

Test Plan – Terms of Office

Necessary cases to test will vary by problem.

As a starting point, test plans should include cases that cover:

- the typical cases for the problem given
- the boundary conditions on all input values
- invalid inputs

Test Cases		
Description	Given Input (in bold) and Expected Output	Points
Typical case <ul style="list-style-type: none"> • Range of years given in example • Years identification accurate • Percentage accurate • All other output matches exactly as shown 	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 2018 Enter the future year (year Y): 2100 All positions change in year 2018 All positions change in year 2078 Between 2018 and 2100, all positions changed at the start of 2.4% of years.	0 1 2
Typical case <ul style="list-style-type: none"> • Large range of years • Years identification (for years shown) accurate • Percentage accurate 	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 2100 Enter the future year (year Y): 4000000 All positions change in year 2100 All positions change in year 2160 All positions change in year 2220 <i>... in-between results removed to save space...</i> All positions change in year 3999840 All positions change in year 3999900 All positions change in year 3999960 Between 2100 and 4000000, all positions changed at the start of 1.7% of years.	0 1 2

Test Cases		
Description	Given Input (in bold) and Expected Output	Points
Typical case • Very small range of years • Years identification accurate • Percentage accurate	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 1977 Enter the future year (year Y): 1978 All positions change in year 1977 Between 1977 and 1978, all positions changed at the start of 50.0% of years.	0 1 2
Typical case • Smallest possible range of years • Starting year identified as changeover year as shown • Percentage accurate	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 2034 Enter the future year (year Y): 2034 All positions change in year 2034 Between 2034 and 2034, all positions changed at the start of 100.0% of years.	0 1 2
Typical case • Checking that turnover year identified at start and end of the range of years given • Starting year identified as changeover year as shown • Percentage accurate	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 1977 Enter the future year (year Y): 2097 All positions change in year 1977 All positions change in year 2037 All positions change in year 2097 Between 1977 and 2097, all positions changed at the start of 2.5% of years.	0 1 2
Boundary condition • 0 is accepted for current year • 0 is accepted for future year	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 0 Enter the future year (year Y): 0 All positions change in year 0 Between 0 and 0, all positions changed at the start of 100.0% of years.	0 1 2

Test Cases		
Description	Given Input (in bold) and Expected Output	Points
Invalid input <ul style="list-style-type: none"> Input below range is rejected for current year Input below range is rejected for future year 	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): -1 Enter the current year (year X): 200 Enter the future year (year Y): -1 Enter the future year (year Y): 300 All positions change in year 200 All positions change in year 260 Between 200 and 300, all positions changed at the start of 2.0% of years.	0 1 2
Invalid input <ul style="list-style-type: none"> String input is rejected for current year String input is rejected for future year 	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): nineteen ninety five Enter the current year (year X): 1995 Enter the future year (year Y): two thousand and one Enter the future year (year Y): 2001 All positions change in year 1995 Between 1995 and 2001, all positions changed at the start of 14.3% of years.	0 1 2
Invalid input <ul style="list-style-type: none"> Decimal input is rejected for current year Decimal input is rejected for future year 	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): nineteen ninety five Enter the current year (year X): 1995 Enter the future year (year Y): two thousand and one Enter the future year (year Y): 2001 All positions change in year 1995 Between 1995 and 2001, all positions changed at the start of 14.3% of years.	0 1 2

Test Cases		
Description	Given Input (in bold) and Expected Output	Points
Invalid input • Current year provided was higher than the future year • Values should be swapped • Output is exactly as shown	Welcome to the Bigtropolis Terms of Office Analyser! Enter the current year (year X): 300 Enter the future year (year Y): 199 Years given have been swapped since the current year provided was greater than the future year. All positions change in year 199 All positions change in year 259 Between 199 and 300, all positions changed at the start of 2.0% of years.	0 1 2

Total score / 20