65,536$ ← too small

3) $2^x = 4$

10/10

Sierra Emmanuelson
3/9/12
6th

Days	Zombies
0	1
1	$2 = 2^1$
2	$4 = 2^2$
3	$8 = 2^3$
4	$16 = 2^4$
5	$32 = 2^5$
6	$64 = 2^6$

Days	zombie	zombie	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
X	2^x	2^x	$2(2^x)$

rate: how much the exponent is increasing or decreasing

Ex/ ~~H~~ of people a zombie infects to stay alive.

1. It will take 10 days to infect sexton.
   64 and went up

2. 114,000. it takes 17 days.

3. $2x - 2$

$64 \times 2 = 128$
$128 \times 2 = 256$
$256 \times 2 = 502$

10 11 12 13 14 15 16 17 18

10/10

Math Battle

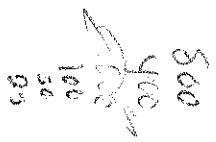
Days	zombies
0	1
1	2
2	4
3	8
4	16
5	32
6	64
∘	∘
∘	∘
∘	∘
∘	∘
X	2^x = # of zombies

$2^5 = 32$

Days	zombi	zombi	zombi
0	1	1	1
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
∘	∘		
∘	∘		
∘	∘		
x	2^x	2^x	

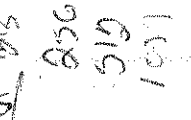
Rate: how much the exponent increases or Decreases

(x) # of people a zombi infects to stay alive



10

1. ~~350~~ Days Because ~~Sorry~~



2. ~~5 1000~~ Days ~~14 Days~~ (7 days)

3. x. ~~$x^2 = x$~~ $x \cdot x^2 = x$

Starting w/ 1 Zombie 10/10

Chris A
5-9-12
6th

Days	Zombies	
0	1	2^0
1	2	2^1
2	4	$2 \cdot 2 = 2^2$
3	8	$2 \cdot 2 \cdot 2 = 2^3$
4	16	$2 \cdot 2 \cdot 2 \cdot 2 = 2^4$
5	32	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5$
6	64	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^6$
.		
.		
.		
.		
X		2^X = # of zombies

2° pattern

Starting w/2 zombies

Days	Zombie	Zombie	Total
0	1	1	2
1	2	2	4
2	4	4	8
3	8	8	16
4	16	16	32
5	32	32	64
.	.	.	.
X	2^X	2^X	$2(2^X)$

Rate: How much the exponent is increasing or decreasing

Ex) # of people a zombie infects to stay alive

1) 10 days ~~6th~~ I used a phone started from 6th power and went up

2) taking = 114,000 17 days

3 $2^x = d$

7 8 9 10 11 12 13 14 15

16 17