

Task a:

```
[hadoop@ip-172-31-7-5 ~]$ python mrtask_a.py yellow_tripdata_2017-03.csv
No configs found; falling back on auto-configuration
No configs specified for inline runner
Creating temp directory /tmp/mrtask_a.hadoop.20250107.105930.713107
Running step 1 of 2...
Running step 2 of 2...
job output is in /tmp/mrtask_a.hadoop.20250107.105930.713107/output
Streaming final output from /tmp/mrtask_a.hadoop.20250107.105930.713107/ou
```

Task b:

```
No configs found; falling back on auto-configuration
No configs specified for inline runner
Creating temp directory /tmp/mrtask_b.hadoop.20250107.084834.246348
Running step 1 of 2...
Running step 2 of 2...
job output is in /tmp/mrtask_b.hadoop.20250107.084834.246348/output
Streaming final output from /tmp/mrtask_b.hadoop.20250107.084834.246348/ou
"1"      12207400 48001407
```

Task c:

```
[hadoop@ip-172-31-7-5 ~]$ python mrtask_c.py yellow_tripdata_2017-0
No configs found; falling back on auto-configuration
No configs specified for inline runner
Creating temp directory /tmp/mrtask_c.hadoop.20250107.104221.209160
Running step 1 of 2...
Running step 2 of 2...
job output is in /tmp/mrtask_c.hadoop.20250107.104221.209160/output
Streaming final output from /tmp/mrtask_c.hadoop.20250107.104221.20
"1"      6994699
"2"      2221028
```

Task d:

```
job output is in /tmp/mrtask_d.hadoop.20250107.105645.334521/output
Streaming final output from /tmp/mrtask_d.hadoop.20250107.105645.334521/output
"222"    18.226363636363633
"184"    16.224
"132"    15.950681691449535
"10"     14.827819782496126
"215"    14.114290220820191
"219"    13.899775510204094
"154"    13.863000000000001
"176"    13.62
"2"      13.218571428571428
"46"     11.83
"5"      11.6175
"139"    10.952857142857143
"122"    10.781578947368422
"130"    10.749469026548681
"187"    10.67
"155"    10.585882352941178
"51"     10.544107142857145
"38"     9.961764705882352
"138"    9.866008030208613
"93"     9.758514492753614
"218"    9.718405797101449
"203"    9.582173913043478
"216"    9.292297546012272
```

"175"	7.53241379310345
"81"	6.972285714285715
"70"	6.909811584089331
"124"	6.783586206896553
"194"	6.4681417624521025
"221"	6.454615384615384
"208"	6.393250000000002
"64"	6.3409523809523805
"201"	6.24625
"57"	6.190344827586207
"213"	6.144743589743592
"206"	6.111111111111111
"180"	6.107968749999999
"39"	5.976327683615816
"101"	5.840967741935484
"191"	5.824000000000001
"30"	5.823333333333333
"21"	5.731034482758622
"205"	5.718717948717949
"76"	5.677470238095237
"245"	5.633333333333333
"192"	5.564862385321101
"23"	5.5504999999999995
"15"	5.521111111111111
"16"	5.514054054054054
"108"	5.4199999999999998
"22"	5.394475524475526
"53"	5.342467532467532
"73"	5.327333333333334
"115"	5.297333333333334
"31"	5.259756097560975
"9"	5.173235294117647
"134"	5.05028960817717
"29"	4.988923076923078
"259"	4.926666666666668
"8"	4.915735294117646
"6"	4.900243902439022
"240"	4.891666666666667
"120"	4.851636363636365
"56"	4.846404833836854
"77"	4.775128205128207
"258"	4.76456953642384
"183"	4.745000000000001
"96"	4.745
"157"	4.689064449064447
"88"	4.563947246306023
"91"	4.559876543209877

"164"	2.3989625095887037
"114"	2.388312042288457
"246"	2.382292313528246
"262"	2.374955155814571
"161"	2.3553159875919842
"224"	2.3536553811360856
"74"	2.3309131604638424
"42"	2.3264017449731584
"151"	2.3143179815145145
"100"	2.3128851325024034
"68"	2.312667762893674
"75"	2.2887784276406076
"170"	2.2684128001621726
"249"	2.268179657532983
"186"	2.2557075552293253
"41"	2.245312869822491
"137"	2.232036492756639
"263"	2.2159388153564494
"229"	2.20770073403701
"1"	2.187048710601716
"238"	2.1831151602038785
"217"	2.148279320987651
"142"	2.1458293971121942
"43"	2.144113426133076
"239"	2.1211344430217896
"107"	2.11955203261152
"234"	2.1059940520794087
"113"	2.099590884591084
"143"	2.0853665242925907
"90"	2.0278675093512066
"141"	2.0077059005757243
"193"	1.9528111551041591
"58"	1.9333333333333331
"236"	1.9238483475736925
"178"	1.8050000000000002
"237"	1.7855843780919094
"109"	1.3471428571428572
"156"	1.0414285714285714
"204"	0.9959999999999999
"207"	0.9258614864864864
"27"	0.75
"59"	0.5

