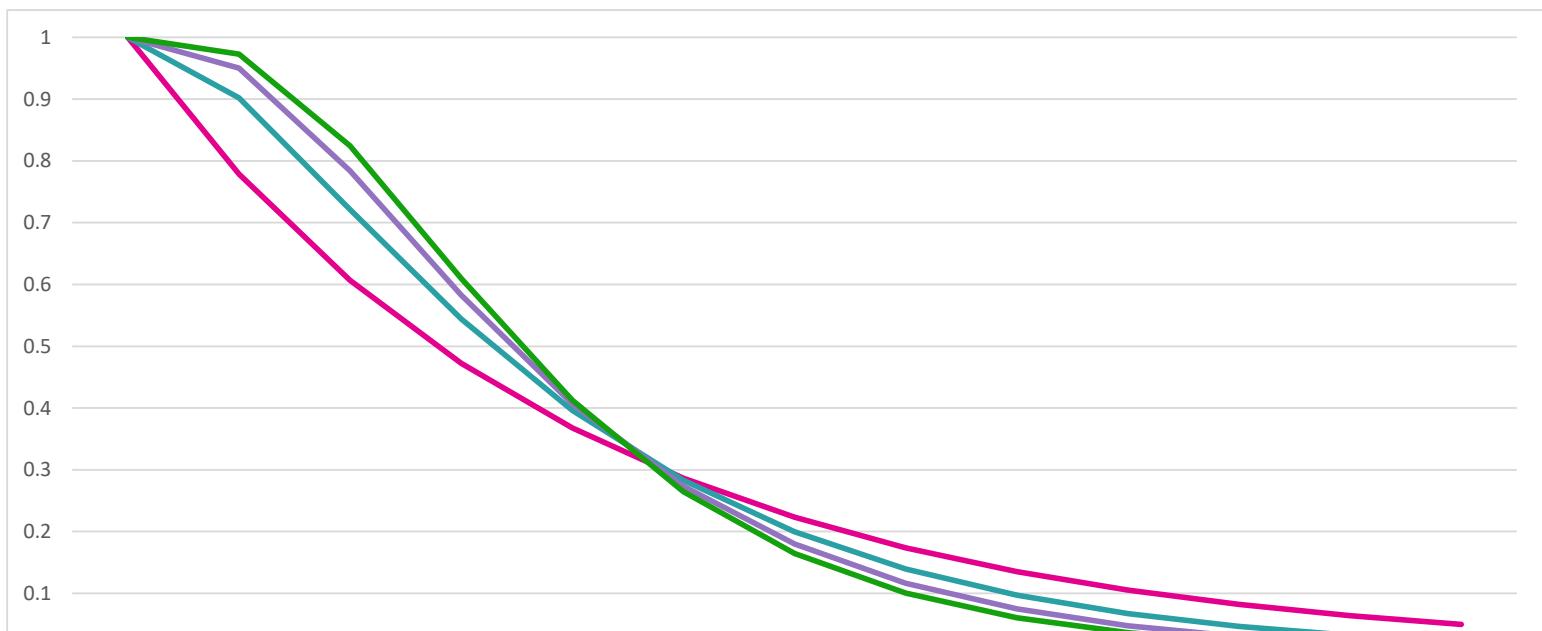


Lab 1 - Task 3

| Time | Scenario 1: 1 op | Scenario 2: 1 op + 1 bak | Scenario 3: 1 op + 2 bak | Scenario 4: 1 op + 3 bak |
|-------|------------------|--------------------------|--------------------------|--------------------------|
| 0 | 1 | 1 | 1 | 1 |
| 2500 | 0.778800783 | 0.902212005 | 0.950300619 | 0.972835871 |
| 5000 | 0.60653066 | 0.721602945 | 0.783837586 | 0.824621378 |
| 7500 | 0.472366553 | 0.54390571 | 0.582898698 | 0.609732219 |
| 10000 | 0.367879441 | 0.396473252 | 0.40704141 | 0.412516211 |
| 12500 | 0.286504797 | 0.283192188 | 0.273664462 | 0.264622942 |
| 15000 | 0.22313016 | 0.199689453 | 0.179784528 | 0.164500556 |
| 17500 | 0.173773943 | 0.139631996 | 0.116435565 | 0.100382105 |
| 20000 | 0.135335283 | 0.097095385 | 0.074741125 | 0.060588046 |
| 22500 | 0.105399225 | 0.067265357 | 0.047710931 | 0.036332934 |
| 25000 | 0.082084999 | 0.046482407 | 0.030349986 | 0.021704213 |
| 27500 | 0.063927861 | 0.032065731 | 0.019263863 | 0.012935908 |
| 30000 | 0.049787068 | 0.022094583 | 0.012210277 | 0.007699485 |





Conclusion

Adding backups always increases reliability
Each extra backup helps less than the previous one
Parallel redundancy is great for long missions
But it has diminishing returns