

EDA LA2

ANKITA ASMA

2022-06-22

```
data<-read.csv("C:/Users/DELL/OneDrive/Desktop/eda.csv",header=TRUE,sep=",")
```

data

##	match_id	radiant_win	freq_r	win_pct_r	duration_avg_win_r
## 1	5796599901	FALSE	29.8	0.6534193	32.09696
## 2	5796710768	TRUE	29.8	0.6534193	32.09696
## 3	4632569639	FALSE	12.2	0.1404762	30.07000
## 4	5080525118	FALSE	11.0	0.1818182	26.60000
## 5	5176256941	TRUE	42.2	0.4574555	34.08308
## 6	5989112142	FALSE	45.4	0.4193409	33.32407
## 7	5730717243	FALSE	170.6	0.5264108	33.64308
## 8	5113821481	FALSE	2.0	0.0000000	NA
## 9	5628319228	TRUE	287.8	0.6203929	35.29406
## 10	5640928004	TRUE	65.4	0.6267639	37.35061
## 11	4897617647	TRUE	57.2	0.5237555	34.81627
## 12	5480282409	TRUE	159.2	0.4788596	34.40844
## 13	5114714358	TRUE	42.5	0.4687889	32.93283
## 14	4466830103	TRUE	106.6	0.5526349	34.91631
## 15	5640703973	TRUE	132.8	0.5097318	32.63575
## 16	6019971220	TRUE	56.2	0.5309129	36.97540
## 17	5300030235	TRUE	13.8	0.5118581	36.69451
## 18	5971206893	TRUE	NA	NA	NA
## 19	5994879529	TRUE	222.0	0.4477352	33.73294
## 20	5224099864	TRUE	28.0	0.2258407	36.55568
## 21	5901414781	TRUE	29.2	0.5420033	36.01521
## 22	5987368876	TRUE	98.8	0.4508924	34.21427
## 23	5677418290	TRUE	178.4	0.5515661	34.77052
## 24	4891379575	TRUE	109.2	0.5641900	34.21306
## 25	5600467667	TRUE	140.6	0.4905469	26.66287
## 26	5440791356	FALSE	186.6	0.6526769	33.09384
## 27	5600992860	FALSE	2.5	0.2500000	27.83333
## 28	5340453463	TRUE	16.2	0.2719114	26.26127
## 29	4360290555	TRUE	46.8	0.5963535	35.38575
## 30	5139217248	TRUE	57.2	0.6140452	36.13098
## 31	6014646140	FALSE	88.6	0.5471228	31.58525
## 32	5060190446	TRUE	90.0	0.5321404	37.11181
## 33	4608178386	FALSE	7.2	0.1416667	41.50000
## 34	5874061480	FALSE	36.0	0.2851800	36.82669
## 35	5238975147	TRUE	85.6	0.5934145	36.81754
## 36	5729519479	TRUE	274.0	0.4525547	24.83468

## 37	5369299134	TRUE	131.6	0.5091375	29.29403
## 38	5950073972	TRUE	198.0	0.3959385	32.82533
## 39	4347235141	FALSE	6.2	0.8380952	31.79556
## 40	5823758731	TRUE	134.0	0.5120051	37.23292
## 41	4593309564	TRUE	75.2	0.4830962	36.03718
## 42	6010520558	FALSE	163.4	0.4757318	32.13805
## 43	5777777395	TRUE	NA	NA	NA
## 44	4678695743	TRUE	135.6	0.5456963	36.85176
## 45	4919856642	FALSE	26.6	0.5338041	37.36698
## 46	5574110489	TRUE	23.6	0.7799331	29.03526
## 47	4623556133	TRUE	8.2	0.3707143	28.94750
## 48	4870534464	FALSE	176.0	0.6000000	35.47760
## 49	5418395979	TRUE	106.0	0.6295876	31.64839
## 50	5628456643	FALSE	288.0	0.5208333	25.02356
## 51	5581274533	TRUE	158.6	0.6353311	32.22441
## 52	5441823282	TRUE	120.8	0.5778040	36.37714
## 53	4401994907	TRUE	1.0	1.0000000	31.95000
## 54	4683207830	TRUE	18.2	0.6323300	36.36597
## 55	5092234458	TRUE	41.0	0.3534523	39.63583
## 56	5117977273	FALSE	76.0	0.5832234	38.22204
## 57	5405369398	TRUE	18.0	0.6111111	30.08333
## 58	4946806477	TRUE	NA	NA	NA
## 59	5877655195	TRUE	81.6	0.6241557	33.19382
## 60	5512371848	FALSE	95.0	0.3568355	33.23157
## 61	5141912737	TRUE	197.2	0.5597142	33.63962
## 62	4807632060	FALSE	38.0	0.5266667	31.37135
## 63	5278143666	FALSE	40.4	0.4460009	41.26471
## 64	5222672937	TRUE	4.0	0.7500000	29.01667
## 65	5138848511	FALSE	43.0	0.4375337	36.64620
## 66	4977309728	TRUE	37.0	0.5138544	37.16783
## 67	5723024440	FALSE	45.4	0.7371429	32.36690
## 68	6002473863	FALSE	95.8	0.2948403	36.47484
## 69	5161775909	TRUE	36.0	0.5000000	40.99630
## 70	6008406786	FALSE	85.8	0.5062445	33.46819
## 71	5481915530	TRUE	13.8	0.1965640	41.67315
## 72	5877781605	TRUE	70.8	0.4508239	35.34769
## 73	5596140059	TRUE	195.0	0.4666667	27.87179
## 74	5134130510	TRUE	7.0	0.1666667	26.44167
## 75	5254796003	TRUE	142.6	0.5643052	36.44053
## 76	5693264439	TRUE	133.6	0.5238949	37.04017
## 77	5683280528	TRUE	186.6	0.5777078	35.02384
## 78	5037916346	TRUE	87.8	0.4582993	34.36435
## 79	5328802719	FALSE	10.0	0.2772031	40.96167
## 80	5364053585	TRUE	27.5	0.7245372	29.49687
## 81	5714460100	TRUE	239.2	0.4113908	35.42402
## 82	5453918445	TRUE	136.2	0.5022336	36.44895
## 83	5826469616	TRUE	71.6	0.4478010	36.04587
## 84	5485483795	TRUE	261.0	0.4674330	29.01148
## 85	5413776697	TRUE	101.0	0.5407047	33.13694
## 86	5449813596	FALSE	74.2	0.4445639	32.58193
## 87	4823117410	FALSE	50.4	0.5157519	41.61598
## 88	5045191517	FALSE	NA	NA	NA
## 89	4955630841	FALSE	23.6	0.5948992	25.34776
## 90	5242654333	FALSE	3.0	1.0000000	26.53889

## 91	4944287268	TRUE	32.2	0.5383834	37.99268
## 92	5229367193	FALSE	137.0	0.5328467	40.90571
## 93	5495184096	FALSE	132.6	0.4985569	36.57672
## 94	4872317348	TRUE	106.6	0.6271506	37.67871
## 95	5591952698	TRUE	131.2	0.5557551	34.76998
## 96	5919966201	TRUE	34.5	0.6228070	32.39154
## 97	5683389718	TRUE	256.4	0.5045965	24.90235
## 98	5466643854	FALSE	101.0	0.5049505	23.90588
## 99	5556432379	FALSE	183.6	0.5228538	28.26796
##	duration_avg_lose_r	actions_per_min_avg_r	ancient_kills_avg_r		
## 1	40.58606	316.8472	6.7380148		
## 2	40.58606	316.8472	6.7380148		
## 3	41.73286	211.0746	5.5801587		
## 4	27.47037	209.7455	2.8363636		
## 5	31.86463	NaN	NaN		
## 6	33.38017	254.5968	4.7940335		
## 7	35.66973	282.9257	5.8467637		
## 8	35.50000	122.5000	1.5000000		
## 9	39.17398	235.6521	7.0475549		
## 10	39.92489	263.9289	4.7161939		
## 11	35.38061	NaN	NaN		
## 12	34.43275	164.4252	7.5487252		
## 13	41.41678	242.2746	1.8844178		
## 14	36.29502	NaN	NaN		
## 15	37.57946	225.1191	7.3188367		
## 16	38.59437	180.3191	8.1546344		
## 17	28.37649	NaN	NaN		
## 18	NA	NA	NA		
## 19	34.06393	NaN	NaN		
## 20	29.32287	NaN	NaN		
## 21	29.05594	286.4950	6.1548440		
## 22	34.31869	NaN	NaN		
## 23	36.56583	235.5135	5.8958571		
## 24	36.27793	278.9649	4.8231206		
## 25	27.98546	NaN	NaN		
## 26	37.50341	NaN	NaN		
## 27	30.26042	213.3333	0.1666667		
## 28	31.51014	NaN	NaN		
## 29	35.47418	253.2849	11.3804929		
## 30	39.68136	NaN	NaN		
## 31	31.04065	NaN	NaN		
## 32	38.05562	264.2459	5.8408687		
## 33	30.40514	158.1417	3.3083333		
## 34	34.79625	274.5261	4.9686066		
## 35	40.54806	NaN	NaN		
## 36	25.05744	183.1314	3.6175182		
## 37	27.61938	200.0639	4.1650816		
## 38	34.13660	NaN	NaN		
## 39	19.08333	220.1619	8.0380952		
## 40	38.22815	239.2531	2.4772126		
## 41	33.92623	201.1142	3.3201434		
## 42	36.65151	311.3689	5.8022409		
## 43	NA	NA	NA		
## 44	38.52503	NaN	NaN		

## 45	29.23944	204.9478	4.9754672
## 46	37.75833	315.3572	3.5344482
## 47	29.97950	181.7868	3.6725000
## 48	35.85875	307.9328	6.0530794
## 49	38.95772	NaN	NaN
## 50	23.86002	NaN	NaN
## 51	36.17849	NaN	NaN
## 52	34.97165	NaN	NaN
## 53	NA	172.0000	0.0000000
## 54	41.33917	199.3891	7.4506132
## 55	39.09162	283.1100	6.0741333
## 56	36.74842	334.1866	7.1740293
## 57	27.69762	205.4722	1.0000000
## 58	NA	NA	NA
## 59	35.82975	267.4103	5.4033962
## 60	28.90058	258.0983	4.2034703
## 61	39.27421	NaN	NaN
## 62	32.88926	NaN	NaN
## 63	38.77805	266.9384	4.6469546
## 64	28.23333	243.9500	2.5500000
## 65	35.35029	NaN	NaN
## 66	37.70793	237.1855	3.7330389
## 67	37.77717	210.8995	7.4452381
## 68	33.59747	NaN	NaN
## 69	35.27130	181.2222	7.2777778
## 70	36.14235	NaN	NaN
## 71	35.75462	282.1646	4.9381886
## 72	33.32290	NaN	NaN
## 73	27.72933	NaN	NaN
## 74	32.79271	346.8125	2.2500000
## 75	36.17881	NaN	NaN
## 76	36.80197	230.9784	6.0743196
## 77	36.98955	178.1077	6.5448533
## 78	34.97960	NaN	NaN
## 79	30.14838	NaN	NaN
## 80	36.64028	NaN	NaN
## 81	34.39591	212.9155	5.2852064
## 82	36.83189	NaN	NaN
## 83	33.22034	284.9485	5.6173464
## 84	27.31751	NaN	NaN
## 85	35.51741	NaN	NaN
## 86	31.29450	190.4491	5.6023236
## 87	42.04452	NaN	NaN
## 88	NA	NA	NA
## 89	32.89506	305.2255	4.2961012
## 90	NA	227.4667	3.2000000
## 91	30.44914	203.1431	3.9904445
## 92	37.82995	214.0117	8.4978102
## 93	36.55982	245.8239	4.5778979
## 94	40.51156	194.5986	7.8976951
## 95	38.63984	217.8450	5.0127452
## 96	38.23507	356.5066	0.2938596
## 97	24.97208	NaN	NaN
## 98	24.96633	182.0733	3.5326733

## 99	27.53402	NaN	NaN	
##	buyback_count_avg_r	courier_kills_avg_r	deaths_avg_r	denies_avg_r
## 1	0.4672965	0.19419870	4.560102	7.198182
## 2	0.4672965	0.19419870	4.560102	7.198182
## 3	0.7865079	0.01111111	6.106349	9.161111
## 4	0.5454545	0.05454545	7.927273	7.236364
## 5	NaN	NaN	4.711898	8.863704
## 6	0.3359571	0.36797854	5.402652	7.523606
## 7	0.3737818	0.26256606	5.432516	7.655926
## 8	1.5000000	0.00000000	11.000000	0.500000
## 9	0.4745440	0.22621332	4.611322	8.297619
## 10	0.4383924	0.45991022	4.506559	10.215568
## 11	NaN	NaN	4.874027	9.432573
## 12	0.4273753	0.31105107	4.515245	8.657140
## 13	0.4331024	0.03132783	5.729958	5.589236
## 14	NaN	NaN	4.920789	10.756053
## 15	0.4065169	0.28826177	4.798605	8.731314
## 16	0.4874976	0.31075535	4.842100	7.416905
## 17	NaN	NaN	4.793277	9.753408
## 18	NA	NA	NA	NA
## 19	NaN	NaN	4.992730	6.141778
## 20	NaN	NaN	6.643301	6.846857
## 21	0.3506897	0.31088670	5.926962	6.327603
## 22	NaN	NaN	5.382724	6.469243
## 23	0.4755131	0.29131253	5.271816	8.294118
## 24	0.4284868	0.03838870	4.293531	8.379813
## 25	NaN	NaN	5.672643	2.636285
## 26	NaN	NaN	4.090174	9.063177
## 27	0.4166667	0.08333333	7.583333	8.333333
## 28	NaN	NaN	5.645688	9.236072
## 29	0.5173823	0.02532095	4.667953	11.035112
## 30	NaN	NaN	4.400872	8.783352
## 31	NaN	NaN	5.552068	6.937697
## 32	0.5374211	0.06189538	3.723037	9.695483
## 33	0.5666667	0.05000000	6.716667	8.916667
## 34	0.3921239	0.18057780	5.442621	6.766460
## 35	NaN	NaN	4.511010	10.056311
## 36	0.2145985	0.22992701	7.040146	5.533577
## 37	0.3969930	0.30226107	6.700769	7.549091
## 38	NaN	NaN	5.163855	6.162576
## 39	0.2666667	0.00000000	4.066667	9.561905
## 40	0.4368864	0.26357464	5.300653	5.402712
## 41	0.5118197	0.03762334	5.444394	7.115617
## 42	0.3981676	0.28767857	5.432494	6.004197
## 43	NA	NA	NA	NA
## 44	NaN	NaN	4.491780	10.475591
## 45	0.6616906	0.02991453	6.066493	9.567101
## 46	0.2876254	0.35418060	4.344147	7.634114
## 47	0.4446429	0.01250000	4.733929	8.568571
## 48	0.4770794	0.04107936	3.973397	9.072476
## 49	NaN	NaN	4.230302	10.848097
## 50	NaN	NaN	6.197222	6.544444
## 51	NaN	NaN	4.253422	8.452789
## 52	NaN	NaN	4.894941	8.866034

## 53	0.0000000	0.00000000	5.000000	11.000000
## 54	0.5596433	0.06369379	5.737421	13.241992
## 55	0.7477879	0.08460419	5.731768	8.443405
## 56	0.5773321	0.05705739	4.250385	9.238895
## 57	0.4027778	0.30555556	5.236111	7.236111
## 58	NA	NA	NA	NA
## 59	0.3475832	0.25817119	4.733212	6.436703
## 60	0.3249143	0.24589046	5.824076	7.849268
## 61	NaN	NaN	4.914611	6.726673
## 62	NaN	NaN	5.898333	8.005000
## 63	0.7244444	0.17117409	5.569141	7.549595
## 64	0.1500000	0.30000000	4.250000	10.200000
## 65	NaN	NaN	5.167550	7.769449
## 66	0.6838856	0.00000000	6.084116	8.967957
## 67	0.4555952	0.33166667	4.866548	8.984286
## 68	NaN	NaN	6.179951	5.517838
## 69	0.7055556	0.09444444	7.900000	8.400000
## 70	NaN	NaN	5.131469	6.282365
## 71	0.6508590	0.33402428	7.093147	8.008366
## 72	NaN	NaN	5.706797	6.676308
## 73	NaN	NaN	5.831795	2.952821
## 74	0.4583333	0.00000000	7.770833	5.500000
## 75	NaN	NaN	4.408638	8.682031
## 76	0.3959410	0.39059866	4.250547	8.845382
## 77	0.3757826	0.28925567	4.395416	8.203989
## 78	NaN	NaN	4.044745	7.174889
## 79	NaN	NaN	5.434291	6.955172
## 80	NaN	NaN	4.844323	7.372977
## 81	0.2860077	0.30601351	5.795786	6.728283
## 82	NaN	NaN	4.497297	9.984556
## 83	0.4205160	0.25915233	5.332555	8.218931
## 84	NaN	NaN	6.508046	7.855172
## 85	NaN	NaN	4.901164	7.588635
## 86	0.2137333	0.17579331	5.972048	4.436067
## 87	NaN	NaN	6.575259	13.489240
## 88	NA	NA	NA	NA
## 89	0.3553514	0.06373205	5.472759	6.315406
## 90	0.0000000	0.26666667	2.000000	10.333333
## 91	0.6703988	0.03109848	6.154692	9.638278
## 92	0.4905109	0.14306569	6.995620	8.217518
## 93	0.3626502	0.32386722	4.560726	9.597612
## 94	0.6984654	0.04164751	4.195945	9.596300
## 95	0.4357026	0.36615230	4.676432	8.055816
## 96	0.5614035	0.12061403	5.247807	7.392544
## 97	NaN	NaN	6.720130	5.652676
## 98	0.2198020	0.27722772	6.279208	6.615842
## 99	NaN	NaN	5.298525	3.032302
##	firstblood_claimed_avg_r	gold_avg_r	gold_per_min_avg_r	gold_spent_avg_r
## 1	0.11558934	2090.2111	435.5398	13093.804
## 2	0.11558934	2090.2111	435.5398	13093.804
## 3	0.05634921	1535.9135	422.1270	15254.440
## 4	0.12727273	929.4182	413.9455	10126.636
## 5	0.10742910	1800.7297	416.1454	12428.797
## 6	0.13694791	1444.2325	425.7679	12551.892