Task e:



Running step 1 of 1...

job output is in /tmp/mrtask\_e.hadoop.20250107.105841.944006/outp

Streaming final output from /tmp/mrtask\_e.hadoop.20250107.105841.

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"1"	0.1207141821477579
"10"	0.10818785706737385
"100"	0.1036698554215106
"101"	0.11272386860071483
"102"	0.10055306633681427
"105"	0.09171366594360085
"106"	0.10978934961315243
"107"	0.12060767877711343
"108"	0.16459569486203868
"109"	0.2727411419199817
"11"	0.08292554532378368
"111"	0.09254458568885279
"112"	0.10773394359303982
"113"	0.1198356138476097
"114"	0.11911520367510238
"115"	0.06954984925667948
"116"	0.0891850662923476
"117"	0.043243243243243246
"118"	0.06123568538709457
"119"	0.07048709650651401
"12"	0.09293556386304279
"120"	0.10883550438515564
"121"	0.11741420610866483
"122"	0.1387652122291481
"123"	0.08960279415384258
"124"	0.08453696528256818
"125"	0.12518769144404782
"126"	0.09259487147933362
"127"	0.08441883718898342
"128"	0.0996911080691746
"129"	0.060201630039305176
"13"	0.12714951929426124
"130"	0.10414607569293091
"131"	0.10417221067470275
"132"	0.10575125324839516

"141"	0.11224772836685043
"142"	0.10943407036321535
"143"	0.11385544735623641
"144"	0.11534246435160811
"145"	0.09385839052238519
"146"	0.08701042916776668
"147"	0.0407104414538495
"148"	0.11552592223584679
"149"	0.07203300930134972
"15"	0.08857607480435004
"150"	0.08822992437709598
"151"	0.10653807861147498
"152"	0.08032142329328529
"153"	0.038389942412793886
"154"	0.07685038639697143
"155"	0.07278967134703021
"156"	0.07347670250896057
"157"	0.10501594923339569
"158"	0.12040536538332194
"159"	0.04321460191532224
"16"	0.15964166650420136
"160"	0.11332917205196806
"161"	0.11910074531590943
"162"	0.12317702599821087
"163"	0.11388391450287717
"164"	0.11356375521257311
"165"	0.07474841653471122
"166"	0.11300512805877584
"167"	0.03467827275684446
"168"	0.03970975383351151
"169"	0.0414459260514526
"17"	0.08139413432067066
"170"	0.11967256252276448
"171"	0.08945571641402163
"172"	0.18060729407061474
"173"	0.06020800402356662
"174"	0.05603043490423155
"175"	0.16555962907051971
"176"	0.16006448641179177

"56"	0.09689085739177432
"57"	0.08978281151684783
"58"	0.20677517842210683
"59"	0.0
"6"	0.052264931159250044
"60"	0.031681601623639075
"61"	0.08715004888384095
"62"	0.07443707183475348
"63"	0.11646649621741123
"64"	0.07580341093428032
"65"	0.10533440352393146
"66"	0.12354358405949303
"67"	0.11795703565511574
"68"	0.11484199757426107
"69"	0.041565606728516925
"7"	0.07795579964389203
"70"	0.10419975360897017
"71"	0.13638875572600404
"72"	0.0854619904976244
"73"	0.1347386827278026
"74"	0.06906228366992087
"75"	0.08762260222707684
"76"	0.10933075911947004
"77"	0.08396271580572354
"78"	0.03167017360983983
"79"	0.11855989992766253
"8"	0.11408029797739186
"80"	0.10761994826311788
"81"	0.07312019605658907
"82"	0.06607188316453157
"83"	0.06176357421006426
"84"	0.1663871184166387
"85"	0.06123726655348049
"86"	0.31385985951687506
"87"	0.12639901382300125
"88"	0.11923831790881051
"89"	0.08679196188505098
"9"	0.1327844471286185
"90"	0.11007165160100000