1, 2, 3, 6, 8, 12, 15, 29

1. End of 1, 2, 5 years

$1,000(1.03)^x$

Year 1: 1,030$

Year 2: 1,060.9$

Year 3: 1,093$

Year 4: 1,125$

Year 5: 1,159.3$

2, 3, 6, 8, 12, 15, 29

2. Rate = 7% $10{,}000(1.07)^t$

2004 = 10000
2005 = 10,700
2006 = 11,449
2007 = 12,250
2008 = 13,108

2008 Pop = 13,108

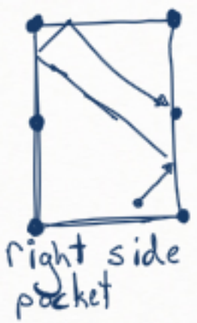
3, 6, 8, 12, 15, 29

3. max: 6,000 fish

3,000 = 50%
4,800 = 80%
7,500 = 133%

6, 8, 12, 15, 29

6.



8, 12, 15, 29

8. $\frac{1000(1.05)^x}{1000} = \frac{2000}{1000}$

$(1.05)^x = 2$

$x \approx 15.5$

12, 15, 29

12. a.

1 step

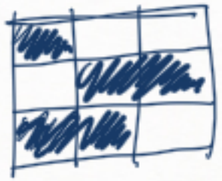
2 steps

3 steps

4 steps

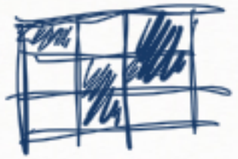
12. b.

1 step



2 steps

3 steps



4 steps

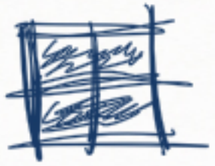
15, 29

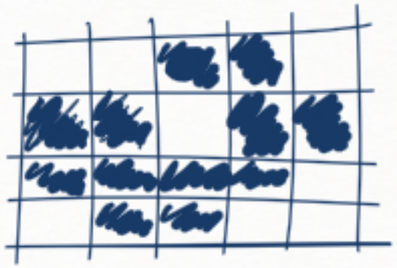
15.a

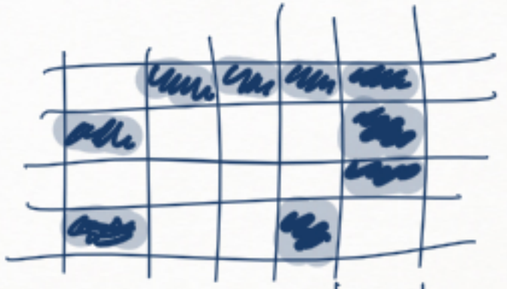
1 step 

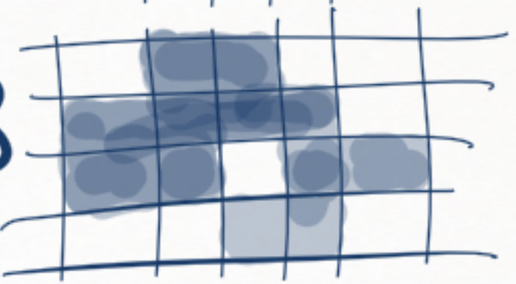
2 steps 

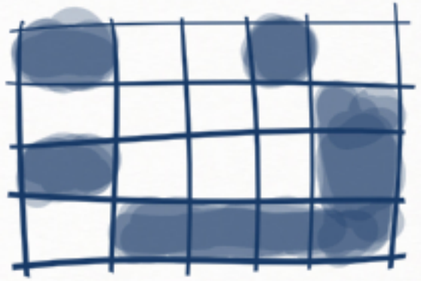
3 steps 

4 steps 

15.b. step 1 

step 2 

step 3 

Step 4 

29

29.

how many ends after four generations? 16

after n generations? $(2)^n$

gen1=

gen2=

gen3=

gen4=