

Test Cases

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I) Test Case #1

a. **Objective:** To see if the recursion and output stops when prey becomes extinct

b. **Data Set:**

- birthRate: 0.75
- SearchEff: 0.05
- FoodConv: 0.1
- DeathRate: 0.25

- Prey: 10
- Predators: 30
- Generations: 7

c. **Expected Results:**

	Generation	Prey	Predators	Output
i.	0	1	55	Generation=0 Prey=1 Predator=55
	1	-2	41	None (Simulation Ended)

II) Test Case #2

a. **Objective:** To see if the recursion and output stops when predators die out

b. **Data Set:**

- birthRate: 0.25
- SearchEff: -.5
- FoodConv: 0.1
- DeathRate: 1

- Prey: 10
- Predators: 6
- Generations: 10

c. **Expected Results:**

	Generation	Prey	Predators	Output
i.	0	10	6	Generation=0 Prey=10 Predator=6
	1	42	0	Generation=1 Prey=42 Predator=0
	2	52	-2	None (Simulation Ended)

III) Test Case #3

a. **Objective:** To see if the recursion terminates on the correct generation

b. **Data Set:**

- birthRate: 0.75
- SearchEff: 0.05
- FoodConv: 0.1
- DeathRate: 0.25

- Prey: 10
- Predators: 0
- Generations: 4

c. **Expected Results:**

	Generation	Prey	Predators	Output
	0	10	0	Generation=0 Prey=10 Predator=0
	1	17	0	Generation=1 Prey=17 Predator=0
i.	2	29	0	Generation=2 Prey=29 Predator=0
	3	50	0	Generation=3 Prey=50 Predator=0
	4	87	0	Generation=4 Prey=50 Predator=0
	5	152	0	None (Simulation Ended)