## 7	0.09569794	1618.6363	427.4632	13412.727
## 8	0.00000000	527.0000	220.0000	6742.500
## 9	0.10251900	1672.1302	429.1646	14101.707
## 10	0.13127817	2371.7296	421.8050	13802.910
## 11	0.17897263	1729.0566	428.4165	13413.870
## 12	0.09564238	1648.9903	415.1208	12748.162
## 13	0.42228362	1687.3979	357.8580	11078.859
## 14	0.08622230	1954.4311	451.0239	14328.762
## 15	0.10102421	1464.8855	413.3724	13081.620
## 16	0.09510196	1711.0999	451.8551	15534.202
## 17	0.04920635	1635.6442	410.1627	12542.228
## 18	NA	NA	NA	NA
## 19	0.09112719	1501.3084	407.8471	12416.358
## 20	0.08736299	1043.6715	378.2052	10831.799
## 21	0.07617406	1760.2718	449.8124	13611.084
## 22	0.09809828	1484.5191	426.9546	13010.368
## 23	0.09417488	1922.0471	411.1654	12643.136
## 24	0.10136461	1799.4364	427.2083	13521.287
## 25	0.09604260	1619.5032	436.7192	10214.750
## 26	0.09858093	1803.8093	418.2633	12814.944
## 27	0.08333333	1023.8333	352.0000	8851.667
## 28	0.02777778	1471.2618	382.0660	10707.909
## 29	0.11056559	1711.9166	441.8902	13824.018
## 30	0.10408576	1871.2691	490.2357	16852.468
## 31	0.05221851	1513.0887	449.3487	12652.336
## 32	0.13047398	2187.6270	489.7112	16457.884
## 33	0.12500000	1344.4167	343.8083	9400.375
## 34	0.11674400	1523.0306	374.7267	12123.478
## 35	0.10804968	2049.2248	447.0122	15352.271
## 36	0.09562044	1177.8285	439.2299	9810.526
## 37	0.09564103	1574.5207	443.2365	11001.013
## 38	0.09257760	1442.1170	402.1836	12168.689
## 39	0.09523809	2191.7286	455.8571	12377.643
## 40	0.10489600	1695.5643	383.1000	12682.923
## 41	0.09560921	1729.5553	381.9791	11613.391
## 42	0.09649860	1607.5835	412.2647	12663.903
## 43	NA	NA	NA	NA
## 44	0.10393110	2081.1323	439.9766	14421.420
## 45	0.09344488	1660.8480	421.3582	12600.596
## 46	0.12073579	1627.7271	410.2826	11436.139
## 47	0.09000000	1111.6879	399.2936	11094.623
## 48	0.09444444	2079.2982	446.3422	14017.647
## 49	0.09999960	1770.0267	415.1810	12553.060
## 50	0.10383275	1301.4708	428.4389	9354.003
## 51	0.10656904	1689.9589	410.0112	12282.646
## 52	0.09126665	1805.4340	424.2117	13475.872
## 53	0.00000000	2133.0000	431.0000	12610.000
## 54	0.09832776	2435.5651	513.1136	16954.374
## 55	0.14108149	1889.3937	423.5532	14388.423
## 56	0.09202686	2122.6653	451.2671	15193.948
## 57	0.09722222	1371.9444	372.4722	9717.569
## 58	NA	NA	NA	NA
## 59	0.09957069	1555.7924	429.3482	13234.662
## 60	0.08162142	1225.5809	379.3819	10692.766

## 61	0.10084930	1566.5555	455.6805	15111.928
## 62	0.08735632	1338.5800	428.4000	12426.567
## 63	0.06523617	1865.6477	409.3069	13795.302
## 64	0.15000000	1937.0000	431.1500	11081.250
## 65	0.05162493	1734.6509	422.0257	13620.439
## 66	0.06400667	1870.1505	442.1946	14443.436
## 67	0.11607143	1575.8081	458.2301	14328.414
## 68	0.10661651	1359.4224	391.8829	12134.441
## 69	0.08888889	1997.8667	484.1444	16499.278
## 70	0.09764717	1796.4940	426.8282	13040.587
## 71	0.06351074	1397.4143	369.4664	12202.891
## 72	0.12546674	1605.3151	403.5540	12586.020
## 73	0.09533679	1584.2595	425.9426	10329.697
## 74	0.00000000	1084.4375	355.0625	10147.188
## 75	0.11213853	1746.3211	432.6577	14357.338
## 76	0.10645274	2030.8174	438.2662	14355.728
## 77	0.10290504	1727.0768	433.3273	14189.027
## 78	0.11775903	1503.9732	431.2833	13354.991
## 79	0.10873016	1540.8057	369.4933	10783.404
## 80	0.11595216	1674.1048	450.0130	12744.547
## 81	0.08173703	1442.4293	406.8836	12777.843
## 82	0.09745057	1787.5919	415.5804	13781.669
## 83	0.08712531	1816.6788	412.0275	12754.590
## 84	0.11307692	1361.6874	430.1632	10732.962
## 85	0.13642899	1590.6302	410.1112	12598.400
## 86	0.08219178	1649.0599	420.9840	11656.190
## 87	0.09240837	2184.8947	522.5796	19181.332
## 88	NA	NA	NA	NA
## 89	0.13570166	1267.2660	455.3431	11735.782
## 90	0.00000000	1534.5333	448.8667	10993.667
## 91	0.09079974	1857.3110	431.6329	13117.170
## 92	0.09635036	2069.7679	512.5255	18240.182
## 93	0.06541434	1737.7961	416.1030	13654.257
## 94	0.12853196	1813.5462	458.8147	15991.868
## 95	0.10075881	1734.3070	408.3827	13099.044
## 96	0.08771930	1763.1886	371.4518	10830.636
## 97	0.09336512	1290.7507	440.8231	9755.707
## 98	0.09900990	1193.4475	417.0376	9077.455
## 99	0.09515420	1684.9287	423.2984	10212.566
##	hero_damage_avg_r	hero_healing_avg_r	hero_kills_avg_r	
## 1	16241.17	1593.9560	5.283281	
## 2	16241.17	1593.9560	5.283281	
## 3	18990.02	530.8056	4.627778	
## 4	17911.27	308.5455	5.781818	
## 5	15314.71	733.5144	NaN	
## 6	17031.04	779.8330	5.675387	
## 7	17183.68	901.5848	5.648934	
## 8	9898.50	200.0000	3.500000	
## 9	19074.78	1249.9510	5.891800	
## 10	19647.92	1234.8912	5.528579	
## 11	16208.45	998.9974	NaN	
## 12	16035.74	910.8228	4.387813	
## 13	14207.74	1428.1513	3.672167	
## 14	17224.89	1123.3245	NaN	

## 15	16841.33	1210.8069	5.042040
## 16	19334.43	1123.2719	5.167810
## 17	18223.86	323.4545	NaN
## 18	NA	NA	NA
## 19	16091.03	775.3407	NaN
## 20	14762.78	674.4580	NaN
## 21	18488.24	561.2931	6.459097
## 22	15947.49	887.0524	NaN
## 23	16807.31	1046.7079	5.161955
## 24	16160.07	902.1901	4.757202
## 25	14000.74	536.3279	NaN
## 26	16812.29	1314.0239	NaN
## 27	12385.42	268.4167	5.416667
## 28	15822.25	927.7343	NaN
## 29	15936.80	940.8772	4.837244
## 30	19591.03	1124.0332	NaN
## 31	19219.66	846.4000	NaN
## 32	19981.07	844.8126	5.915651
## 33	13983.50	500.6000	4.450000
## 34	15691.31	750.9585	4.279910
## 35	19050.64	1677.8267	NaN
## 36	15503.75	342.5168	6.530657
## 37	18689.87	823.3236	6.450699
## 38	15702.20	777.0462	NaN
## 39	15982.98	1572.4810	6.357143
## 40	16855.41	958.6250	4.444848
## 41	14577.80	1113.6222	4.144631
## 42	18066.07	802.4899	5.197132
## 43	NA	NA	NA
## 44	16356.37	1114.6276	NaN
## 45	16859.77	783.6677	5.520382
## 46	17085.22	1861.6124	6.482609
## 47	13326.99	637.5864	4.377143
## 48	15610.14	930.9312	4.628063
## 49	15566.63	1141.2163	NaN
## 50	14821.73	523.6417	NaN
## 51	16611.37	1150.6876	NaN
## 52	17648.58	1190.3431	NaN
## 53	21680.00	200.0000	9.000000
## 54	25939.79	1252.6274	9.106503
## 55	18048.47	932.6884	5.135491
## 56	18871.57	1035.0474	5.081123
## 57	14287.68	1379.4583	4.805556
## 58	NA	NA	NA
## 59	17083.59	1397.2984	5.514407
## 60	15144.66	702.5446	4.440337
## 61	18267.29	742.8161	NaN
## 62	15619.02	759.1717	NaN
## 63	18385.15	959.1142	4.950967
## 64	15224.60	948.9000	5.900000
## 65	17691.05	898.4615	NaN
## 66	19243.15	1203.7867	5.888303
## 67	18042.65	1292.3196	6.104524
## 68	16331.15	910.5925	NaN

## 69	26004.74	586.7500	7.411111
## 70	18097.02	712.6506	NaN
## 71	16350.82	1100.8320	4.296816
## 72	16902.89	661.8366	NaN
## 73	14046.09	483.8185	NaN
## 74	19426.33	737.4583	5.500000
## 75	16855.53	943.5258	NaN
## 76	19411.02	978.4958	5.739360
## 77	16564.53	1008.2316	4.719688
## 78	15224.89	737.6219	NaN
## 79	15118.07	845.7343	NaN
## 80	19294.37	606.7979	NaN
## 81	16864.06	862.6804	4.952054
## 82	16317.55	868.2011	NaN
## 83	17174.82	1210.8549	5.008575
## 84	17519.67	680.0828	NaN
## 85	15917.47	911.2173	NaN
## 86	15809.98	463.7105	5.536327
## 87	31995.28	901.0576	NaN
## 88	NA	NA	NA
## 89	15754.98	1144.3062	5.506301
## 90	15070.60	777.7333	6.200000
## 91	18545.15	1008.3074	5.858468
## 92	23825.75	544.4847	7.040876
## 93	17264.51	1260.0623	4.935961
## 94	17134.89	1458.2781	5.063132
## 95	17641.92	866.4152	5.199240
## 96	15003.80	1574.9934	4.179825
## 97	15044.31	427.0143	NaN
## 98	15054.09	606.1465	6.164356
## 99	14213.22	571.6321	NaN

```
str(data)
```

```
## 'data.frame':   99 obs. of  19 variables:
## $ match_id      : num  5.80e+09 5.80e+09 4.63e+09 5.08e+09 5.18e+09 ...
## $ radiant_win   : logi  FALSE TRUE FALSE FALSE TRUE FALSE ...
## $ freq_r        : num  29.8 29.8 12.2 11 42.2 ...
## $ win_pct_r     : num  0.653 0.653 0.14 0.182 0.457 ...
## $ duration_avg_win_r : num  32.1 32.1 30.1 26.6 34.1 ...
## $ duration_avg_lose_r : num  40.6 40.6 41.7 27.5 31.9 ...
## $ actions_per_min_avg_r : num  317 317 211 210 NaN ...
## $ ancient_kills_avg_r : num  6.74 6.74 5.58 2.84 NaN ...
## $ buyback_count_avg_r : num  0.467 0.467 0.787 0.545 NaN ...
## $ courier_kills_avg_r : num  0.1942 0.1942 0.0111 0.0545 NaN ...
## $ deaths_avg_r   : num  4.56 4.56 6.11 7.93 4.71 ...
## $ denies_avg_r   : num  7.2 7.2 9.16 7.24 8.86 ...
## $ firstblood_claimed_avg_r : num  0.1156 0.1156 0.0563 0.1273 0.1074 ...
## $ gold_avg_r     : num  2090 2090 1536 929 1801 ...
## $ gold_per_min_avg_r : num  436 436 422 414 416 ...
## $ gold_spent_avg_r : num  13094 13094 15254 10127 12429 ...
## $ hero_damage_avg_r : num  16241 16241 18990 17911 15315 ...
## $ hero_healing_avg_r : num  1594 1594 531 309 734 ...
## $ hero_kills_avg_r : num  5.28 5.28 4.63 5.78 NaN ...
```

```
summary(data)
```

```
##      match_id      radiant_win      freq_r      win_pct_r
## Min.   :4.347e+09  Mode :logical  Min.    : 1.0  Min.    :0.0000
## 1st Qu.:5.086e+09  FALSE:34    1st Qu.: 29.8  1st Qu.:0.4509
## Median :5.418e+09  TRUE :65    Median : 75.2  Median :0.5208
## Mean   :5.363e+09                Mean   : 90.7  Mean   :0.5068
## 3rd Qu.:5.688e+09                3rd Qu.:134.8  3rd Qu.:0.5883
## Max.   :6.020e+09                Max.    :288.0  Max.    :1.0000
##                                     NA's    :4      NA's    :4
## duration_avg_win_r duration_avg_lose_r actions_per_min_avg_r
## Min.    :23.91      Min.    :19.08      Min.    :122.5
## 1st Qu.:31.69      1st Qu.:31.04      1st Qu.:202.1
## Median :34.21      Median :35.47      Median :235.5
## Mean    :33.69      Mean    :34.34      Mean    :238.8
## 3rd Qu.:36.57      3rd Qu.:37.76      3rd Qu.:276.7
## Max.    :41.67      Max.    :42.04      Max.    :356.5
## NA's    :5          NA's    :6          NA's    :40
## ancient_kills_avg_r buyback_count_avg_r courier_kills_avg_r deaths_avg_r
## Min.    : 0.000      Min.    :0.0000      Min.    :0.00000      Min.    : 2.000
## 1st Qu.: 3.576      1st Qu.:0.3682      1st Qu.:0.04582      1st Qu.: 4.560
## Median : 4.975      Median :0.4369      Median :0.19420      Median : 5.248
## Mean    : 4.974      Mean    :0.4610      Mean    :0.17989      Mean    : 5.364
## 3rd Qu.: 6.350      3rd Qu.:0.5414      3rd Qu.:0.29566      3rd Qu.: 5.865
## Max.    :11.380      Max.    :1.5000      Max.    :0.45991      Max.    :11.000
## NA's    :40          NA's    :40          NA's    :40          NA's    :4
## denies_avg_r      firstblood_claimed_avg_r gold_avg_r      gold_per_min_avg_r
## Min.    : 0.500      Min.    :0.00000      Min.    : 527      Min.    :220.0
## 1st Qu.: 6.747      1st Qu.:0.08944      1st Qu.:1493      1st Qu.:410.1
## Median : 8.008      Median :0.09722      Median :1674      Median :425.8
## Mean    : 7.899      Mean    :0.09861      Mean    :1658      Mean    :421.9
## 3rd Qu.: 9.068      3rd Qu.:0.10839      3rd Qu.:1815      3rd Qu.:440.4
## Max.    :13.489      Max.    :0.42228      Max.    :2436      Max.    :522.6
## NA's    :4          NA's    :4          NA's    :4          NA's    :4
## gold_spent_avg_r  hero_damage_avg_r  hero_healing_avg_r hero_kills_avg_r
## Min.    : 6742      Min.    : 9898      Min.    : 200.0      Min.    :3.500
## 1st Qu.:11265      1st Qu.:15615      1st Qu.: 707.6      1st Qu.:4.781
## Median :12683      Median :16812      Median : 901.6      Median :5.283
## Mean    :12744      Mean    :17104      Mean    : 912.7      Mean    :5.426
## 3rd Qu.:13799      3rd Qu.:18160      3rd Qu.:1123.7      3rd Qu.:5.890
## Max.    :19181      Max.    :31995      Max.    :1861.6      Max.    :9.107
## NA's    :4          NA's    :4          NA's    :4          NA's    :40
```

```
names(data)
```

```
## [1] "match_id"      "radiant_win"
## [3] "freq_r"        "win_pct_r"
## [5] "duration_avg_win_r" "duration_avg_lose_r"
## [7] "actions_per_min_avg_r" "ancient_kills_avg_r"
## [9] "buyback_count_avg_r" "courier_kills_avg_r"
## [11] "deaths_avg_r"    "denies_avg_r"
## [13] "firstblood_claimed_avg_r" "gold_avg_r"
## [15] "gold_per_min_avg_r" "gold_spent_avg_r"
```

```
## [17] "hero_damage_avg_r"      "hero_healing_avg_r"
## [19] "hero_kills_avg_r"
```

```
row.names(data)
```

```
## [1] "1" "2" "3" "4" "5" "6" "7" "8" "9" "10" "11" "12" "13" "14" "15"
## [16] "16" "17" "18" "19" "20" "21" "22" "23" "24" "25" "26" "27" "28" "29" "30"
## [31] "31" "32" "33" "34" "35" "36" "37" "38" "39" "40" "41" "42" "43" "44" "45"
## [46] "46" "47" "48" "49" "50" "51" "52" "53" "54" "55" "56" "57" "58" "59" "60"
## [61] "61" "62" "63" "64" "65" "66" "67" "68" "69" "70" "71" "72" "73" "74" "75"
## [76] "76" "77" "78" "79" "80" "81" "82" "83" "84" "85" "86" "87" "88" "89" "90"
## [91] "91" "92" "93" "94" "95" "96" "97" "98" "99"
```

```
rownames(data)
```

```
## [1] "1" "2" "3" "4" "5" "6" "7" "8" "9" "10" "11" "12" "13" "14" "15"
## [16] "16" "17" "18" "19" "20" "21" "22" "23" "24" "25" "26" "27" "28" "29" "30"
## [31] "31" "32" "33" "34" "35" "36" "37" "38" "39" "40" "41" "42" "43" "44" "45"
## [46] "46" "47" "48" "49" "50" "51" "52" "53" "54" "55" "56" "57" "58" "59" "60"
## [61] "61" "62" "63" "64" "65" "66" "67" "68" "69" "70" "71" "72" "73" "74" "75"
## [76] "76" "77" "78" "79" "80" "81" "82" "83" "84" "85" "86" "87" "88" "89" "90"
## [91] "91" "92" "93" "94" "95" "96" "97" "98" "99"
```

```
colnames(data)
```

```
## [1] "match_id"      "radiant_win"
## [3] "freq_r"        "win_pct_r"
## [5] "duration_avg_win_r" "duration_avg_lose_r"
## [7] "actions_per_min_avg_r" "ancient_kills_avg_r"
## [9] "buyback_count_avg_r" "courier_kills_avg_r"
## [11] "deaths_avg_r" "denies_avg_r"
## [13] "firstblood_claimed_avg_r" "gold_avg_r"
## [15] "gold_per_min_avg_r" "gold_spent_avg_r"
## [17] "hero_damage_avg_r" "hero_healing_avg_r"
## [19] "hero_kills_avg_r"
```

```
dimnames(data)
```

```
## [[1]]
## [1] "1" "2" "3" "4" "5" "6" "7" "8" "9" "10" "11" "12" "13" "14" "15"
## [16] "16" "17" "18" "19" "20" "21" "22" "23" "24" "25" "26" "27" "28" "29" "30"
## [31] "31" "32" "33" "34" "35" "36" "37" "38" "39" "40" "41" "42" "43" "44" "45"
## [46] "46" "47" "48" "49" "50" "51" "52" "53" "54" "55" "56" "57" "58" "59" "60"
## [61] "61" "62" "63" "64" "65" "66" "67" "68" "69" "70" "71" "72" "73" "74" "75"
## [76] "76" "77" "78" "79" "80" "81" "82" "83" "84" "85" "86" "87" "88" "89" "90"
## [91] "91" "92" "93" "94" "95" "96" "97" "98" "99"
##
## [[2]]
## [1] "match_id"      "radiant_win"
## [3] "freq_r"        "win_pct_r"
## [5] "duration_avg_win_r" "duration_avg_lose_r"
```

```
## [7] "actions_per_min_avg_r" "ancient_kills_avg_r"
## [9] "buyback_count_avg_r" "courier_kills_avg_r"
## [11] "deaths_avg_r" "denies_avg_r"
## [13] "firstblood_claimed_avg_r" "gold_avg_r"
## [15] "gold_per_min_avg_r" "gold_spent_avg_r"
## [17] "hero_damage_avg_r" "hero_healing_avg_r"
## [19] "hero_kills_avg_r"
```

```
length(data$match_id)
```

```
## [1] 99
```

```
max(data ,na.rm=TRUE)
```

```
## [1] 6019971220
```

```
min(data,na.rm=TRUE)
```

```
## [1] 0
```

```
sum(data,na.rm=TRUE)
```

```
## [1] 5.30895e+11
```

```
fivenum(data,na.rm=TRUE)
```

```
## [1] 0.000000e+00 1.000000e+00 3.342418e+01 1.100832e+03 6.019971e+09
```

```
quantile(data,na.rm=TRUE)
```

```
##           0%           25%           50%           75%           100%
## 0.000000e+00 1.000000e+00 3.342418e+01 1.096733e+03 6.019971e+09
```

```
mean(data$deaths_avg_r,na.rm=TRUE)
```

```
## [1] 5.364039
```

```
median(data$deaths_avg_r,na.rm=TRUE)
```

```
## [1] 5.247807
```

```
table(data$ancient_kills_avg_r)
```

```
##
##           0 0.166666667 0.293859649           1           1.5 1.884417808
##           1           1           1           1           1           1
##          2.25 2.477212596           2.55 2.836363636           3.2 3.308333333
```

```

##          1          1          1          1          1          1
## 3.320143372 3.532673267 3.534448161 3.617518248      3.6725 3.733038946
##          1          1          1          1          1          1
## 3.99044454 4.165081585 4.203470286 4.296101217 4.577897916 4.646954566
##          1          1          1          1          1          1
## 4.716193899 4.794033535 4.823120629 4.938188609 4.968606601 4.975467188
##          1          1          1          1          1          1
## 5.012745242 5.285206361 5.40339616 5.58015873 5.602323565 5.617346437
##          1          1          1          1          1          1
## 5.802240896 5.840868681 5.846763738 5.895857134 6.053079365 6.074133253
##          1          1          1          1          1          1
## 6.074319553 6.154844007 6.544853303 6.738014834 7.047554924 7.174029304
##          1          1          1          2          1          1
## 7.277777778 7.318836734 7.445238095 7.450613155 7.54872515 7.8976951
##          1          1          1          1          1          1
## 8.038095238 8.154634394 8.497810219 11.38049287
##          1          1          1          1

