

```

Sync[log_String, f_] := (
  tlog = ToExpression[StringReplace[
    log, {"[" → "{", "]" → "}"}
  ]];
  tlog[[1]] = 0;
  Do[
    tlog[[i, 1]] = Round[f[tlog[[i, 1]]]],
    {i, 2, Length[tlog]}
  ];
  StringReplace[
    StringReplace[
      ToString[tlog, InputForm],
      {"{" → "[", "}" → "]" }
    ],
    "\", " → "\", \n"
  ]
)

oldlog = "log=[1297627474920,
[253964, [1,1], \"Handout view 2: Abstract 1\"],
[444894, [1,2], \"Handout view 3: Abstract 2\"],
[613813, [1,3], \"Handout view 4: NCGE Handout\"],
[757772, [1,3], \"Handout view 4: NCGE Handout\"],
[788259, [1,4], \"Handout view 5: The Problem\"],
[799050, [1,5], \"Handout view 6: A Demo Program\"],
[810339, [1,6], \"Handout view 7: The Rubik's Cube\"],
[820209, [1,7], \"Handout view 8: The Answer\"],
[835128, [1,8], \"Handout view 9: Homework Problem 1\"],
[855314, [1,5], \"Handout view 6: A Demo Program\"],
[857391, [1,4], \"Handout view 5: The Problem\"],
[862368, [1,6], \"Handout view 7: The Rubik's Cube\"],
[864830, [1,7], \"Handout view 8: The Answer\"],
[867078, [1,8], \"Handout view 9: Homework Problem 1\"],
[887797, [1,7], \"Handout view 8: The Answer\"],
[891164, [1,6], \"Handout view 7: The Rubik's Cube\"],
[899380, [1,7], \"Handout view 8: The Answer\"],
[906500, [1,8], \"Handout view 9: Homework Problem 1\"],
[928003, [1,9], \"Handout view 10: I could be a mathematician\"],
[939714, [1,10], \"Handout view 11: or an art historian ...\"],
[948073, [1,11], \"Handout view 12: Left Eye\"],
[953310, [1,12], \"Handout view 13: Right Eye\"],
[966742, [1,13], \"Handout view 14: or and environmentalist ...\"],
[981993, [1,14], \"Handout view 15: CO2 Emissions\"],
[1003998, [1,15], \"Handout view 16: Smokestacks here\"],
[1011454, [1,16], \"Handout view 17: Distress penguins here\"],
[1017872, [1,15], \"Handout view 16: Smokestacks here\"],
[1020781, [1,16], \"Handout view 17: Distress penguins here\"],
[1028286, [1,17], \"Handout view 18: Goal\"],

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[1036949, [1,18], \"Handout
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[1300301, [1,19], \"Handout view 20: Fermat's Principle\"],
[1466477, [1,20], \"Handout view 21: The Brachistochrone\"],
[1702318, [1,21], \"Handout view 22: Airline Route Maps\"],
[1850063, [1,22], \"Handout view 23: The Least Action Principle\"],
[1911242, [1,23], \"Handout view 24: The Sphere and the Pseudosphere\"],
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[2364337, [1,25], \"Handout view 26: Segways above the Mona plane.\"],
[2448700, [1,24], \"Handout view 25: The Happy Segway Principle\"],
[2459811, [1,25], \"Handout view 26: Segways above the Mona plane.\"],
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[2558357, [1,25], \"Handout view 26: Segways above the Mona plane.\"],
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[3254471, [1,28], \"Handout view 29: Life in the Lobachevsky Plane\"],
[3455370, [1,29], \"Handout view 30: Finding the Centre\"],
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[3555189, [1,31], \"Handout view 32: The Actual Code\"],
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[3616474, [1,33], \"Handout view 34: We had a goal...\"],
[3619689, [1,32], \"Handout view 33: Ops used\"],
[3624305, [1,33], \"Handout view 34: We had a goal...\"],
[3634424, [1,34], \"Handout view 35: we attained it...\"],
[3639295, [1,35], \"Handout view 36: we used all keys ...\"],
[3644503, [1,36], \"Handout
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[3649959, [1,37], \"Handout view 38: is related to Lobachevsky\"],
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[4517568, [1,22], \"Handout view 23: The Least Action Principle\"],
[4563099, [1,20], \"Handout view 21: The Brachistochrone\"],
[4761178, [1,22], \"Handout view 23: The Least Action Principle\"]
]";

pairs = {
  {253 964, 0},
  {444 894, 1000 (3 * 60 + 8)},
  {3 656 592, 1000 (56 * 60 + 40)},
  {4 029 815, 1000 (3600 + 2 * 60 + 43)},
  {4 517 568, 1000 (3600 + 10 * 60 + 50)}
}

{{253 964, 0}, {444 894, 188 000},
 {3 656 592, 3 400 000}, {4 029 815, 3 763 000}, {4 517 568, 4 250 000}}

Sync[oldlog, Interpolation[pairs, InterpolationOrder → 1]]

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InterpolatingFunction::dmval :

Input value {4563099} lies outside the range of data in the interpolating function. Extrapolation will be used. >>

InterpolatingFunction::dmval :

Input value {4761178} lies outside the range of data in the interpolating function. Extrapolation will be used. >>

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[3240311, [1, 30], "Handout view 31: Parametrization"],
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[3377830, [1, 34], "Handout view 35: we attained it..."],
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