```python
def _ddmin(circumstances, n):
    while len(circumstances) >= 2:
        subsets = split(circumstances, n)

        some_complement_is_failing = 0
        for subset in subsets:
            complement = listminus(circumstances, subset)
            if test(complement) == FAIL:
                circumstances = complement
                n = max(n - 1, 2)
                some_complement_is_failing = 1
                break

        if not some_complement_is_failing:
            if n == len(circumstances):
                break
            n = min(n * 2, len(circumstances))

    return circumstances
```