```

t(data)

```

##          [,1]          [,2]          [,3]          [,4]
## match_id      5.796600e+09 5.796711e+09 4.632570e+09 5.080525e+09
## radiant_win    0.000000e+00 1.000000e+00 0.000000e+00 0.000000e+00
## freq_r         2.980000e+01 2.980000e+01 1.220000e+01 1.100000e+01
## win_pct_r      6.534193e-01 6.534193e-01 1.404762e-01 1.818182e-01
## duration_avg_win_r 3.209696e+01 3.209696e+01 3.007000e+01 2.660000e+01
## duration_avg_lose_r 4.058606e+01 4.058606e+01 4.173286e+01 2.747037e+01
## actions_per_min_avg_r 3.168472e+02 3.168472e+02 2.110746e+02 2.097455e+02
## ancient_kills_avg_r 6.738015e+00 6.738015e+00 5.580159e+00 2.836364e+00
## buyback_count_avg_r 4.672965e-01 4.672965e-01 7.865079e-01 5.454545e-01
## courier_kills_avg_r 1.941987e-01 1.941987e-01 1.111111e-02 5.454545e-02
## deaths_avg_r   4.560102e+00 4.560102e+00 6.106349e+00 7.927273e+00
## denies_avg_r   7.198182e+00 7.198182e+00 9.161111e+00 7.236364e+00
## firstblood_claimed_avg_r 1.155893e-01 1.155893e-01 5.634921e-02 1.272727e-01
## gold_avg_r     2.090211e+03 2.090211e+03 1.535913e+03 9.294182e+02
## gold_per_min_avg_r 4.355398e+02 4.355398e+02 4.221270e+02 4.139455e+02
## gold_spent_avg_r 1.309380e+04 1.309380e+04 1.525444e+04 1.012664e+04
## hero_damage_avg_r 1.624117e+04 1.624117e+04 1.899002e+04 1.791127e+04
## hero_healing_avg_r 1.593956e+03 1.593956e+03 5.308056e+02 3.085455e+02
## hero_kills_avg_r 5.283281e+00 5.283281e+00 4.627778e+00 5.781818e+00
##          [,5]          [,6]          [,7]          [,8]
## match_id      5.176257e+09 5.989112e+09 5.730717e+09 5113821481.0
## radiant_win    1.000000e+00 0.000000e+00 0.000000e+00 0.0
## freq_r         4.220000e+01 4.540000e+01 1.706000e+02 2.0
## win_pct_r      4.574555e-01 4.193409e-01 5.264108e-01 0.0
## duration_avg_win_r 3.408308e+01 3.332407e+01 3.364308e+01 NA
## duration_avg_lose_r 3.186463e+01 3.338017e+01 3.566973e+01 35.5
## actions_per_min_avg_r      NaN 2.545968e+02 2.829257e+02 122.5
## ancient_kills_avg_r      NaN 4.794034e+00 5.846764e+00 1.5
## buyback_count_avg_r      NaN 3.359571e-01 3.737818e-01 1.5
## courier_kills_avg_r      NaN 3.679785e-01 2.625661e-01 0.0
## deaths_avg_r   4.711898e+00 5.402652e+00 5.432516e+00 11.0
## denies_avg_r   8.863704e+00 7.523606e+00 7.655926e+00 0.5
## firstblood_claimed_avg_r 1.074291e-01 1.369479e-01 9.569794e-02 0.0

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## gold_avg_r	1.800730e+03	1.444232e+03	1.618636e+03	527.0
## gold_per_min_avg_r	4.161454e+02	4.257679e+02	4.274632e+02	220.0
## gold_spent_avg_r	1.242880e+04	1.255189e+04	1.341273e+04	6742.5
## hero_damage_avg_r	1.531471e+04	1.703104e+04	1.718368e+04	9898.5
## hero_healing_avg_r	7.335144e+02	7.798330e+02	9.015848e+02	200.0
## hero_kills_avg_r	NaN	5.675387e+00	5.648934e+00	3.5
##	[,9]	[,10]	[,11]	[,12]
## match_id	5.628319e+09	5.640928e+09	4.897618e+09	5.480282e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	2.878000e+02	6.540000e+01	5.720000e+01	1.592000e+02
## win_pct_r	6.203929e-01	6.267639e-01	5.237555e-01	4.788596e-01
## duration_avg_win_r	3.529406e+01	3.735061e+01	3.481627e+01	3.440844e+01
## duration_avg_lose_r	3.917398e+01	3.992489e+01	3.538061e+01	3.443275e+01
## actions_per_min_avg_r	2.356521e+02	2.639289e+02	NaN	1.644252e+02
## ancient_kills_avg_r	7.047555e+00	4.716194e+00	NaN	7.548725e+00
## buyback_count_avg_r	4.745440e-01	4.383924e-01	NaN	4.273753e-01
## courier_kills_avg_r	2.262133e-01	4.599102e-01	NaN	3.110511e-01
## deaths_avg_r	4.611322e+00	4.506559e+00	4.874027e+00	4.515245e+00
## denies_avg_r	8.297619e+00	1.021557e+01	9.432573e+00	8.657140e+00
## firstblood_claimed_avg_r	1.025190e-01	1.312782e-01	1.789726e-01	9.564238e-02
## gold_avg_r	1.672130e+03	2.371730e+03	1.729057e+03	1.648990e+03
## gold_per_min_avg_r	4.291646e+02	4.218050e+02	4.284165e+02	4.151208e+02
## gold_spent_avg_r	1.410171e+04	1.380291e+04	1.341387e+04	1.274816e+04
## hero_damage_avg_r	1.907478e+04	1.964792e+04	1.620845e+04	1.603574e+04
## hero_healing_avg_r	1.249951e+03	1.234891e+03	9.989974e+02	9.108228e+02
## hero_kills_avg_r	5.891800e+00	5.528579e+00	NaN	4.387813e+00
##	[,13]	[,14]	[,15]	[,16]
## match_id	5.114714e+09	4.466830e+09	5.640704e+09	6.019971e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	4.250000e+01	1.066000e+02	1.328000e+02	5.620000e+01
## win_pct_r	4.687889e-01	5.526349e-01	5.097318e-01	5.309129e-01
## duration_avg_win_r	3.293283e+01	3.491631e+01	3.263575e+01	3.697540e+01
## duration_avg_lose_r	4.141678e+01	3.629502e+01	3.757946e+01	3.859437e+01
## actions_per_min_avg_r	2.422746e+02	NaN	2.251191e+02	1.803191e+02
## ancient_kills_avg_r	1.884418e+00	NaN	7.318837e+00	8.154634e+00
## buyback_count_avg_r	4.331024e-01	NaN	4.065169e-01	4.874976e-01
## courier_kills_avg_r	3.132783e-02	NaN	2.882618e-01	3.107554e-01
## deaths_avg_r	5.729958e+00	4.920789e+00	4.798605e+00	4.842100e+00
## denies_avg_r	5.589236e+00	1.075605e+01	8.731314e+00	7.416905e+00
## firstblood_claimed_avg_r	4.222836e-01	8.622230e-02	1.010242e-01	9.510196e-02
## gold_avg_r	1.687398e+03	1.954431e+03	1.464886e+03	1.711100e+03
## gold_per_min_avg_r	3.578580e+02	4.510239e+02	4.133724e+02	4.518551e+02
## gold_spent_avg_r	1.107886e+04	1.432876e+04	1.308162e+04	1.553420e+04
## hero_damage_avg_r	1.420774e+04	1.722489e+04	1.684133e+04	1.933443e+04
## hero_healing_avg_r	1.428151e+03	1.123324e+03	1.210807e+03	1.123272e+03
## hero_kills_avg_r	3.672167e+00	NaN	5.042040e+00	5.167810e+00
##	[,17]	[,18]	[,19]	[,20]
## match_id	5.300030e+09	5971206893	5.994880e+09	5.224100e+09
## radiant_win	1.000000e+00	1	1.000000e+00	1.000000e+00
## freq_r	1.380000e+01	NA	2.220000e+02	2.800000e+01
## win_pct_r	5.118581e-01	NA	4.477352e-01	2.258407e-01
## duration_avg_win_r	3.669451e+01	NA	3.373294e+01	3.655568e+01
## duration_avg_lose_r	2.837649e+01	NA	3.406393e+01	2.932287e+01
## actions_per_min_avg_r	NaN	NA	NaN	NaN

## ancient_kills_avg_r	NaN	NA	NaN	NaN
## buyback_count_avg_r	NaN	NA	NaN	NaN
## courier_kills_avg_r	NaN	NA	NaN	NaN
## deaths_avg_r	4.793277e+00	NA	4.992730e+00	6.643301e+00
## denies_avg_r	9.753408e+00	NA	6.141778e+00	6.846857e+00
## firstblood_claimed_avg_r	4.920635e-02	NA	9.112719e-02	8.736299e-02
## gold_avg_r	1.635644e+03	NA	1.501308e+03	1.043671e+03
## gold_per_min_avg_r	4.101627e+02	NA	4.078471e+02	3.782052e+02
## gold_spent_avg_r	1.254223e+04	NA	1.241636e+04	1.083180e+04
## hero_damage_avg_r	1.822386e+04	NA	1.609103e+04	1.476278e+04
## hero_healing_avg_r	3.234545e+02	NA	7.753407e+02	6.744580e+02
## hero_kills_avg_r	NaN	NA	NaN	NaN
##	[,21]	[,22]	[,23]	[,24]
## match_id	5.901415e+09	5.987369e+09	5.677418e+09	4.891380e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	2.920000e+01	9.880000e+01	1.784000e+02	1.092000e+02
## win_pct_r	5.420033e-01	4.508924e-01	5.515661e-01	5.641900e-01
## duration_avg_win_r	3.601521e+01	3.421427e+01	3.477052e+01	3.421306e+01
## duration_avg_lose_r	2.905594e+01	3.431869e+01	3.656583e+01	3.627793e+01
## actions_per_min_avg_r	2.864950e+02	NaN	2.355135e+02	2.789649e+02
## ancient_kills_avg_r	6.154844e+00	NaN	5.895857e+00	4.823121e+00
## buyback_count_avg_r	3.506897e-01	NaN	4.755131e-01	4.284868e-01
## courier_kills_avg_r	3.108867e-01	NaN	2.913125e-01	3.838870e-02
## deaths_avg_r	5.926962e+00	5.382724e+00	5.271816e+00	4.293531e+00
## denies_avg_r	6.327603e+00	6.469243e+00	8.294118e+00	8.379813e+00
## firstblood_claimed_avg_r	7.617406e-02	9.809828e-02	9.417488e-02	1.013646e-01
## gold_avg_r	1.760272e+03	1.484519e+03	1.922047e+03	1.799436e+03
## gold_per_min_avg_r	4.498124e+02	4.269546e+02	4.111654e+02	4.272083e+02
## gold_spent_avg_r	1.361108e+04	1.301037e+04	1.264314e+04	1.352129e+04
## hero_damage_avg_r	1.848824e+04	1.594749e+04	1.680731e+04	1.616007e+04
## hero_healing_avg_r	5.612931e+02	8.870524e+02	1.046708e+03	9.021901e+02
## hero_kills_avg_r	6.459097e+00	NaN	5.161955e+00	4.757202e+00
##	[,25]	[,26]	[,27]	[,28]
## match_id	5.600468e+09	5.440791e+09	5.600993e+09	5.340453e+09
## radiant_win	1.000000e+00	0.000000e+00	0.000000e+00	1.000000e+00
## freq_r	1.406000e+02	1.866000e+02	2.500000e+00	1.620000e+01
## win_pct_r	4.905469e-01	6.526769e-01	2.500000e-01	2.719114e-01
## duration_avg_win_r	2.666287e+01	3.309384e+01	2.783333e+01	2.626127e+01
## duration_avg_lose_r	2.798546e+01	3.750341e+01	3.026042e+01	3.151014e+01
## actions_per_min_avg_r	NaN	NaN	2.133333e+02	NaN
## ancient_kills_avg_r	NaN	NaN	1.666667e-01	NaN
## buyback_count_avg_r	NaN	NaN	4.166667e-01	NaN
## courier_kills_avg_r	NaN	NaN	8.333333e-02	NaN
## deaths_avg_r	5.672643e+00	4.090174e+00	7.583333e+00	5.645688e+00
## denies_avg_r	2.636285e+00	9.063177e+00	8.333333e+00	9.236072e+00
## firstblood_claimed_avg_r	9.604260e-02	9.858093e-02	8.333333e-02	2.777778e-02
## gold_avg_r	1.619503e+03	1.803809e+03	1.023833e+03	1.471262e+03
## gold_per_min_avg_r	4.367192e+02	4.182633e+02	3.520000e+02	3.820660e+02
## gold_spent_avg_r	1.021475e+04	1.281494e+04	8.851667e+03	1.070791e+04
## hero_damage_avg_r	1.400074e+04	1.681229e+04	1.238542e+04	1.582225e+04
## hero_healing_avg_r	5.363279e+02	1.314024e+03	2.684167e+02	9.277343e+02
## hero_kills_avg_r	NaN	NaN	5.416667e+00	NaN
##	[,29]	[,30]	[,31]	[,32]
## match_id	4.360291e+09	5.139217e+09	6.014646e+09	5.060190e+09

## radiant_win	1.000000e+00	1.000000e+00	0.000000e+00	1.000000e+00
## freq_r	4.680000e+01	5.720000e+01	8.860000e+01	9.000000e+01
## win_pct_r	5.963535e-01	6.140452e-01	5.471228e-01	5.321404e-01
## duration_avg_win_r	3.538575e+01	3.613098e+01	3.158525e+01	3.711181e+01
## duration_avg_lose_r	3.547418e+01	3.968136e+01	3.104065e+01	3.805562e+01
## actions_per_min_avg_r	2.532849e+02	NaN	NaN	2.642459e+02
## ancient_kills_avg_r	1.138049e+01	NaN	NaN	5.840869e+00
## buyback_count_avg_r	5.173823e-01	NaN	NaN	5.374211e-01
## courier_kills_avg_r	2.532095e-02	NaN	NaN	6.189538e-02
## deaths_avg_r	4.667953e+00	4.400872e+00	5.552068e+00	3.723037e+00
## denies_avg_r	1.103511e+01	8.783352e+00	6.937697e+00	9.695483e+00
## firstblood_claimed_avg_r	1.105656e-01	1.040858e-01	5.221851e-02	1.304740e-01
## gold_avg_r	1.711917e+03	1.871269e+03	1.513089e+03	2.187627e+03
## gold_per_min_avg_r	4.418902e+02	4.902357e+02	4.493487e+02	4.897112e+02
## gold_spent_avg_r	1.382402e+04	1.685247e+04	1.265234e+04	1.645788e+04
## hero_damage_avg_r	1.593680e+04	1.959103e+04	1.921966e+04	1.998107e+04
## hero_healing_avg_r	9.408772e+02	1.124033e+03	8.464000e+02	8.448126e+02
## hero_kills_avg_r	4.837244e+00	NaN	NaN	5.915651e+00
##	[,33]	[,34]	[,35]	[,36]
## match_id	4.608178e+09	5.874061e+09	5.238975e+09	5.729519e+09
## radiant_win	0.000000e+00	0.000000e+00	1.000000e+00	1.000000e+00
## freq_r	7.200000e+00	3.600000e+01	8.560000e+01	2.740000e+02
## win_pct_r	1.416667e-01	2.851800e-01	5.934145e-01	4.525547e-01
## duration_avg_win_r	4.150000e+01	3.682669e+01	3.681754e+01	2.483468e+01
## duration_avg_lose_r	3.040514e+01	3.479625e+01	4.054806e+01	2.505744e+01
## actions_per_min_avg_r	1.581417e+02	2.745261e+02	NaN	1.831314e+02
## ancient_kills_avg_r	3.308333e+00	4.968607e+00	NaN	3.617518e+00
## buyback_count_avg_r	5.666667e-01	3.921239e-01	NaN	2.145985e-01
## courier_kills_avg_r	5.000000e-02	1.805778e-01	NaN	2.299270e-01
## deaths_avg_r	6.716667e+00	5.442621e+00	4.511010e+00	7.040146e+00
## denies_avg_r	8.916667e+00	6.766460e+00	1.005631e+01	5.533577e+00
## firstblood_claimed_avg_r	1.250000e-01	1.167440e-01	1.080497e-01	9.562044e-02
## gold_avg_r	1.344417e+03	1.523031e+03	2.049225e+03	1.177828e+03
## gold_per_min_avg_r	3.438083e+02	3.747267e+02	4.470122e+02	4.392299e+02
## gold_spent_avg_r	9.400375e+03	1.212348e+04	1.535227e+04	9.810526e+03
## hero_damage_avg_r	1.398350e+04	1.569131e+04	1.905064e+04	1.550375e+04
## hero_healing_avg_r	5.006000e+02	7.509585e+02	1.677827e+03	3.425168e+02
## hero_kills_avg_r	4.450000e+00	4.279910e+00	NaN	6.530657e+00
##	[,37]	[,38]	[,39]	[,40]
## match_id	5.369299e+09	5.950074e+09	4.347235e+09	5.823759e+09
## radiant_win	1.000000e+00	1.000000e+00	0.000000e+00	1.000000e+00
## freq_r	1.316000e+02	1.980000e+02	6.200000e+00	1.340000e+02
## win_pct_r	5.091375e-01	3.959385e-01	8.380952e-01	5.120051e-01
## duration_avg_win_r	2.929403e+01	3.282533e+01	3.179556e+01	3.723292e+01
## duration_avg_lose_r	2.761938e+01	3.413660e+01	1.908333e+01	3.822815e+01
## actions_per_min_avg_r	2.000639e+02	NaN	2.201619e+02	2.392531e+02
## ancient_kills_avg_r	4.165082e+00	NaN	8.038095e+00	2.477213e+00
## buyback_count_avg_r	3.969930e-01	NaN	2.666667e-01	4.368864e-01
## courier_kills_avg_r	3.022611e-01	NaN	0.000000e+00	2.635746e-01
## deaths_avg_r	6.700769e+00	5.163855e+00	4.066667e+00	5.300653e+00
## denies_avg_r	7.549091e+00	6.162576e+00	9.561905e+00	5.402712e+00
## firstblood_claimed_avg_r	9.564103e-02	9.257760e-02	9.523809e-02	1.048960e-01
## gold_avg_r	1.574521e+03	1.442117e+03	2.191729e+03	1.695564e+03
## gold_per_min_avg_r	4.432365e+02	4.021836e+02	4.558571e+02	3.831000e+02

## gold_spent_avg_r	1.100101e+04	1.216869e+04	1.237764e+04	1.268292e+04
## hero_damage_avg_r	1.868987e+04	1.570220e+04	1.598298e+04	1.685541e+04
## hero_healing_avg_r	8.233236e+02	7.770462e+02	1.572481e+03	9.586250e+02
## hero_kills_avg_r	6.450699e+00	NaN	6.357143e+00	4.444848e+00
##	[,41]	[,42]	[,43]	[,44]
## match_id	4.593310e+09	6.010521e+09	5777777395	4.678696e+09
## radiant_win	1.000000e+00	0.000000e+00	1	1.000000e+00
## freq_r	7.520000e+01	1.634000e+02	NA	1.356000e+02
## win_pct_r	4.830962e-01	4.757318e-01	NA	5.456963e-01
## duration_avg_win_r	3.603718e+01	3.213805e+01	NA	3.685176e+01
## duration_avg_lose_r	3.392623e+01	3.665151e+01	NA	3.852503e+01
## actions_per_min_avg_r	2.011142e+02	3.113689e+02	NA	NaN
## ancient_kills_avg_r	3.320143e+00	5.802241e+00	NA	NaN
## buyback_count_avg_r	5.118197e-01	3.981676e-01	NA	NaN
## courier_kills_avg_r	3.762334e-02	2.876786e-01	NA	NaN
## deaths_avg_r	5.444394e+00	5.432494e+00	NA	4.491780e+00
## denies_avg_r	7.115617e+00	6.004197e+00	NA	1.047559e+01
## firstblood_claimed_avg_r	9.560921e-02	9.649860e-02	NA	1.039311e-01
## gold_avg_r	1.729555e+03	1.607583e+03	NA	2.081132e+03
## gold_per_min_avg_r	3.819791e+02	4.122647e+02	NA	4.399766e+02
## gold_spent_avg_r	1.161339e+04	1.266390e+04	NA	1.442142e+04
## hero_damage_avg_r	1.457780e+04	1.806607e+04	NA	1.635637e+04
## hero_healing_avg_r	1.113622e+03	8.024899e+02	NA	1.114628e+03
## hero_kills_avg_r	4.144631e+00	5.197132e+00	NA	NaN
##	[,45]	[,46]	[,47]	[,48]
## match_id	4.919857e+09	5.574110e+09	4.623556e+09	4.870534e+09
## radiant_win	0.000000e+00	1.000000e+00	1.000000e+00	0.000000e+00
## freq_r	2.660000e+01	2.360000e+01	8.200000e+00	1.760000e+02
## win_pct_r	5.338041e-01	7.799331e-01	3.707143e-01	6.000000e-01
## duration_avg_win_r	3.736698e+01	2.903526e+01	2.894750e+01	3.547760e+01
## duration_avg_lose_r	2.923944e+01	3.775833e+01	2.997950e+01	3.585875e+01
## actions_per_min_avg_r	2.049478e+02	3.153572e+02	1.817868e+02	3.079328e+02
## ancient_kills_avg_r	4.975467e+00	3.534448e+00	3.672500e+00	6.053079e+00
## buyback_count_avg_r	6.616906e-01	2.876254e-01	4.446429e-01	4.770794e-01
## courier_kills_avg_r	2.991453e-02	3.541806e-01	1.250000e-02	4.107936e-02
## deaths_avg_r	6.066493e+00	