

Plane Altitude

Distance between cities A and B is 1400 kilometers. You should prepare a optimal flight plan, considering fuel usage for a plane between these cities. A plane can fly in one of four available flight altitudes and can do 3 things - up, keep level, down. Up will move the plane to a higher altitude level while also moving it forwards, keep level will keep the same altitude level and down will lower the altitude while also moving forwards. Fuel is used each 50 kilometers. Flight at first level costs 22 units of fuel, second level costs 21 units of fuel, third level costs 16 units of fuel and last level costs 14 units of fuel. Change between first and second level costs 15 units of fuel, change between second and third costs 19 units of fuel and change between third and fourth (the last) level costs 22 units of fuel.

- What is an optimal flight plan for this flight?
- Alter the cost of change between two levels to transform the optimal flight plan. Write down which cost (of change between levels) you changed and how it altered the optimal flight plan.