

HW 4

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1. a)

	Draw 1	Draw 2	
0 blue :	4	x 4	16
2 blue -	3	x 3	9
2 blue -	2	x 2	4
3 blue -	1	x 1	1
4 blue -	0	x 0	0

16/30 chance of 0 blue
 9/30 chance of 1 blue
 4/30 chance of 2 blue
 1/30 chance of 3 blue
 0/30 chance of 4 blue

b)

Conjectures	Prior	Count	Prob
0B	16	$10 = 0$	0/20
1B	9	$11 = 9$	9/20
2B	4	$12 = 8$	8/20
3B	1	$13 = 3$	3/20
4B	0	$14 = 0$	0/20

c)

3. Uranus is 80% land, Earth is 30% land
= 110% chance of getting land

$$\frac{30}{110} \approx 0.27$$

$$4. a) 10\% + 20\% = 30\%, \frac{10}{30} = \boxed{\frac{1}{3}}$$

b) would double the chances that we're observing species 2, or halve the chances that we're not,
 $50\% \boxed{1/6}$