4.344147e+00	4.733929e+00	3.973397e+00
## denies_avg_r	9.567101e+00	7.634114e+00	8.568571e+00	9.072476e+00
## firstblood_claimed_avg_r	9.344488e-02	1.207358e-01	9.000000e-02	9.444444e-02
## gold_avg_r	1.660848e+03	1.627727e+03	1.111688e+03	2.079298e+03
## gold_per_min_avg_r	4.213582e+02	4.102826e+02	3.992936e+02	4.463422e+02
## gold_spent_avg_r	1.260060e+04	1.143614e+04	1.109462e+04	1.401765e+04
## hero_damage_avg_r	1.685977e+04	1.708522e+04	1.332699e+04	1.561014e+04
## hero_healing_avg_r	7.836677e+02	1.861612e+03	6.375864e+02	9.309312e+02
## hero_kills_avg_r	5.520382e+00	6.482609e+00	4.377143e+00	4.628063e+00
##	[,49]	[,50]	[,51]	[,52]
## match_id	5.418396e+09	5.628457e+09	5.581275e+09	5.441823e+09
## radiant_win	1.000000e+00	0.000000e+00	1.000000e+00	1.000000e+00
## freq_r	1.060000e+02	2.880000e+02	1.586000e+02	1.208000e+02
## win_pct_r	6.295876e-01	5.208333e-01	6.353311e-01	5.778040e-01
## duration_avg_win_r	3.164839e+01	2.502356e+01	3.222441e+01	3.637714e+01
## duration_avg_lose_r	3.895772e+01	2.386002e+01	3.617849e+01	3.497165e+01
## actions_per_min_avg_r	NaN	NaN	NaN	NaN
## ancient_kills_avg_r	NaN	NaN	NaN	NaN
## buyback_count_avg_r	NaN	NaN	NaN	NaN

## courier_kills_avg_r	NaN	NaN	NaN	NaN
## deaths_avg_r	4.230302e+00	6.197222e+00	4.253422e+00	4.894941e+00
## denies_avg_r	1.084810e+01	6.544444e+00	8.452789e+00	8.866034e+00
## firstblood_claimed_avg_r	9.999960e-02	1.038328e-01	1.065690e-01	9.126665e-02
## gold_avg_r	1.770027e+03	1.301471e+03	1.689959e+03	1.805434e+03
## gold_per_min_avg_r	4.151810e+02	4.284389e+02	4.100112e+02	4.242117e+02
## gold_spent_avg_r	1.255306e+04	9.354003e+03	1.228265e+04	1.347587e+04
## hero_damage_avg_r	1.556663e+04	1.482173e+04	1.661137e+04	1.764858e+04
## hero_healing_avg_r	1.141216e+03	5.236417e+02	1.150688e+03	1.190343e+03
## hero_kills_avg_r	NaN	NaN	NaN	NaN
##	[,53]	[,54]	[,55]	[,56]
## match_id	4.401995e+09	4.683208e+09	5.092234e+09	5.117977e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	0.000000e+00
## freq_r	1.000000e+00	1.820000e+01	4.100000e+01	7.600000e+01
## win_pct_r	1.000000e+00	6.323300e-01	3.534523e-01	5.832234e-01
## duration_avg_win_r	3.195000e+01	3.636597e+01	3.963583e+01	3.822204e+01
## duration_avg_lose_r	NA	4.133917e+01	3.909162e+01	3.674842e+01
## actions_per_min_avg_r	1.720000e+02	1.993891e+02	2.831100e+02	3.341866e+02
## ancient_kills_avg_r	0.000000e+00	7.450613e+00	6.074133e+00	7.174029e+00
## buyback_count_avg_r	0.000000e+00	5.596433e-01	7.477879e-01	5.773321e-01
## courier_kills_avg_r	0.000000e+00	6.369379e-02	8.460419e-02	5.705739e-02
## deaths_avg_r	5.000000e+00	5.737421e+00	5.731768e+00	4.250385e+00
## denies_avg_r	1.100000e+01	1.324199e+01	8.443405e+00	9.238895e+00
## firstblood_claimed_avg_r	0.000000e+00	9.832776e-02	1.410815e-01	9.202686e-02
## gold_avg_r	2.133000e+03	2.435565e+03	1.889394e+03	2.122665e+03
## gold_per_min_avg_r	4.310000e+02	5.131136e+02	4.235532e+02	4.512671e+02
## gold_spent_avg_r	1.261000e+04	1.695437e+04	1.438842e+04	1.519395e+04
## hero_damage_avg_r	2.168000e+04	2.593979e+04	1.804847e+04	1.887157e+04
## hero_healing_avg_r	2.000000e+02	1.252627e+03	9.326884e+02	1.035047e+03
## hero_kills_avg_r	9.000000e+00	9.106503e+00	5.135491e+00	5.081123e+00
##	[,57]	[,58]	[,59]	[,60]
## match_id	5.405369e+09	4946806477	5.877655e+09	5.512372e+09
## radiant_win	1.000000e+00	1	1.000000e+00	0.000000e+00
## freq_r	1.800000e+01	NA	8.160000e+01	9.500000e+01
## win_pct_r	6.111111e-01	NA	6.241557e-01	3.568355e-01
## duration_avg_win_r	3.008333e+01	NA	3.319382e+01	3.323157e+01
## duration_avg_lose_r	2.769762e+01	NA	3.582975e+01	2.890058e+01
## actions_per_min_avg_r	2.054722e+02	NA	2.674103e+02	2.580983e+02
## ancient_kills_avg_r	1.000000e+00	NA	5.403396e+00	4.203470e+00
## buyback_count_avg_r	4.027778e-01	NA	3.475832e-01	3.249143e-01
## courier_kills_avg_r	3.055556e-01	NA	2.581712e-01	2.458905e-01
## deaths_avg_r	5.236111e+00	NA	4.733212e+00	5.824076e+00
## denies_avg_r	7.236111e+00	NA	6.436703e+00	7.849268e+00
## firstblood_claimed_avg_r	9.722222e-02	NA	9.957069e-02	8.162142e-02
## gold_avg_r	1.371944e+03	NA	1.555792e+03	1.225581e+03
## gold_per_min_avg_r	3.724722e+02	NA	4.293482e+02	3.793819e+02
## gold_spent_avg_r	9.717569e+03	NA	1.323466e+04	1.069277e+04
## hero_damage_avg_r	1.428768e+04	NA	1.708359e+04	1.514466e+04
## hero_healing_avg_r	1.379458e+03	NA	1.397298e+03	7.025446e+02
## hero_kills_avg_r	4.805556e+00	NA	5.514407e+00	4.440337e+00
##	[,61]	[,62]	[,63]	[,64]
## match_id	5.141913e+09	4.807632e+09	5.278144e+09	5.222673e+09
## radiant_win	1.000000e+00	0.000000e+00	0.000000e+00	1.000000e+00
## freq_r	1.972000e+02	3.800000e+01	4.040000e+01	4.000000e+00

## win_pct_r	5.597142e-01	5.266667e-01	4.460009e-01	7.500000e-01
## duration_avg_win_r	3.363962e+01	3.137135e+01	4.126471e+01	2.901667e+01
## duration_avg_lose_r	3.927421e+01	3.288926e+01	3.877805e+01	2.823333e+01
## actions_per_min_avg_r	NaN	NaN	2.669384e+02	2.439500e+02
## ancient_kills_avg_r	NaN	NaN	4.646955e+00	2.550000e+00
## buyback_count_avg_r	NaN	NaN	7.244444e-01	1.500000e-01
## courier_kills_avg_r	NaN	NaN	1.711741e-01	3.000000e-01
## deaths_avg_r	4.914611e+00	5.898333e+00	5.569141e+00	4.250000e+00
## denies_avg_r	6.726673e+00	8.005000e+00	7.549595e+00	1.020000e+01
## firstblood_claimed_avg_r	1.008493e-01	8.735632e-02	6.523617e-02	1.500000e-01
## gold_avg_r	1.566556e+03	1.338580e+03	1.865648e+03	1.937000e+03
## gold_per_min_avg_r	4.556805e+02	4.284000e+02	4.093069e+02	4.311500e+02
## gold_spent_avg_r	1.511193e+04	1.242657e+04	1.379530e+04	1.108125e+04
## hero_damage_avg_r	1.826729e+04	1.561902e+04	1.838515e+04	1.522460e+04
## hero_healing_avg_r	7.428161e+02	7.591717e+02	9.591142e+02	9.489000e+02
## hero_kills_avg_r	NaN	NaN	4.950967e+00	5.900000e+00
##	[,65]	[,66]	[,67]	[,68]
## match_id	5.138849e+09	4.977310e+09	5.723024e+09	6.002474e+09
## radiant_win	0.000000e+00	1.000000e+00	0.000000e+00	0.000000e+00
## freq_r	4.300000e+01	3.700000e+01	4.540000e+01	9.580000e+01
## win_pct_r	4.375337e-01	5.138544e-01	7.371429e-01	2.948403e-01
## duration_avg_win_r	3.664620e+01	3.716783e+01	3.236690e+01	3.647484e+01
## duration_avg_lose_r	3.535029e+01	3.770793e+01	3.777717e+01	3.359747e+01
## actions_per_min_avg_r	NaN	2.371855e+02	2.108995e+02	NaN
## ancient_kills_avg_r	NaN	3.733039e+00	7.445238e+00	NaN
## buyback_count_avg_r	NaN	6.838856e-01	4.555952e-01	NaN
## courier_kills_avg_r	NaN	0.000000e+00	3.316667e-01	NaN
## deaths_avg_r	5.167550e+00	6.084116e+00	4.866548e+00	6.179951e+00
## denies_avg_r	7.769449e+00	8.967957e+00	8.984286e+00	5.517838e+00
## firstblood_claimed_avg_r	5.162493e-02	6.400667e-02	1.160714e-01	1.066165e-01
## gold_avg_r	1.734651e+03	1.870150e+03	1.575808e+03	1.359422e+03
## gold_per_min_avg_r	4.220257e+02	4.421946e+02	4.582301e+02	3.918829e+02
## gold_spent_avg_r	1.362044e+04	1.444344e+04	1.432841e+04	1.213444e+04
## hero_damage_avg_r	1.769105e+04	1.924315e+04	1.804265e+04	1.633115e+04
## hero_healing_avg_r	8.984615e+02	1.203787e+03	1.292320e+03	9.105925e+02
## hero_kills_avg_r	NaN	5.888303e+00	6.104524e+00	NaN
##	[,69]	[,70]	[,71]	[,72]
## match_id	5.161776e+09	6.008407e+09	5.481916e+09	5.877782e+09
## radiant_win	1.000000e+00	0.000000e+00	1.000000e+00	1.000000e+00
## freq_r	3.600000e+01	8.580000e+01	1.380000e+01	7.080000e+01
## win_pct_r	5.000000e-01	5.062445e-01	1.965640e-01	4.508239e-01
## duration_avg_win_r	4.099630e+01	3.346819e+01	4.167315e+01	3.534769e+01
## duration_avg_lose_r	3.527130e+01	3.614235e+01	3.575462e+01	3.332290e+01
## actions_per_min_avg_r	1.812222e+02	NaN	2.821646e+02	NaN
## ancient_kills_avg_r	7.277778e+00	NaN	4.938189e+00	NaN
## buyback_count_avg_r	7.055556e-01	NaN	6.508590e-01	NaN
## courier_kills_avg_r	9.444444e-02	NaN	3.340243e-01	NaN
## deaths_avg_r	7.900000e+00	5.131469e+00	7.093147e+00	5.706797e+00
## denies_avg_r	8.400000e+00	6.282365e+00	8.008366e+00	6.676308e+00
## firstblood_claimed_avg_r	8.888889e-02	9.764717e-02	6.351074e-02	1.254667e-01
## gold_avg_r	1.997867e+03	1.796494e+03	1.397414e+03	1.605315e+03
## gold_per_min_avg_r	4.841444e+02	4.268282e+02	3.694664e+02	4.035540e+02
## gold_spent_avg_r	1.649928e+04	1.304059e+04	1.220289e+04	1.258602e+04
## hero_damage_avg_r	2.600474e+04	1.809702e+04	1.635082e+04	1.690289e+04

## hero_healing_avg_r	5.867500e+02	7.126506e+02	1.100832e+03	6.618366e+02
## hero_kills_avg_r	7.411111e+00	NaN	4.296816e+00	NaN
##	[,73]	[,74]	[,75]	[,76]
## match_id	5.596140e+09	5.134131e+09	5.254796e+09	5.693264e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	1.950000e+02	7.000000e+00	1.426000e+02	1.336000e+02
## win_pct_r	4.666667e-01	1.666667e-01	5.643052e-01	5.238949e-01
## duration_avg_win_r	2.787179e+01	2.644167e+01	3.644053e+01	3.704017e+01
## duration_avg_lose_r	2.772933e+01	3.279271e+01	3.617881e+01	3.680197e+01
## actions_per_min_avg_r	NaN	3.468125e+02	NaN	2.309784e+02
## ancient_kills_avg_r	NaN	2.250000e+00	NaN	6.074320e+00
## buyback_count_avg_r	NaN	4.583333e-01	NaN	3.959410e-01
## courier_kills_avg_r	NaN	0.000000e+00	NaN	3.905987e-01
## deaths_avg_r	5.831795e+00	7.770833e+00	4.408638e+00	4.250547e+00
## denies_avg_r	2.952821e+00	5.500000e+00	8.682031e+00	8.845382e+00
## firstblood_claimed_avg_r	9.533679e-02	0.000000e+00	1.121385e-01	1.064527e-01
## gold_avg_r	1.584259e+03	1.084438e+03	1.746321e+03	2.030817e+03
## gold_per_min_avg_r	4.259426e+02	3.550625e+02	4.326577e+02	4.382662e+02
## gold_spent_avg_r	1.032970e+04	1.014719e+04	1.435734e+04	1.435573e+04
## hero_damage_avg_r	1.404609e+04	1.942633e+04	1.685553e+04	1.941102e+04
## hero_healing_avg_r	4.838185e+02	7.374583e+02	9.435258e+02	9.784958e+02
## hero_kills_avg_r	NaN	5.500000e+00	NaN	5.739360e+00
##	[,77]	[,78]	[,79]	[,80]
## match_id	5.683281e+09	5.037916e+09	5.328803e+09	5.364054e+09
## radiant_win	1.000000e+00	1.000000e+00	0.000000e+00	1.000000e+00
## freq_r	1.866000e+02	8.780000e+01	1.000000e+01	2.750000e+01
## win_pct_r	5.777078e-01	4.582993e-01	2.772031e-01	7.245372e-01
## duration_avg_win_r	3.502384e+01	3.436435e+01	4.096167e+01	2.949687e+01
## duration_avg_lose_r	3.698955e+01	3.497960e+01	3.014838e+01	3.664028e+01
## actions_per_min_avg_r	1.781077e+02	NaN	NaN	NaN
## ancient_kills_avg_r	6.544853e+00	NaN	NaN	NaN
## buyback_count_avg_r	3.757826e-01	NaN	NaN	NaN
## courier_kills_avg_r	2.892557e-01	NaN	NaN	NaN
## deaths_avg_r	4.395416e+00	4.044745e+00	5.434291e+00	4.844323e+00
## denies_avg_r	8.203989e+00	7.174889e+00	6.955172e+00	7.372977e+00
## firstblood_claimed_avg_r	1.029050e-01	1.177590e-01	1.087302e-01	1.159522e-01
## gold_avg_r	1.727077e+03	1.503973e+03	1.540806e+03	1.674105e+03
## gold_per_min_avg_r	4.333273e+02	4.312833e+02	3.694933e+02	4.500130e+02
## gold_spent_avg_r	1.418903e+04	1.335499e+04	1.078340e+04	1.274455e+04
## hero_damage_avg_r	1.656453e+04	1.522489e+04	1.511807e+04	1.929437e+04
## hero_healing_avg_r	1.008232e+03	7.376219e+02	8.457343e+02	6.067979e+02
## hero_kills_avg_r	4.719688e+00	NaN	NaN	NaN
##	[,81]	[,82]	[,83]	[,84]
## match_id	5.714460e+09	5.453918e+09	5.826470e+09	5.485484e+09
## radiant_win	1.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	2.392000e+02	1.362000e+02	7.160000e+01	2.610000e+02
## win_pct_r	4.113908e-01	5.022336e-01	4.478010e-01	4.674330e-01
## duration_avg_win_r	3.542402e+01	3.644895e+01	3.604587e+01	2.901148e+01
## duration_avg_lose_r	3.439591e+01	3.683189e+01	3.322034e+01	2.731751e+01
## actions_per_min_avg_r	2.129155e+02	NaN	2.849485e+02	NaN
## ancient_kills_avg_r	5.285206e+00	NaN	5.617346e+00	NaN
## buyback_count_avg_r	2.860077e-01	NaN	4.205160e-01	NaN
## courier_kills_avg_r	3.060135e-01	NaN	2.591523e-01	NaN
## deaths_avg_r	5.795786e+00	4.497297e+00	5.332555e+00	6.508046e+00

## denies_avg_r	6.728283e+00	9.984556e+00	8.218931e+00	7.855172e+00
## firstblood_claimed_avg_r	8.173703e-02	9.745057e-02	8.712531e-02	1.130769e-01
## gold_avg_r	1.442429e+03	1.787592e+03	1.816679e+03	1.361687e+03
## gold_per_min_avg_r	4.068836e+02	4.155804e+02	4.120275e+02	4.301632e+02
## gold_spent_avg_r	1.277784e+04	1.378167e+04	1.275459e+04	1.073296e+04
## hero_damage_avg_r	1.686406e+04	1.631755e+04	1.717482e+04	1.751967e+04
## hero_healing_avg_r	8.626804e+02	8.682011e+02	1.210855e+03	6.800828e+02
## hero_kills_avg_r	4.952054e+00	NaN	5.008575e+00	NaN
##	[,85]	[,86]	[,87]	[,88]
## match_id	5.413777e+09	5.449814e+09	4.823117e+09	5045191517
## radiant_win	1.000000e+00	0.000000e+00	0.000000e+00	0
## freq_r	1.010000e+02	7.420000e+01	5.040000e+01	NA
## win_pct_r	5.407047e-01	4.445639e-01	5.157519e-01	NA
## duration_avg_win_r	3.313694e+01	3.258193e+01	4.161598e+01	NA
## duration_avg_lose_r	3.551741e+01	3.129450e+01	4.204452e+01	NA
## actions_per_min_avg_r	NaN	1.904491e+02	NaN	NA
## ancient_kills_avg_r	NaN	5.602324e+00	NaN	NA
## buyback_count_avg_r	NaN	2.137333e-01	NaN	NA
## courier_kills_avg_r	NaN	1.757933e-01	NaN	NA
## deaths_avg_r	4.901164e+00	5.972048e+00	6.575259e+00	NA
## denies_avg_r	7.588635e+00	4.436067e+00	1.348924e+01	NA
## firstblood_claimed_avg_r	1.364290e-01	8.219178e-02	9.240837e-02	NA
## gold_avg_r	1.590630e+03	1.649060e+03	2.184895e+03	NA
## gold_per_min_avg_r	4.101112e+02	4.209840e+02	5.225796e+02	NA
## gold_spent_avg_r	1.259840e+04	1.165619e+04	1.918133e+04	NA
## hero_damage_avg_r	1.591747e+04	1.580998e+04	3.199528e+04	NA
## hero_healing_avg_r	9.112173e+02	4.637105e+02	9.010576e+02	NA
## hero_kills_avg_r	NaN	5.536327e+00	NaN	NA
##	[,89]	[,90]	[,91]	[,92]
## match_id	4.955631e+09	5.242654e+09	4.944287e+09	5.229367e+09
## radiant_win	0.000000e+00	0.000000e+00	1.000000e+00	0.000000e+00
## freq_r	2.360000e+01	3.000000e+00	3.220000e+01	1.370000e+02
## win_pct_r	5.948992e-01	1.000000e+00	5.383834e-01	5.328467e-01
## duration_avg_win_r	2.534776e+01	2.653889e+01	3.799268e+01	4.090571e+01
## duration_avg_lose_r	3.289506e+01	NA	3.044914e+01	3.782995e+01
## actions_per_min_avg_r	3.052255e+02	2.274667e+02	2.031431e+02	2.140117e+02
## ancient_kills_avg_r	4.296101e+00	3.200000e+00	3.990445e+00	8.497810e+00
## buyback_count_avg_r	3.553514e-01	0.000000e+00	6.703988e-01	4.905109e-01
## courier_kills_avg_r	6.373205e-02	2.666667e-01	3.109848e-02	1.430657e-01
## deaths_avg_r	5.472759e+00	2.000000e+00	6.154692e+00	6.995620e+00
## denies_avg_r	6.315406e+00	1.033333e+01	9.638278e+00	8.217518e+00
## firstblood_claimed_avg_r	1.357017e-01	0.000000e+00	9.079974e-02	9.635036e-02
## gold_avg_r	1.267266e+03	1.534533e+03	1.857311e+03	2.069768e+03
## gold_per_min_avg_r	4.553431e+02	4.488667e+02	4.316329e+02	5.125255e+02
## gold_spent_avg_r	1.173578e+04	1.099367e+04	1.311717e+04	1.824018e+04
## hero_damage_avg_r	1.575498e+04	1.507060e+04	1.854515e+04	2.382575e+04
## hero_healing_avg_r	1.144306e+03	7.777333e+02	1.008307e+03	5.444847e+02
## hero_kills_avg_r	5.506301e+00	6.200000e+00	5.858468e+00	7.040876e+00
##	[,93]	[,94]	[,95]	[,96]
## match_id	5.495184e+09	4.872317e+09	5.591953e+09	5.919966e+09
## radiant_win	0.000000e+00	1.000000e+00	1.000000e+00	1.000000e+00
## freq_r	1.326000e+02	1.066000e+02	1.312000e+02	3.450000e+01
## win_pct_r	4.985569e-01	6.271506e-01	5.557551e-01	6.228070e-01
## duration_avg_win_r	3.657672e+01	3.767871e+01	3.476998e+01	3.239154e+01

```

## duration_avg_lose_r      3.655982e+01 4.051156e+01 3.863984e+01 3.823507e+01
## actions_per_min_avg_r    2.458239e+02 1.945986e+02 2.178450e+02 3.565066e+02
## ancient_kills_avg_r      4.577898e+00 7.897695e+00 5.012745e+00 2.938596e-01
## buyback_count_avg_r      3.626502e-01 6.984654e-01 4.357026e-01 5.614035e-01
## courier_kills_avg_r      3.238672e-01 4.164751e-02 3.661523e-01 1.206140e-01
## deaths_avg_r             4.560726e+00 4.195945e+00 4.676432e+00 5.247807e+00
## denies_avg_r             9.597612e+00 9.596300e+00 8.055816e+00 7.392544e+00
## firstblood_claimed_avg_r 6.541434e-02 1.285320e-01 1.007588e-01 8.771930e-02
## gold_avg_r               1.737796e+03 1.813546e+03 1.734307e+03 1.763189e+03
## gold_per_min_avg_r       4.161030e+02 4.588147e+02 4.083827e+02 3.714518e+02
## gold_spent_avg_r         1.365426e+04 1.599187e+04 1.309904e+04 1.083064e+04
## hero_damage_avg_r        1.726451e+04 1.713489e+04 1.764192e+04 1.500380e+04
## hero_healing_avg_r       1.260062e+03 1.458278e+03 8.664152e+02 1.574993e+03
## hero_kills_avg_r         4.935961e+00 5.063132e+00 5.199240e+00 4.179825e+00
##                          [,97]      [,98]      [,99]
## match_id                 5.683390e+09 5.466644e+09 5.556432e+09
## radiant_win              1.000000e+00 0.000000e+00 0.000000e+00
## freq_r                   2.564000e+02 1.010000e+02 1.836000e+02
## win_pct_r                5.045965e-01 5.049505e-01 5.228538e-01
## duration_avg_win_r       2.490235e+01 2.390588e+01 2.826796e+01
## duration_avg_lose_r      2.497208e+01 2.496633e+01 2.753402e+01
## actions_per_min_avg_r    NaN 1.820733e+02      NaN
## ancient_kills_avg_r      NaN 3.532673e+00      NaN
## buyback_count_avg_r      NaN 2.198020e-01      NaN
## courier_kills_avg_r      NaN 2.772277e-01      NaN
## deaths_avg_r             6.720130e+00 6.279208e+00 5.298525e+00
## denies_avg_r             5.652676e+00 6.615842e+00 3.032302e+00
## firstblood_claimed_avg_r 9.336512e-02 9.900990e-02 9.515420e-02
## gold_avg_r               1.290751e+03 1.193448e+03 1.684929e+03
## gold_per_min_avg_r       4.408231e+02 4.170376e+02 4.232984e+02
## gold_spent_avg_r         9.755707e+03 9.077455e+03 1.021257e+04
## hero_damage_avg_r        1.504431e+04 1.505409e+04 1.421322e+04
## hero_healing_avg_r       4.270143e+02 6.061465e+02 5.716321e+02
## hero_kills_avg_r         NaN 6.164356e+00      NaN

```

```
as.table(as.matrix(data))
```

```

##      match_id radiant_win      freq_r  win_pct_r duration_avg_win_r
## A  5.796600e+09 0.000000e+00 2.980000e+01 6.534193e-01 3.209696e+01
## B  5.796711e+09 1.000000e+00 2.980000e+01 6.534193e-01 3.209696e+01
## C  4.632570e+09 0.000000e+00 1.220000e+01 1.404762e-01 3.007000e+01
## D  5.080525e+09 0.000000e+00 1.100000e+01 1.818182e-01 2.660000e+01
## E  5.176257e+09 1.000000e+00 4.220000e+01 4.574555e-01 3.408308e+01
## F  5.989112e+09 0.000000e+00 4.540000e+01 4.193409e-01 3.332407e+01
## G  5.730717e+09 0.000000e+00 1.706000e+02 5.264108e-01 3.364308e+01
## H  5.113821e+09 0.000000e+00 2.000000e+00 0.000000e+00
## I  5.628319e+09 1.000000e+00 2.878000e+02 6.203929e-01 3.529406e+01
## J  5.640928e+09 1.000000e+00 6.540000e+01 6.267639e-01 3.735061e+01
## K  4.897618e+09 1.000000e+00 5.720000e+01 5.237555e-01 3.481627e+01
## L  5.480282e+09 1.000000e+00 1.592000e+02 4.788596e-01 3.440844e+01
## M  5.114714e+09 1.000000e+00 4.250000e+01 4.687889e-01 3.293283e+01
## N  4.466830e+09 1.000000e+00 1.066000e+02 5.526349e-01 3.491631e+01
## O  5.640704e+09 1.000000e+00 1.328000e+02 5.097318e-01 3.263575e+01
## P  6.019971e+09 1.000000e+00 5.620000e+01 5.309129e-01 3.697540e+01

```

## Q	5.300030e+09	1.000000e+00	1.380000e+01	5.118581e-01	3.669451e+01
## R	5.971207e+09	1.000000e+00			
## S	5.994880e+09	1.000000e+00	2.220000e+02	4.477352e-01	3.373294e+01
## T	5.224100e+09	1.000000e+00	2.800000e+01	2.258407e-01	3.655568e+01
## U	5.901415e+09	1.000000e+00	2.920000e+01	5.420033e-01	3.601521e+01
## V	5.987369e+09	1.000000e+00	9.880000e+01	4.508924e-01	3.421427e+01
## W	5.677418e+09	1.000000e+00	1.784000e+02	5.515661e-01	3.477052e+01
## X	4.891380e+09	1.000000e+00	1.092000e+02	5.641900e-01	3.421306e+01
## Y	5.600468e+09	1.000000e+00	1.406000e+02	4.905469e-01	2.666287e+01
## Z	5.440791e+09	0.000000e+00	1.866000e+02	6.526769e-01	3.309384e+01
## A1	5.600993e+09	0.000000e+00	2.500000e+00	2.500000e-01	2.783333e+01
## B1	5.340453e+09	1.000000e+00	1.620000e+01	2.719114e-01	2.626127e+01
## C1	4.360291e+09	1.000000e+00	4.680000e+01	5.963535e-01	3.538575e+01
## D1	5.139217e+09	1.000000e+00	5.720000e+01	6.140452e-01	3.613098e+01
## E1	6.014646e+09	0.000000e+00	8.860000e+01	5.471228e-01	3.158525e+01
## F1	5.060190e+09	1.000000e+00	9.000000e+01	5.321404e-01	3.711181e+01
## G1	4.608178e+09	0.000000e+00	7.200000e+00	1.416667e-01	4.150000e+01
## H1	5.874061e+09	0.000000e+00	3.600000e+01	2.851800e-01	3.682669e+01
## I1	5.238975e+09	1.000000e+00	8.560000e+01	5.934145e-01	3.681754e+01
## J1	5.729519e+09	1.000000e+00	2.740000e+02	4.525547e-01	2.483468e+01
## K1	5.369299e+09	1.000000e+00	1.316000e+02	5.091375e-01	2.929403e+01
## L1	5.950074e+09	1.000000e+00	1.980000e+02	3.959385e-01	3.282533e+01
## M1	4.347235e+09	0.000000e+00	6.200000e+00	8.380952e-01	3.179556e+01
## N1	5.823759e+09	1.000000e+00	1.340000e+02	5.120051e-01	3.723292e+01
## O1	4.593310e+09	1.000000e+00	7.520000e+01	4.830962e-01	3.603718e+01
## P1	6.010521e+09	0.000000e+00	1.634000e+02	4.757318e-01	3.213805e+01
## Q1	5.777777e+09	1.000000e+00			
## R1	4.678696e+09	1.000000e+00	1.356000e+02	5.456963e-01	3.685176e+01
## S1	4.919857e+09	0.000000e+00	2.660000e+01	5.338041e-01	3.736698e+01
## T1	5.574110e+09	1.000000e+00	2.360000e+01	7.799331e-01	2.903526e+01
## U1	4.623556e+09	1.000000e+00	8.200000e+00	3.707143e-01	2.894750e+01
## V1	4.870534e+09	0.000000e+00	1.760000e+02	6.000000e-01	3.547760e+01
## W1	5.418396e+09	1.000000e+00	1.060000e+02	6.295876e-01	3.164839e+01
## X1	5.628457e+09	0.000000e+00	2.880000e+02	5.208333e-01	2.502356e+01
## Y1	5.581275e+09	1.000000e+00	1.586000e+02	6.353311e-01	3.222441e+01
## Z1	5.441823e+09	1.000000e+00	1.208000e+02	5.778040e-01	3.637714e+01
## A2	4.401995e+09	1.000000e+00	1.000000e+00	1.000000e+00	3.195000e+01
## B2	4.683208e+09	1.000000e+00	1.820000e+01	6.323300e-01	3.636597e+01
## C2	5.092234e+09	1.000000e+00	4.100000e+01	3.534523e-01	3.963583e+01
## D2	5.117977e+09	0.000000e+00	7.600000e+01	5.832234e-01	3.822204e+01
## E2	5.405369e+09	1.000000e+00	1.800000e+01	6.111111e-01	3.008333e+01
## F2	4.946806e+09	1.000000e+00			
## G2	5.877655e+09	1.000000e+00	8.160000e+01	6.241557e-01	3.319382e+01
## H2	5.512372e+09	0.000000e+00	9.500000e+01	3.568355e-01	3.323157e+01
## I2	5.141913e+09	1.000000e+00	1.972000e+02	5.597142e-01	3.363962e+01
## J2	4.807632e+09	0.000000e+00	3.800000e+01	5.266667e-01	3.137135e+01
## K2	5.278144e+09	0.000000e+00	4.040000e+01	4.460009e-01	4.126471e+01
## L2	5.222673e+09	1.000000e+00	4.000000e+00	7.500000e-01	2.901667e+01
## M2	5.138849e+09	0.000000e+00	4.300000e+01	4.375337e-01	3.664620e+01
## N2	4.977310e+09	1.000000e+00	3.700000e+01	5.138544e-01	3.716783e+01
## O2	5.723024e+09	0.000000e+00	4.540000e+01	7.371429e-01	3.236690e+01
## P2	6.002474e+09	0.000000e+00	9.580000e+01	2.948403e-01	3.647484e+01
## Q2	5.161776e+09	1.000000e+00	3.600000e+01	5.000000e-01	4.099630e+01
## R2	6.008407e+09	0.000000e+00	8.580000e+01	5.062445e-01	3.346819e+01

## S2	5.481916e+09	1.000000e+00	1.380000e+01	1.965640e-01	4.167315e+01
## T2	5.877782e+09	1.000000e+00	7.080000e+01	4.508239e-01	3.534769e+01
## U2	5.596140e+09	1.000000e+00	1.950000e+02	4.666667e-01	2.787179e+01
## V2	5.134131e+09	1.000000e+00	7.000000e+00	1.666667e-01	2.644167e+01
## W2	5.254796e+09	1.000000e+00	1.426000e+02	5.643052e-01	3.644053e+01
## X2	5.693264e+09	1.000000e+00	1.336000e+02	5.238949e-01	3.704017e+01
## Y2	5.683281e+09	1.000000e+00	1.866000e+02	5.777078e-01	3.502384e+01
## Z2	5.037916e+09	1.000000e+00	8.780000e+01	4.582993e-01	3.436435e+01
## A3	5.328803e+09	0.000000e+00	1.000000e+01	2.772031e-01	4.096167e+01
## B3	5.364054e+09	1.000000e+00	2.750000e+01	7.245372e-01	2.949687e+01
## C3	5.714460e+09	1.000000e+00	2.392000e+02	4.113908e-01	3.542402e+01
## D3	5.453918e+09	1.000000e+00	1.362000e+02	5.022336e-01	3.644895e+01
## E3	5.826470e+09	1.000000e+00	7.160000e+01	4.478010e-01	3.604587e+01
## F3	5.485484e+09	1.000000e+00	2.610000e+02	4.674330e-01	2.901148e+01
## G3	5.413777e+09	1.000000e+00	1.010000e+02	5.407047e-01	3.313694e+01
## H3	5.449814e+09	0.000000e+00	7.420000e+01	4.445639e-01	3.258193e+01
## I3	4.823117e+09	0.000000e+00	5.040000e+01	5.157519e-01	4.161598e+01
## J3	5.045192e+09	0.000000e+00			
## K3	4.955631e+09	0.000000e+00	2.360000e+01	5.948992e-01	2.534776e+01
## L3	5.242654e+09	0.000000e+00	3.000000e+00	1.000000e+00	2.653889e+01
## M3	4.944287e+09	1.000000e+00	3.220000e+01	5.383834e-01	3.799268e+01
## N3	5.229367e+09	0.000000e+00	1.370000e+02	5.328467e-01	4.090571e+01
## O3	5.495184e+09	0.000000e+00	1.326000e+02	4.985569e-01	3.657672e+01
## P3	4.872317e+09	1.000000e+00	1.066000e+02	6.271506e-01	3.767871e+01
## Q3	5.591953e+09	1.000000e+00	1.312000e+02	5.557551e-01	3.476998e+01
## R3	5.919966e+09	1.000000e+00	3.450000e+01	6.228070e-01	3.239154e+01
## S3	5.683390e+09	1.000000e+00	2.564000e+02	5.045965e-01	2.490235e+01
## T3	5.466644e+09	0.000000e+00	1.010000e+02	5.049505e-01	2.390588e+01
## U3	5.556432e+09	0.000000e+00	1.836000e+02	5.228538e-01	2.826796e+01
##	duration_avg_lose_r	actions_per_min_avg_r	ancient_kills_avg_r		
## A	4.058606e+01	3.168472e+02	6.738015e+00		
## B	4.058606e+01	3.168472e+02	6.738015e+00		
## C	4.173286e+01	2.110746e+02	5.580159e+00		
## D	2.747037e+01	2.097455e+02	2.836364e+00		
## E	3.186463e+01				
## F	3.338017e+01	2.545968e+02	4.794034e+00		
## G	3.566973e+01	2.829257e+02	5.846764e+00		
## H	3.550000e+01	1.225000e+02	1.500000e+00		
## I	3.917398e+01	2.356521e+02	7.047555e+00		
## J	3.992489e+01	2.639289e+02	4.716194e+00		
## K	3.538061e+01				
## L	3.443275e+01	1.644252e+02	7.548725e+00		
## M	4.141678e+01	2.422746e+02	1.884418e+00		
## N	3.629502e+01				
## O	3.757946e+01	2.251191e+02	7.318837e+00		
## P	3.859437e+01	1.803191e+02	8.154634e+00		
## Q	2.837649e+01				
## R					
## S	3.406393e+01				
## T	2.932287e+01				
## U	2.905594e+01	2.864950e+02	6.154844e+00		
## V	3.431869e+01				
## W	3.656583e+01	2.355135e+02	5.895857e+00		
## X	3.627793e+01	2.789649e+02	4.823121e+00		

## Y	2.798546e+01		
## Z	3.750341e+01		
## A1	3.026042e+01	2.133333e+02	1.666667e-01
## B1	3.151014e+01		
## C1	3.547418e+01	2.532849e+02	1.138049e+01
## D1	3.968136e+01		
## E1	3.104065e+01		
## F1	3.805562e+01	2.642459e+02	5.840869e+00
## G1	3.040514e+01	1.581417e+02	3.308333e+00
## H1	3.479625e+01	2.745261e+02	4.968607e+00
## I1	4.054806e+01		
## J1	2.505744e+01	1.831314e+02	3.617518e+00
## K1	2.761938e+01	2.000639e+02	4.165082e+00
## L1	3.413660e+01		
## M1	1.908333e+01	2.201619e+02	8.038095e+00
## N1	3.822815e+01	2.392531e+02	2.477213e+00
## O1	3.392623e+01	2.011142e+02	3.320143e+00
## P1	3.665151e+01	3.113689e+02	5.802241e+00
## Q1			
## R1	3.852503e+01		
## S1	2.923944e+01	2.049478e+02	4.975467e+00
## T1	3.775833e+01	3.153572e+02	3.534448e+00
## U1	2.997950e+01	1.817868e+02	3.672500e+00
## V1	3.585875e+01	3.079328e+02	6.053079e+00
## W1	3.895772e+01		
## X1	2.386002e+01		
## Y1	3.617849e+01		
## Z1	3.497165e+01		
## A2		1.720000e+02	0.000000e+00
## B2	4.133917e+01	1.993891e+02	7.450613e+00
## C2	3.909162e+01	2.831100e+02	6.074133e+00
## D2	3.674842e+01	3.341866e+02	7.174029e+00
## E2	2.769762e+01	2.054722e+02	1.000000e+00
## F2			
## G2	3.582975e+01	2.674103e+02	5.403396e+00
## H2	2.890058e+01	2.580983e+02	4.203470e+00
## I2	3.927421e+01		
## J2	3.288926e+01		
## K2	3.877805e+01	2.669384e+02	4.646955e+00
## L2	2.823333e+01	2.439500e+02	2.550000e+00
## M2	3.535029e+01		
## N2	3.770793e+01	2.371855e+02	3.733039e+00
## O2	3.777717e+01	2.108995e+02	7.445238e+00
## P2	3.359747e+01		
## Q2	3.527130e+01	1.812222e+02	7.277778e+00
## R2	3.614235e+01		
## S2	3.575462e+01	2.821646e+02	4.938189e+00
## T2	3.332290e+01		
## U2	2.772933e+01		
## V2	3.279271e+01	3.468125e+02	2.250000e+00
## W2	3.617881e+01		
## X2	3.680197e+01	2.309784e+02	6.074320e+00
## Y2	3.698955e+01	1.781077e+02	6.544853e+00
## Z2	3.497960e+01		

## A3	3.014838e+01			
## B3	3.664028e+01			
## C3	3.439591e+01	2.129155e+02	5.285206e+00	
## D3	3.683189e+01			
## E3	3.322034e+01	2.849485e+02	5.617346e+00	
## F3	2.731751e+01			
## G3	3.551741e+01			
## H3	3.129450e+01	1.904491e+02	5.602324e+00	
## I3	4.204452e+01			
## J3				
## K3	3.289506e+01	3.052255e+02	4.296101e+00	
## L3		2.274667e+02	3.200000e+00	
## M3	3.044914e+01	2.031431e+02	3.990445e+00	
## N3	3.782995e+01	2.140117e+02	8.497810e+00	
## O3	3.655982e+01	2.458239e+02	4.577898e+00	
## P3	4.051156e+01	1.945986e+02	7.897695e+00	
## Q3	3.863984e+01	2.178450e+02	5.012745e+00	
## R3	3.823507e+01	3.565066e+02	2.938596e-01	
## S3	2.497208e+01			
## T3	2.496633e+01	1.820733e+02	3.532673e+00	
## U3	2.753402e+01			
##	buyback_count_avg_r	courier_kills_avg_r	deaths_avg_r	denies_avg_r
## A	4.672965e-01	1.941987e-01	4.560102e+00	7.198182e+00
## B	4.672965e-01	1.941987e-01	4.560102e+00	7.198182e+00
## C	7.865079e-01	1.111111e-02	6.106349e+00	9.161111e+00
## D	5.454545e-01	5.454545e-02	7.927273e+00	7.236364e+00
## E			4.711898e+00	8.863704e+00
## F	3.359571e-01	3.679785e-01	5.402652e+00	7.523606e+00
## G	3.737818e-01	2.625661e-01	5.432516e+00	7.655926e+00
## H	1.500000e+00	0.000000e+00	1.100000e+01	5.000000e-01
## I	4.745440e-01	2.262133e-01	4.611322e+00	8.297619e+00
## J	4.383924e-01	4.599102e-01	4.506559e+00	1.021557e+01
## K			4.874027e+00	9.432573e+00
## L	4.273753e-01	3.110511e-01	4.515245e+00	8.657140e+00
## M	4.331024e-01	3.132783e-02	5.729958e+00	5.589236e+00
## N			4.920789e+00	1.075605e+01
## O	4.065169e-01	2.882618e-01	4.798605e+00	8.731314e+00
## P	4.874976e-01	3.107554e-01	4.842100e+00	7.416905e+00
## Q			4.793277e+00	9.753408e+00
## R				
## S			4.992730e+00	6.141778e+00
## T			6.643301e+00	6.846857e+00
## U	3.506897e-01	3.108867e-01	5.926962e+00	6.327603e+00
## V			5.382724e+00	6.469243e+00
## W	4.755131e-01	2.913125e-01	5.271816e+00	8.294118e+00
## X	4.284868e-01	3.838870e-02	4.293531e+00	8.379813e+00
## Y			5.672643e+00	2.636285e+00
## Z			4.090174e+00	9.063177e+00
## A1	4.166667e-01	8.333333e-02	7.583333e+00	8.333333e+00
## B1			5.645688e+00	9.236072e+00
## C1	5.173823e-01	2.532095e-02	4.667953e+00	1.103511e+01
## D1			4.400872e+00	8.783352e+00
## E1			5.552068e+00	6.937697e+00
## F1	5.374211e-01	6.189538e-02	3.723037e+00	9.695483e+00

## G1	5.666667e-01	5.000000e-02	6.716667e+00	8.916667e+00
## H1	3.921239e-01	1.805778e-01	5.442621e+00	6.766460e+00
## I1			4.511010e+00	1.005631e+01
## J1	2.145985e-01	2.299270e-01	7.040146e+00	5.533577e+00
## K1	3.969930e-01	3.022611e-01	6.700769e+00	7.549091e+00
## L1			5.163855e+00	6.162576e+00
## M1	2.666667e-01	0.000000e+00	4.066667e+00	9.561905e+00
## N1	4.368864e-01	2.635746e-01	5.300653e+00	5.402712e+00
## O1	5.118197e-01	3.762334e-02	5.444394e+00	7.115617e+00
## P1	3.981676e-01	2.876786e-01	5.432494e+00	6.004197e+00
## Q1				
## R1			4.491780e+00	1.047559e+01
## S1	6.616906e-01	2.991453e-02	6.066493e+00	9.567101e+00
## T1	2.876254e-01	3.541806e-01	4.344147e+00	7.634114e+00
## U1	4.446429e-01	1.250000e-02	4.733929e+00	8.568571e+00
## V1	4.770794e-01	4.107936e-02	3.973397e+00	9.072476e+00
## W1			4.230302e+00	1.084810e+01
## X1			6.197222e+00	6.544444e+00
## Y1			4.253422e+00	8.452789e+00
## Z1			4.894941e+00	8.866034e+00
## A2	0.000000e+00	0.000000e+00	5.000000e+00	1.100000e+01
## B2	5.596433e-01	6.369379e-02	5.737421e+00	1.324199e+01
## C2	7.477879e-01	8.460419e-02	5.731768e+00	8.443405e+00
## D2	5.773321e-01	5.705739e-02	4.250385e+00	9.238895e+00
## E2	4.027778e-01	3.055556e-01	5.236111e+00	7.236111e+00
## F2				
## G2	3.475832e-01	2.581712e-01	4.733212e+00	6.436703e+00
## H2	3.249143e-01	2.458905e-01	5.824076e+00	7.849268e+00
## I2			4.914611e+00	6.726673e+00
## J2			5.898333e+00	8.005000e+00
## K2	7.244444e-01	1.711741e-01	5.569141e+00	7.549595e+00
## L2	1.500000e-01	3.000000e-01	4.250000e+00	1.020000e+01
## M2			5.167550e+00	7.769449e+00
## N2	6.838856e-01	0.000000e+00	6.084116e+00	8.967957e+00
## O2	4.555952e-01	3.316667e-01	4.866548e+00	8.984286e+00
## P2			6.179951e+00	5.517838e+00
## Q2	7.055556e-01	9.444444e-02	7.900000e+00	8.400000e+00
## R2			5.131469e+00	6.282365e+00
## S2	6.508590e-01	3.340243e-01	7.093147e+00	8.008366e+00
## T2			5.706797e+00	6.676308e+00
## U2			5.831795e+00	2.952821e+00
## V2	4.583333e-01	0.000000e+00	7.770833e+00	5.500000e+00
## W2			4.408638e+00	8.682031e+00
## X2	3.959410e-01	3.905987e-01	4.250547e+00	8.845382e+00
## Y2	3.757826e-01	2.892557e-01	4.395416e+00	8.203989e+00
## Z2			4.044745e+00	7.174889e+00
## A3			5.434291e+00	6.955172e+00
## B3			4.844323e+00	7.372977e+00
## C3	2.860077e-01	3.060135e-01	5.795786e+00	6.728283e+00
## D3			4.497297e+00	9.984556e+00
## E3	4.205160e-01	2.591523e-01	5.332555e+00	8.218931e+00
## F3			6.508046e+00	7.855172e+00
## G3			4.901164e+00	7.588635e+00
## H3	2.137333e-01	1.757933e-01	5.972048e+00	4.436067e+00

## I3			6.575259e+00	1.348924e+01
## J3				
## K3	3.553514e-01	6.373205e-02	5.472759e+00	6.315406e+00
## L3	0.000000e+00	2.666667e-01	2.000000e+00	1.033333e+01
## M3	6.703988e-01	3.109848e-02	6.154692e+00	9.638278e+00
## N3	4.905109e-01	1.430657e-01	6.995620e+00	8.217518e+00
## O3	3.626502e-01	3.238672e-01	4.560726e+00	9.597612e+00
## P3	6.984654e-01	4.164751e-02	4.195945e+00	9.596300e+00
## Q3	4.357026e-01	3.661523e-01	4.676432e+00	8.055816e+00
## R3	5.614035e-01	1.206140e-01	5.247807e+00	7.392544e+00
## S3			6.720130e+00	5.652676e+00
## T3	2.198020e-01	2.772277e-01	6.279208e+00	6.615842e+00
## U3			5.298525e+00	3.032302e+00
##	firstblood_claimed_avg_r	gold_avg_r	gold_per_min_avg_r	gold_spent_avg_r
## A	1.155893e-01	2.090211e+03	4.355398e+02	1.309380e+04
## B	1.155893e-01	2.090211e+03	4.355398e+02	1.309380e+04
## C	5.634921e-02	1.535913e+03	4.221270e+02	1.525444e+04
## D	1.272727e-01	9.294182e+02	4.139455e+02	1.012664e+04
## E	1.074291e-01	1.800730e+03	4.161454e+02	1.242880e+04
## F	1.369479e-01	1.444232e+03	4.257679e+02	1.255189e+04
## G	9.569794e-02	1.618636e+03	4.274632e+02	1.341273e+04
## H	0.000000e+00	5.270000e+02	2.200000e+02	6.742500e+03
## I	1.025190e-01	1.672130e+03	4.291646e+02	1.410171e+04
## J	1.312782e-01	2.371730e+03	4.218050e+02	1.380291e+04
## K	1.789726e-01	1.729057e+03	4.284165e+02	1.341387e+04
## L	9.564238e-02	1.648990e+03	4.151208e+02	1.274816e+04
## M	4.222836e-01	1.687398e+03	3.578580e+02	1.107886e+04
## N	8.622230e-02	1.954431e+03	4.510239e+02	1.432876e+04
## O	1.010242e-01	1.464886e+03	4.133724e+02	1.308162e+04
## P	9.510196e-02	1.711100e+03	4.518551e+02	1.553420e+04
## Q	4.920635e-02	1.635644e+03	4.101627e+02	1.254223e+04
## R				
## S	9.112719e-02	1.501308e+03	4.078471e+02	1.241636e+04
## T	8.736299e-02	1.043671e+03	3.782052e+02	1.083180e+04
## U	7.617406e-02	1.760272e+03	4.498124e+02	1.361108e+04
## V	9.809828e-02	1.484519e+03	4.269546e+02	1.301037e+04
## W	9.417488e-02	1.922047e+03	4.111654e+02	1.264314e+04
## X	1.013646e-01	1.799436e+03	4.272083e+02	1.352129e+04
## Y	9.604260e-02	1.619503e+03	4.367192e+02	1.021475e+04
## Z	9.858093e-02	1.803809e+03	4.182633e+02	1.281494e+04
## A1	8.333333e-02	1.023833e+03	3.520000e+02	8.851667e+03
## B1	2.777778e-02	1.471262e+03	3.820660e+02	1.070791e+04
## C1	1.105656e-01	1.711917e+03	4.418902e+02	1.382402e+04
## D1	1.040858e-01	1.871269e+03	4.902357e+02	1.685247e+04
## E1	5.221851e-02	1.513089e+03	4.493487e+02	1.265234e+04
## F1	1.304740e-01	2.187627e+03	4.897112e+02	1.645788e+04
## G1	1.250000e-01	1.344417e+03	3.438083e+02	9.400375e+03
## H1	1.167440e-01	1.523031e+03	3.747267e+02	1.212348e+04
## I1	1.080497e-01	2.049225e+03	4.470122e+02	1.535227e+04
## J1	9.562044e-02	1.177828e+03	4.392299e+02	9.810526e+03
## K1	9.564103e-02	1.574521e+03	4.432365e+02	1.100101e+04
## L1	9.257760e-02	1.442117e+03	4.021836e+02	1.216869e+04
## M1	9.523809e-02	2.191729e+03	4.558571e+02	1.237764e+04
## N1	1.048960e-01	1.695564e+03	3.831000e+02	1.268292e+04

## O1	9.560921e-02	1.729555e+03	3.819791e+02	1.161339e+04
## P1	9.649860e-02	1.607583e+03	4.122647e+02	1.266390e+04
## Q1				
## R1	1.039311e-01	2.081132e+03	4.399766e+02	1.442142e+04
## S1	9.344488e-02	1.660848e+03	4.213582e+02	1.260060e+04
## T1	1.207358e-01	1.627727e+03	4.102826e+02	1.143614e+04
## U1	9.000000e-02	1.111688e+03	3.992936e+02	1.109462e+04
## V1	9.444444e-02	2.079298e+03	4.463422e+02	1.401765e+04
## W1	9.999960e-02	1.770027e+03	4.151810e+02	1.255306e+04
## X1	1.038328e-01	1.301471e+03	4.284389e+02	9.354003e+03
## Y1	1.065690e-01	1.689959e+03	4.100112e+02	1.228265e+04
## Z1	9.126665e-02	1.805434e+03	4.242117e+02	1.347587e+04
## A2	0.000000e+00	2.133000e+03	4.310000e+02	1.261000e+04
## B2	9.832776e-02	2.435565e+03	5.131136e+02	1.695437e+04
## C2	1.410815e-01	1.889394e+03	4.235532e+02	1.438842e+04
## D2	9.202686e-02	2.122665e+03	4.512671e+02	1.519395e+04
## E2	9.722222e-02	1.371944e+03	3.724722e+02	9.717569e+03
## F2				
## G2	9.957069e-02	1.555792e+03	4.293482e+02	1.323466e+04
## H2	8.162142e-02	1.225581e+03	3.793819e+02	1.069277e+04
## I2	1.008493e-01	1.566556e+03	4.556805e+02	1.511193e+04
## J2	8.735632e-02	1.338580e+03	4.284000e+02	1.242657e+04
## K2	6.523617e-02	1.865648e+03	4.093069e+02	1.379530e+04
## L2	1.500000e-01	1.937000e+03	4.311500e+02	1.108125e+04
## M2	5.162493e-02	1.734651e+03	4.220257e+02	1.362044e+04
## N2	6.400667e-02	1.870150e+03	4.421946e+02	1.444344e+04
## O2	1.160714e-01	1.575808e+03	4.582301e+02	1.432841e+04
## P2	1.066165e-01	1.359422e+03	3.918829e+02	1.213444e+04
## Q2	8.888889e-02	1.997867e+03	4.841444e+02	1.649928e+04
## R2	9.764717e-02	1.796494e+03	4.268282e+02	1.304059e+04
## S2	6.351074e-02	1.397414e+03	3.694664e+02	1.220289e+04
## T2	1.254667e-01	1.605315e+03	4.035540e+02	1.258602e+04
## U2	9.533679e-02	1.584259e+03	4.259426e+02	1.032970e+04
## V2	0.000000e+00	1.084438e+03	3.550625e+02	1.014719e+04
## W2	1.121385e-01	1.746321e+03	4.326577e+02	1.435734e+04
## X2	1.064527e-01	2.030817e+03	4.382662e+02	1.435573e+04
## Y2	1.029050e-01	1.727077e+03	4.333273e+02	1.418903e+04
## Z2	1.177590e-01	1.503973e+03	4.312833e+02	1.335499e+04
## A3	1.087302e-01	1.540806e+03	3.694933e+02	1.078340e+04
## B3	1.159522e-01	1.674105e+03	4.500130e+02	1.274455e+04
## C3	8.173703e-02	1.442429e+03	4.068836e+02	1.277784e+04
## D3	9.745057e-02	1.787592e+03	4.155804e+02	1.378167e+04
## E3	8.712531e-02	1.816679e+03	4.120275e+02	1.275459e+04
## F3	1.130769e-01	1.361687e+03	4.301632e+02	1.073296e+04
## G3	1.364290e-01	1.590630e+03	4.101112e+02	1.259840e+04
## H3	8.219178e-02	1.649060e+03	4.209840e+02	1.165619e+04
## I3	9.240837e-02	2.184895e+03	5.225796e+02	1.918133e+04
## J3				
## K3	1.357017e-01	1.267266e+03	4.553431e+02	1.173578e+04
## L3	0.000000e+00	1.534533e+03	4.488667e+02	1.099367e+04
## M3	9.079974e-02	1.857311e+03	4.316329e+02	1.311717e+04
## N3	9.635036e-02	2.069768e+03	5.125255e+02	1.824018e+04
## O3	6.541434e-02	1.737796e+03	4.161030e+02	1.365426e+04
## P3	1.285320e-01	1.813546e+03	4.588147e+02	1.599187e+04

## Q3	1.007588e-01	1.734307e+03	4.083827e+02	1.309904e+04
## R3	8.771930e-02	1.763189e+03	3.714518e+02	1.083064e+04
## S3	9.336512e-02	1.290751e+03	4.408231e+02	9.755707e+03
## T3	9.900990e-02	1.193448e+03	4.170376e+02	9.077455e+03
## U3	9.515420e-02	1.684929e+03	4.232984e+02	1.021257e+04
##	hero_damage_avg_r	hero_healing_avg_r	hero_kills_avg_r	
## A	1.624117e+04	1.593956e+03	5.283281e+00	
## B	1.624117e+04	1.593956e+03	5.283281e+00	
## C	1.899002e+04	5.308056e+02	4.627778e+00	
## D	1.791127e+04	3.085455e+02	5.781818e+00	
## E	1.531471e+04	7.335144e+02		
## F	1.703104e+04	7.798330e+02	5.675387e+00	
## G	1.718368e+04	9.015848e+02	5.648934e+00	
## H	9.898500e+03	2.000000e+02	3.500000e+00	
## I	1.907478e+04	1.249951e+03	5.891800e+00	
## J	1.964792e+04	1.234891e+03	5.528579e+00	
## K	1.620845e+04	9.989974e+02		
## L	1.603574e+04	9.108228e+02	4.387813e+00	
## M	1.420774e+04	1.428151e+03	3.672167e+00	
## N	1.722489e+04	1.123324e+03		
## O	1.684133e+04	1.210807e+03	5.042040e+00	
## P	1.933443e+04	1.123272e+03	5.167810e+00	
## Q	1.822386e+04	3.234545e+02		
## R				
## S	1.609103e+04	7.753407e+02		
## T	1.476278e+04	6.744580e+02		
## U	1.848824e+04	5.612931e+02	6.459097e+00	
## V	1.594749e+04	8.870524e+02		
## W	1.680731e+04	1.046708e+03	5.161955e+00	
## X	1.616007e+04	9.021901e+02	4.757202e+00	
## Y	1.400074e+04	5.363279e+02		
## Z	1.681229e+04	1.314024e+03		
## A1	1.238542e+04	2.684167e+02	5.416667e+00	
## B1	1.582225e+04	9.277343e+02		
## C1	1.593680e+04	9.408772e+02	4.837244e+00	
## D1	1.959103e+04	1.124033e+03		
## E1	1.921966e+04	8.464000e+02		
## F1	1.998107e+04	8.448126e+02	5.915651e+00	
## G1	1.398350e+04	5.006000e+02	4.450000e+00	
## H1	1.569131e+04	7.509585e+02	4.279910e+00	
## I1	1.905064e+04	1.677827e+03		
## J1	1.550375e+04	3.425168e+02	6.530657e+00	
## K1	1.868987e+04	8.233236e+02	6.450699e+00	
## L1	1.570220e+04	7.770462e+02		
## M1	1.598298e+04	1.572481e+03	6.357143e+00	
## N1	1.685541e+04	9.586250e+02	4.444848e+00	
## O1	1.457780e+04	1.113622e+03	4.144631e+00	
## P1	1.806607e+04	8.024899e+02	5.197132e+00	
## Q1				
## R1	1.635637e+04	1.114628e+03		
## S1	1.685977e+04	7.836677e+02	5.520382e+00	
## T1	1.708522e+04	1.861612e+03	6.482609e+00	
## U1	1.332699e+04	6.375864e+02	4.377143e+00	
## V1	1.561014e+04	9.309312e+02	4.628063e+00	

## W1	1.556663e+04	1.141216e+03	
## X1	1.482173e+04	5.236417e+02	
## Y1	1.661137e+04	1.150688e+03	
## Z1	1.764858e+04	1.190343e+03	
## A2	2.168000e+04	2.000000e+02	9.000000e+00
## B2	2.593979e+04	1.252627e+03	9.106503e+00
## C2	1.804847e+04	9.326884e+02	5.135491e+00
## D2	1.887157e+04	1.035047e+03	5.081123e+00
## E2	1.428768e+04	1.379458e+03	4.805556e+00
## F2			
## G2	1.708359e+04	1.397298e+03	5.514407e+00
## H2	1.514466e+04	7.025446e+02	4.440337e+00
## I2	1.826729e+04	7.428161e+02	
## J2	1.561902e+04	7.591717e+02	
## K2	1.838515e+04	9.591142e+02	4.950967e+00
## L2	1.522460e+04	9.489000e+02	5.900000e+00
## M2	1.769105e+04	8.984615e+02	
## N2	1.924315e+04	1.203787e+03	5.888303e+00
## O2	1.804265e+04	1.292320e+03	6.104524e+00
## P2	1.633115e+04	9.105925e+02	
## Q2	2.600474e+04	5.867500e+02	7.411111e+00
## R2	1.809702e+04	7.126506e+02	
## S2	1.635082e+04	1.100832e+03	4.296816e+00
## T2	1.690289e+04	6.618366e+02	
## U2	1.404609e+04	4.838185e+02	
## V2	1.942633e+04	7.374583e+02	5.500000e+00
## W2	1.685553e+04	9.435258e+02	
## X2	1.941102e+04	9.784958e+02	5.739360e+00
## Y2	1.656453e+04	1.008232e+03	4.719688e+00
## Z2	1.522489e+04	7.376219e+02	
## A3	1.511807e+04	8.457343e+02	
## B3	1.929437e+04	6.067979e+02	
## C3	1.686406e+04	8.626804e+02	4.952054e+00
## D3	1.631755e+04	8.682011e+02	
## E3	1.717482e+04	1.210855e+03	5.008575e+00
## F3	1.751967e+04	6.800828e+02	
## G3	1.591747e+04	9.112173e+02	
## H3	1.580998e+04	4.637105e+02	5.536327e+00
## I3	3.199528e+04	9.010576e+02	
## J3			
## K3	1.575498e+04	1.144306e+03	5.506301e+00
## L3	1.507060e+04	7.777333e+02	6.200000e+00
## M3	1.854515e+04	1.008307e+03	5.858468e+00
## N3	2.382575e+04	5.444847e+02	7.040876e+00
## O3	1.726451e+04	1.260062e+03	4.935961e+00
## P3	1.713489e+04	1.458278e+03	5.063132e+00
## Q3	1.764192e+04	8.664152e+02	5.199240e+00
## R3	1.500380e+04	1.574993e+03	4.179825e+00
## S3	1.504431e+04	4.270143e+02	
## T3	1.505409e+04	6.061465e+02	6.164356e+00
## U3	1.421322e+04	5.716321e+02	

```
head(data ,n=10)
```


##	match_id	radiant_win	freq_r	win_pct_r	duration_avg_win_r
## 1	5796599901	FALSE	29.8	0.6534193	32.09696
## 2	5796710768	TRUE	29.8	0.6534193	32.09696
## 3	4632569639	FALSE	12.2	0.1404762	30.07000
## 4	5080525118	FALSE	11.0	0.1818182	26.60000
## 5	5176256941	TRUE	42.2	0.4574555	34.08308
## 6	5989112142	FALSE	45.4	0.4193409	33.32407
## 7	5730717243	FALSE	170.6	0.5264108	33.64308
## 8	5113821481	FALSE	2.0	0.0000000	NA
## 9	5628319228	TRUE	287.8	0.6203929	35.29406
## 10	5640928004	TRUE	65.4	0.6267639	37.35061
##	duration_avg_lose_r	actions_per_min_avg_r	ancient_kills_avg_r		
## 1	40.58606		316.8472		6.738015
## 2	40.58606		316.8472		6.738015
## 3	41.73286		211.0746		5.580159
## 4	27.47037		209.7455		2.836364
## 5	31.86463		NaN		NaN
## 6	33.38017		254.5968		4.794034
## 7	35.66973		282.9257		5.846764
## 8	35.50000		122.5000		1.500000
## 9	39.17398		235.6521		7.047555
## 10	39.92489		263.9289		4.716194
##	buyback_count_avg_r	courier_kills_avg_r	deaths_avg_r	denies_avg_r	
## 1	0.4672965		0.19419870	4.560102	7.198182
## 2	0.4672965		0.19419870	4.560102	7.198182
## 3	0.7865079		0.01111111	6.106349	9.161111
## 4	0.5454545		0.05454545	7.927273	7.236364
## 5	NaN		NaN	4.711898	8.863704
## 6	0.3359571		0.36797854	5.402652	7.523606
## 7	0.3737818		0.26256606	5.432516	7.655926
## 8	1.5000000		0.00000000	11.000000	0.500000
## 9	0.4745440		0.22621332	4.611322	8.297619
## 10	0.4383924		0.45991022	4.506559	10.215568
##	firstblood_claimed_avg_r	gold_avg_r	gold_per_min_avg_r	gold_spent_avg_r	
## 1	0.11558934	2090.2111		435.5398	13093.80
## 2	0.11558934	2090.2111		435.5398	13093.80
## 3	0.05634921	1535.9135		422.1270	15254.44
## 4	0.12727273	929.4182		413.9455	10126.64
## 5	0.10742910	1800.7297		416.1454	12428.80
## 6	0.13694791	1444.2325		425.7679	12551.89
## 7	0.09569794	1618.6363		427.4632	13412.73
## 8	0.00000000	527.0000		220.0000	6742.50
## 9	0.10251900	1672.1302		429.1646	14101.71
## 10	0.13127817	2371.7296		421.8050	13802.91
##	hero_damage_avg_r	hero_healing_avg_r	hero_kills_avg_r		
## 1	16241.17	1593.9560		5.283281	
## 2	16241.17	1593.9560		5.283281	
## 3	18990.02	530.8056		4.627778	
## 4	17911.27	308.5455		5.781818	
## 5	15314.71	733.5144		NaN	
## 6	17031.04	779.8330		5.675387	
## 7	17183.68	901.5848		5.648934	
## 8	9898.50	200.0000		3.500000	
## 9	19074.78	1249.9510		5.891800	

```
## 10          19647.92          1234.8912          5.528579
```

```
tail(data,n=10)
```

```
##      match_id radiant_win freq_r win_pct_r duration_avg_win_r
## 90 5242654333      FALSE    3.0 1.0000000      26.53889
## 91 4944287268       TRUE   32.2 0.5383834      37.99268
## 92 5229367193      FALSE  137.0 0.5328467      40.90571
## 93 5495184096      FALSE  132.6 0.4985569      36.57672
## 94 4872317348       TRUE  106.6 0.6271506      37.67871
## 95 5591952698       TRUE  131.2 0.5557551      34.76998
## 96 5919966201       TRUE   34.5 0.6228070      32.39154
## 97 5683389718       TRUE  256.4 0.5045965      24.90235
## 98 5466643854      FALSE  101.0 0.5049505      23.90588
## 99 5556432379      FALSE  183.6 0.5228538      28.26796
##      duration_avg_lose_r actions_per_min_avg_r ancient_kills_avg_r
## 90                NA                227.4667                3.2000000
## 91            30.44914                203.1431                3.9904445
## 92            37.82995                214.0117                8.4978102
## 93            36.55982                245.8239                4.5778979
## 94            40.51156                194.5986                7.8976951
## 95            38.63984                217.8450                5.0127452
## 96            38.23507                356.5066                0.2938596
## 97            24.97208                  NaN                  NaN
## 98            24.96633                182.0733                3.5326733
## 99            27.53402                  NaN                  NaN
##      buyback_count_avg_r courier_kills_avg_r deaths_avg_r denies_avg_r
## 90            0.0000000            0.26666667            2.000000            10.333333
## 91            0.6703988            0.03109848            6.154692            9.638278
## 92            0.4905109            0.14306569            6.995620            8.217518
## 93            0.3626502            0.32386722            4.560726            9.597612
## 94            0.6984654            0.04164751            4.195945            9.596300
## 95            0.4357026            0.36615230            4.676432            8.055816
## 96            0.5614035            0.12061403            5.247807            7.392544
## 97                NaN                NaN            6.720130            5.652676
## 98            0.2198020            0.27722772            6.279208            6.615842
## 99                NaN                NaN            5.298525            3.032302
##      firstblood_claimed_avg_r gold_avg_r gold_per_min_avg_r gold_spent_avg_r
## 90            0.00000000            1534.533            448.8667            10993.667
## 91            0.09079974            1857.311            431.6329            13117.170
## 92            0.09635036            2069.768            512.5255            18240.182
## 93            0.06541434            1737.796            416.1030            13654.257
## 94            0.12853196            1813.546            458.8147            15991.868
## 95            0.10075881            1734.307            408.3827            13099.044
## 96            0.08771930            1763.189            371.4518            10830.636
## 97            0.09336512            1290.751            440.8231            9755.707
## 98            0.09900990            1193.448            417.0376            9077.455
## 99            0.09515420            1684.929            423.2984            10212.566
##      hero_damage_avg_r hero_healing_avg_r hero_kills_avg_r
## 90            15070.60            777.7333            6.200000
## 91            18545.15            1008.3074            5.858468
## 92            23825.75            544.4847            7.040876
## 93            17264.51            1260.0623            4.935961
## 94            17134.89            1458.2781            5.063132
```

## 95	17641.92	866.4152	5.199240
## 96	15003.80	1574.9934	4.179825
## 97	15044.31	427.0143	NaN
## 98	15054.09	606.1465	6.164356
## 99	14213.22	571.6321	NaN

cumsum(data)

##	match_id	radiant_win	freq_r	win_pct_r	duration_avg_win_r
## 1	5796599901	0	29.8	0.6534193	32.09696
## 2	11593310669	1	59.6	1.3068387	64.19392
## 3	16225880308	1	71.8	1.4473149	94.26392
## 4	21306405426	1	82.8	1.6291331	120.86392
## 5	26482662367	2	125.0	2.0865886	154.94700
## 6	32471774509	2	170.4	2.5059295	188.27107
## 7	38202491752	2	341.0	3.0323403	221.91415
## 8	43316313233	2	343.0	3.0323403	NA
## 9	48944632461	3	630.8	3.6527331	NA
## 10	54585560465	4	696.2	4.2794971	NA
## 11	59483178112	5	753.4	4.8032525	NA
## 12	64963460521	6	912.6	5.2821122	NA
## 13	70078174879	7	955.1	5.7509011	NA
## 14	74545004982	8	1061.7	6.3035360	NA
## 15	80185708955	9	1194.5	6.8132678	NA
## 16	86205680175	10	1250.7	7.3441807	NA
## 17	91505710410	11	1264.5	7.8560388	NA
## 18	97476917303	12	NA	NA	NA
## 19	103471796832	13	NA	NA	NA
## 20	108695896696	14	NA	NA	NA
## 21	114597311477	15	NA	NA	NA
## 22	120584680353	16	NA	NA	NA
## 23	126262098643	17	NA	NA	NA
## 24	131153478218	18	NA	NA	NA
## 25	136753945885	19	NA	NA	NA
## 26	142194737241	19	NA	NA	NA
## 27	147795730101	19	NA	NA	NA
## 28	153136183564	20	NA	NA	NA
## 29	157496474119	21	NA	NA	NA
## 30	162635691367	22	NA	NA	NA
## 31	168650337507	22	NA	NA	NA
## 32	173710527953	23	NA	NA	NA
## 33	178318706339	23	NA	NA	NA
## 34	184192767819	23	NA	NA	NA
## 35	189431742966	24	NA	NA	NA
## 36	195161262445	25	NA	NA	NA
## 37	200530561579	26	NA	NA	NA
## 38	206480635551	27	NA	NA	NA
## 39	210827870692	27	NA	NA	NA
## 40	216651629423	28	NA	NA	NA
## 41	221244938987	29	NA	NA	NA
## 42	227255459545	29	NA	NA	NA
## 43	233033236940	30	NA	NA	NA
## 44	237711932683	31	NA	NA	NA
## 45	242631789325	31	NA	NA	NA

## 46	248205899814	32	NA	NA	NA
## 47	252829455947	33	NA	NA	NA
## 48	257699990411	33	NA	NA	NA
## 49	263118386390	34	NA	NA	NA
## 50	268746843033	34	NA	NA	NA
## 51	274328117566	35	NA	NA	NA
## 52	279769940848	36	NA	NA	NA
## 53	284171935755	37	NA	NA	NA
## 54	288855143585	38	NA	NA	NA
## 55	293947378043	39	NA	NA	NA
## 56	299065355316	39	NA	NA	NA
## 57	304470724714	40	NA	NA	NA
## 58	309417531191	41	NA	NA	NA
## 59	315295186386	42	NA	NA	NA
## 60	320807558234	42	NA	NA	NA
## 61	325949470971	43	NA	NA	NA
## 62	330757103031	43	NA	NA	NA
## 63	336035246697	43	NA	NA	NA
## 64	341257919634	44	NA	NA	NA
## 65	346396768145	44	NA	NA	NA
## 66	351374077873	45	NA	NA	NA
## 67	357097102313	45	NA	NA	NA
## 68	363099576176	45	NA	NA	NA
## 69	368261352085	46	NA	NA	NA
## 70	374269758871	46	NA	NA	NA
## 71	379751674401	47	NA	NA	NA
## 72	385629456006	48	NA	NA	NA
## 73	391225596065	49	NA	NA	NA
## 74	396359726575	50	NA	NA	NA
## 75	401614522578	51	NA	NA	NA
## 76	407307787017	52	NA	NA	NA
## 77	412991067545	53	NA	NA	NA
## 78	418028983891	54	NA	NA	NA
## 79	423357786610	54	NA	NA	NA
## 80	428721840195	55	NA	NA	NA
## 81	434436300295	56	NA	NA	NA
## 82	439890218740	57	NA	NA	NA
## 83	445716688356	58	NA	NA	NA
## 84	451202172151	59	NA	NA	NA
## 85	456615948848	60	NA	NA	NA
## 86	462065762444	60	NA	NA	NA
## 87	466888879854	60	NA	NA	NA
## 88	471934071371	60	NA	NA	NA
## 89	476889702212	60	NA	NA	NA
## 90	482132356545	60	NA	NA	NA
## 91	487076643813	61	NA	NA	NA
## 92	492306011006	61	NA	NA	NA
## 93	497801195102	61	NA	NA	NA
## 94	502673512450	62	NA	NA	NA
## 95	508265465148	63	NA	NA	NA
## 96	514185431349	64	NA	NA	NA
## 97	519868821067	65	NA	NA	NA
## 98	525335464921	65	NA	NA	NA
## 99	530891897300	65	NA	NA	NA

##	duration_avg_lose_r	actions_per_min_avg_r	ancient_kills_avg_r
## 1	40.58606	316.8472	6.738015
## 2	81.17212	633.6944	13.476030
## 3	122.90498	844.7691	19.056188
## 4	150.37535	1054.5145	21.892552
## 5	182.23999	NaN	NaN
## 6	215.62015	NaN	NaN
## 7	251.28988	NaN	NaN
## 8	286.78988	NaN	NaN
## 9	325.96386	NaN	NaN
## 10	365.88875	NaN	NaN
## 11	401.26936	NaN	NaN
## 12	435.70211	NaN	NaN
## 13	477.11889	NaN	NaN
## 14	513.41391	NaN	NaN
## 15	550.99337	NaN	NaN
## 16	589.58774	NaN	NaN
## 17	617.96424	NaN	NaN
## 18	NA	NaN	NaN
## 19	NA	NaN	NaN
## 20	NA	NaN	NaN
## 21	NA	NaN	NaN
## 22	NA	NaN	NaN
## 23	NA	NaN	NaN
## 24	NA	NaN	NaN
## 25	NA	NaN	NaN
## 26	NA	NaN	NaN
## 27	NA	NaN	NaN
## 28	NA	NaN	NaN
## 29	NA	NaN	NaN
## 30	NA	NaN	NaN
## 31	NA	NaN	NaN
## 32	NA	NaN	NaN
## 33	NA	NaN	NaN
## 34	NA	NaN	NaN
## 35	NA	NaN	NaN
## 36	NA	NaN	NaN
## 37	NA	NaN	NaN
## 38	NA	NaN	NaN
## 39	NA	NaN	NaN
## 40	NA	NaN	NaN
## 41	NA	NaN	NaN
## 42	NA	NaN	NaN
## 43	NA	NaN	NaN
## 44	NA	NaN	NaN
## 45	NA	NaN	NaN
## 46	NA	NaN	NaN
## 47	NA	NaN	NaN
## 48	NA	NaN	NaN
## 49	NA	NaN	NaN
## 50	NA	NaN	NaN
## 51	NA	NaN	NaN
## 52	NA	NaN	NaN
## 53	NA	NaN	NaN

## 54	NA	NaN	NaN	
## 55	NA	NaN	NaN	
## 56	NA	NaN	NaN	
## 57	NA	NaN	NaN	
## 58	NA	NaN	NaN	
## 59	NA	NaN	NaN	
## 60	NA	NaN	NaN	
## 61	NA	NaN	NaN	
## 62	NA	NaN	NaN	
## 63	NA	NaN	NaN	
## 64	NA	NaN	NaN	
## 65	NA	NaN	NaN	
## 66	NA	NaN	NaN	
## 67	NA	NaN	NaN	
## 68	NA	NaN	NaN	
## 69	NA	NaN	NaN	
## 70	NA	NaN	NaN	
## 71	NA	NaN	NaN	
## 72	NA	NaN	NaN	
## 73	NA	NaN	NaN	
## 74	NA	NaN	NaN	
## 75	NA	NaN	NaN	
## 76	NA	NaN	NaN	
## 77	NA	NaN	NaN	
## 78	NA	NaN	NaN	
## 79	NA	NaN	NaN	
## 80	NA	NaN	NaN	
## 81	NA	NaN	NaN	
## 82	NA	NaN	NaN	
## 83	NA	NaN	NaN	
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## 85	NA	NaN	NaN	
## 86	NA	NaN	NaN	
## 87	NA	NaN	NaN	
## 88	NA	NaN	NaN	
## 89	NA	NaN	NaN	
## 90	NA	NaN	NaN	
## 91	NA	NaN	NaN	
## 92	NA	NaN	NaN	
## 93	NA	NaN	NaN	
## 94	NA	NaN	NaN	
## 95	NA	NaN	NaN	
## 96	NA	NaN	NaN	
## 97	NA	NaN	NaN	
## 98	NA	NaN	NaN	
## 99	NA	NaN	NaN	
##	buyback_count_avg_r	courier_kills_avg_r	deaths_avg_r	denies_avg_r
## 1	0.4672965	0.1941987	4.560102	7.198182
## 2	0.9345931	0.3883974	9.120203	14.396364
## 3	1.7211010	0.3995085	15.226553	23.557475
## 4	2.2665556	0.4540540	23.153825	30.793839
## 5	NaN	NaN	27.865723	39.657542
## 6	NaN	NaN	33.268375	47.181148
## 7	NaN	NaN	38.700892	54.837074

## 8	NaN	NaN	49.700892	55.337074
## 9	NaN	NaN	54.312213	63.634693
## 10	NaN	NaN	58.818772	73.850261
## 11	NaN	NaN	63.692800	83.282834
## 12	NaN	NaN	68.208044	91.939974
## 13	NaN	NaN	73.938002	97.529210
## 14	NaN	NaN	78.858791	108.285263
## 15	NaN	NaN	83.657396	117.016578
## 16	NaN	NaN	88.499497	124.433483
## 17	NaN	NaN	93.292774	134.186891
## 18	NaN	NaN	NA	NA
## 19	NaN	NaN	NA	NA
## 20	NaN	NaN	NA	NA
## 21	NaN	NaN	NA	NA
## 22	NaN	NaN	NA	NA
## 23	NaN	NaN	NA	NA
## 24	NaN	NaN	NA	NA
## 25	NaN	NaN	NA	NA
## 26	NaN	NaN	NA	NA
## 27	NaN	NaN	NA	NA
## 28	NaN	NaN	NA	NA
## 29	NaN	NaN	NA	NA
## 30	NaN	NaN	NA	NA
## 31	NaN	NaN	NA	NA
## 32	NaN	NaN	NA	NA
## 33	NaN	NaN	NA	NA
## 34	NaN	NaN	NA	NA
## 35	NaN	NaN	NA	NA
## 36	NaN	NaN	NA	NA
## 37	NaN	NaN	NA	NA
## 38	NaN	NaN	NA	NA
## 39	NaN	NaN	NA	NA
## 40	NaN	NaN	NA	NA
## 41	NaN	NaN	NA	NA
## 42	NaN	NaN	NA	NA
## 43	NaN	NaN	NA	NA
## 44	NaN	NaN	NA	NA
## 45	NaN	NaN	NA	NA
## 46	NaN	NaN	NA	NA
## 47	NaN	NaN	NA	NA
## 48	NaN	NaN	NA	NA
## 49	NaN	NaN	NA	NA
## 50	NaN	NaN	NA	NA
## 51	NaN	NaN	NA	NA
## 52	NaN	NaN	NA	NA
## 53	NaN	NaN	NA	NA
## 54	NaN	NaN	NA	NA
## 55	NaN	NaN	NA	NA
## 56	NaN	NaN	NA	NA
## 57	NaN	NaN	NA	NA
## 58	NaN	NaN	NA	NA
## 59	NaN	NaN	NA	NA
## 60	NaN	NaN	NA	NA
## 61	NaN	NaN	NA	NA

## 62	NaN	NaN	NA	NA
## 63	NaN	NaN	NA	NA
## 64	NaN	NaN	NA	NA
## 65	NaN	NaN	NA	NA
## 66	NaN	NaN	NA	NA
## 67	NaN	NaN	NA	NA
## 68	NaN	NaN	NA	NA
## 69	NaN	NaN	NA	NA
## 70	NaN	NaN	NA	NA
## 71	NaN	NaN	NA	NA
## 72	NaN	NaN	NA	NA
## 73	NaN	NaN	NA	NA
## 74	NaN	NaN	NA	NA
## 75	NaN	NaN	NA	NA
## 76	NaN	NaN	NA	NA
## 77	NaN	NaN	NA	NA
## 78	NaN	NaN	NA	NA
## 79	NaN	NaN	NA	NA
## 80	NaN	NaN	NA	NA
## 81	NaN	NaN	NA	NA
## 82	NaN	NaN	NA	NA
## 83	NaN	NaN	NA	NA
## 84	NaN	NaN	NA	NA
## 85	NaN	NaN	NA	NA
## 86	NaN	NaN	NA	NA
## 87	NaN	NaN	NA	NA
## 88	NaN	NaN	NA	NA
## 89	NaN	NaN	NA	NA
## 90	NaN	NaN	NA	NA
## 91	NaN	NaN	NA	NA
## 92	NaN	NaN	NA	NA
## 93	NaN	NaN	NA	NA
## 94	NaN	NaN	NA	NA
## 95	NaN	NaN	NA	NA
## 96	NaN	NaN	NA	NA
## 97	NaN	NaN	NA	NA
## 98	NaN	NaN	NA	NA
## 99	NaN	NaN	NA	NA
##	firstblood_claimed_avg_r	gold_avg_r	gold_per_min_avg_r	gold_spent_avg_r
## 1	0.1155893	2090.211	435.5398	13093.80
## 2	0.2311787	4180.422	871.0796	26187.61
## 3	0.2875279	5716.336	1293.2066	41442.05
## 4	0.4148006	6645.754	1707.1521	51568.68
## 5	0.5222297	8446.484	2123.2975	63997.48
## 6	0.6591776	9890.716	2549.0653	76549.37
## 7	0.7548756	11509.352	2976.5286	89962.10
## 8	0.7548756	12036.352	3196.5286	96704.60
## 9	0.8573946	13708.483	3625.6931	110806.31
## 10	0.9886727	16080.212	4047.4981	124609.22
## 11	1.1676454	17809.269	4475.9146	138023.09
## 12	1.2632878	19458.259	4891.0354	150771.25
## 13	1.6855714	21145.657	5248.8934	161850.11
## 14	1.7717937	23100.088	5699.9173	176178.87
## 15	1.8728179	24564.974	6113.2897	189260.49

## 16	1.9679199	26276.074	6565.1448	204794.69
## 17	2.0171262	27911.718	6975.3076	217336.92
## 18	NA	NA	NA	NA
## 19	NA	NA	NA	NA
## 20	NA	NA	NA	NA
## 21	NA	NA	NA	NA
## 22	NA	NA	NA	NA
## 23	NA	NA	NA	NA
## 24	NA	NA	NA	NA
## 25	NA	NA	NA	NA
## 26	NA	NA	NA	NA
## 27	NA	NA	NA	NA
## 28	NA	NA	NA	NA
## 29	NA	NA	NA	NA
## 30	NA	NA	NA	NA
## 31	NA	NA	NA	NA
## 32	NA	NA	NA	NA
## 33	NA	NA	NA	NA
## 34	NA	NA	NA	NA
## 35	NA	NA	NA	NA
## 36	NA	NA	NA	NA
## 37	NA	NA	NA	NA
## 38	NA	NA	NA	NA
## 39	NA	NA	NA	NA
## 40	NA	NA	NA	NA
## 41	NA	NA	NA	NA
## 42	NA	NA	NA	NA
## 43	NA	NA	NA	NA
## 44	NA	NA	NA	NA
## 45	NA	NA	NA	NA
## 46	NA	NA	NA	NA
## 47	NA	NA	NA	NA
## 48	NA	NA	NA	NA
## 49	NA	NA	NA	NA
## 50	NA	NA	NA	NA
## 51	NA	NA	NA	NA
## 52	NA	NA	NA	NA
## 53	NA	NA	NA	NA
## 54	NA	NA	NA	NA
## 55	NA	NA	NA	NA
## 56	NA	NA	NA	NA
## 57	NA	NA	NA	NA
## 58	NA	NA	NA	NA
## 59	NA	NA	NA	NA
## 60	NA	NA	NA	NA
## 61	NA	NA	NA	NA
## 62	NA	NA	NA	NA
## 63	NA	NA	NA	NA
## 64	NA	NA	NA	NA
## 65	NA	NA	NA	NA
## 66	NA	NA	NA	NA
## 67	NA	NA	NA	NA
## 68	NA	NA	NA	NA
## 69	NA	NA	NA	NA

## 70	NA	NA	NA	NA
## 71	NA	NA	NA	NA
## 72	NA	NA	NA	NA
## 73	NA	NA	NA	NA
## 74	NA	NA	NA	NA
## 75	NA	NA	NA	NA
## 76	NA	NA	NA	NA
## 77	NA	NA	NA	NA
## 78	NA	NA	NA	NA
## 79	NA	NA	NA	NA
## 80	NA	NA	NA	NA
## 81	NA	NA	NA	NA
## 82	NA	NA	NA	NA
## 83	NA	NA	NA	NA
## 84	NA	NA	NA	NA
## 85	NA	NA	NA	NA
## 86	NA	NA	NA	NA
## 87	NA	NA	NA	NA
## 88	NA	NA	NA	NA
## 89	NA	NA	NA	NA
## 90	NA	NA	NA	NA
## 91	NA	NA	NA	NA
## 92	NA	NA	NA	NA
## 93	NA	NA	NA	NA
## 94	NA	NA	NA	NA
## 95	NA	NA	NA	NA
## 96	NA	NA	NA	NA
## 97	NA	NA	NA	NA
## 98	NA	NA	NA	NA
## 99	NA	NA	NA	NA
##	hero_damage_avg_r	hero_healing_avg_r	hero_kills_avg_r	
## 1	16241.17	1593.956	5.283281	
## 2	32482.34	3187.912	10.566562	
## 3	51472.36	3718.718	15.194340	
## 4	69383.63	4027.263	20.976158	
## 5	84698.34	4760.777	NaN	
## 6	101729.38	5540.610	NaN	
## 7	118913.05	6442.195	NaN	
## 8	128811.55	6642.195	NaN	
## 9	147886.34	7892.146	NaN	
## 10	167534.25	9127.037	NaN	
## 11	183742.70	10126.035	NaN	
## 12	199778.44	11036.858	NaN	
## 13	213986.18	12465.009	NaN	
## 14	231211.07	13588.333	NaN	
## 15	248052.40	14799.140	NaN	
## 16	267386.83	15922.412	NaN	
## 17	285610.69	16245.867	NaN	
## 18	NA	NA	NaN	
## 19	NA	NA	NaN	
## 20	NA	NA	NaN	
## 21	NA	NA	NaN	
## 22	NA	NA	NaN	
## 23	NA	NA	NaN	

## 24	NA	NA	NaN
## 25	NA	NA	NaN
## 26	NA	NA	NaN
## 27	NA	NA	NaN
## 28	NA	NA	NaN
## 29	NA	NA	NaN
## 30	NA	NA	NaN
## 31	NA	NA	NaN
## 32	NA	NA	NaN
## 33	NA	NA	NaN
## 34	NA	NA	NaN
## 35	NA	NA	NaN
## 36	NA	NA	NaN
## 37	NA	NA	NaN
## 38	NA	NA	NaN
## 39	NA	NA	NaN
## 40	NA	NA	NaN
## 41	NA	NA	NaN
## 42	NA	NA	NaN
## 43	NA	NA	NaN
## 44	NA	NA	NaN
## 45	NA	NA	NaN
## 46	NA	NA	NaN
## 47	NA	NA	NaN
## 48	NA	NA	NaN
## 49	NA	NA	NaN
## 50	NA	NA	NaN
## 51	NA	NA	NaN
## 52	NA	NA	NaN
## 53	NA	NA	NaN
## 54	NA	NA	NaN
## 55	NA	NA	NaN
## 56	NA	NA	NaN
## 57	NA	NA	NaN
## 58	NA	NA	NaN
## 59	NA	NA	NaN
## 60	NA	NA	NaN
## 61	NA	NA	NaN
## 62	NA	NA	NaN
## 63	NA	NA	NaN
## 64	NA	NA	NaN
## 65	NA	NA	NaN
## 66	NA	NA	NaN
## 67	NA	NA	NaN
## 68	NA	NA	NaN
## 69	NA	NA	NaN
## 70	NA	NA	NaN
## 71	NA	NA	NaN
## 72	NA	NA	NaN
## 73	NA	NA	NaN
## 74	NA	NA	NaN
## 75	NA	NA	NaN
## 76	NA	NA	NaN
## 77	NA	NA	NaN


```
mad(data,na.rm=TRUE)
```

```
## [1] 49.39602
```

```
var(data,na.rm=TRUE)
```

```
##          match_id    radiant_win      freq_r
## match_id      2.019343e+17  1.404350e+07  1.086395e+10
## radiant_win    1.404350e+07  2.386364e-01  4.857955e+00
## freq_r         1.086395e+10  4.857955e+00  4.914669e+03
## win_pct_r      5.026269e+06  1.495897e-02  1.462263e+00
## duration_avg_win_r -1.418131e+08  2.299144e-01  9.933067e+00
## duration_avg_lose_r  3.764389e+08  5.081482e-01  3.698599e+01
## actions_per_min_avg_r  5.277850e+09 -1.558935e+00 -5.145655e+02
## ancient_kills_avg_r -1.003985e+08 -1.447582e-02  3.478936e+01
## buyback_count_avg_r -2.482948e+07  4.091627e-03 -2.883746e+00
## courier_kills_avg_r  4.572263e+07  9.594443e-03  3.315967e+00
## deaths_avg_r     -2.239673e+07 -8.116891e-02 -1.430687e+01
## denies_avg_r      -3.340901e+08  5.740548e-02 -1.776442e+01
## firstblood_claimed_avg_r -1.083416e+06  2.161536e-03 -2.444276e-01
## gold_avg_r       -1.569879e+10  3.006293e+01  5.911051e+02
## gold_per_min_avg_r  -2.424628e+09  2.087510e-01  3.855685e+02
## gold_spent_avg_r    -8.485418e+10  1.057302e+02  2.107217e+04
## hero_damage_avg_r   -3.921494e+10  1.676965e+02  7.983451e+03
## hero_healing_avg_r    1.483909e+10  5.277090e+01 -2.347424e+03
## hero_kills_avg_r    -1.978409e+07  7.511191e-03 -1.330693e+00
##          win_pct_r duration_avg_win_r duration_avg_lose_r
## match_id      5.026269e+06      -1.418131e+08      3.764389e+08
## radiant_win    1.495897e-02      2.299144e-01      5.081482e-01
## freq_r         1.462263e+00      9.933067e+00      3.698599e+01
## win_pct_r      2.331675e-02      -1.497133e-02      6.588289e-02
## duration_avg_win_r -1.497133e-02      1.860374e+01      9.170756e+00
## duration_avg_lose_r  6.588289e-02      9.170756e+00      2.349751e+01
## actions_per_min_avg_r  9.973563e-01      -8.941568e+00      7.023002e+01
## ancient_kills_avg_r  1.035340e-01      3.654284e+00      2.957054e+00
## buyback_count_avg_r -6.191822e-03      3.407866e-01      3.161461e-01
## courier_kills_avg_r  4.171456e-03      -9.326813e-03      4.045428e-02
## deaths_avg_r     -1.066440e-01      -5.235130e-01     -1.604444e+00
## denies_avg_r      5.978770e-02      2.330947e+00      1.212830e+00
## firstblood_claimed_avg_r  1.196911e-03      -6.239804e-03      4.536388e-02
## gold_avg_r       2.997533e+01      7.964028e+02      7.175967e+02
## gold_per_min_avg_r  2.866194e+00      2.675652e+01      2.704807e+01
## gold_spent_avg_r    9.203928e+01      5.418983e+03      6.033117e+03
## hero_damage_avg_r    4.464531e+01      4.459497e+03      4.507444e+03
## hero_healing_avg_r    3.587565e+01      1.406466e+02      6.768544e+02
## hero_kills_avg_r    4.613202e-02      -3.205278e-01     -6.138955e-01
##          actions_per_min_avg_r ancient_kills_avg_r
## match_id      5.277850e+09      -1.003985e+08
## radiant_win    -1.558935e+00      -1.447582e-02
## freq_r         -5.145655e+02      3.478936e+01
## win_pct_r      9.973563e-01      1.035340e-01
## duration_avg_win_r -8.941568e+00      3.654284e+00
## duration_avg_lose_r  7.023002e+01      2.957054e+00
```

## actions_per_min_avg_r	2.418969e+03	-9.496740e+00	
## ancient_kills_avg_r	-9.496740e+00	4.525229e+00	
## buyback_count_avg_r	3.729494e-02	4.610981e-02	
## courier_kills_avg_r	-5.199478e-02	8.448650e-03	
## deaths_avg_r	-1.103406e+01	-7.892568e-01	
## denies_avg_r	-1.314982e+01	1.273109e+00	
## firstblood_claimed_avg_r	-9.837905e-02	-1.195992e-02	
## gold_avg_r	2.984149e+03	3.389903e+02	
## gold_per_min_avg_r	-1.938945e+02	5.213771e+01	
## gold_spent_avg_r	7.671087e+02	3.106318e+03	
## hero_damage_avg_r	-4.545821e+03	2.467554e+03	
## hero_healing_avg_r	6.457833e+03	9.664748e+01	
## hero_kills_avg_r	-7.295702e+00	5.075349e-01	
##	buyback_count_avg_r	courier_kills_avg_r	deaths_avg_r
## match_id	-2.482948e+07	4.572263e+07	-2.239673e+07
## radiant_win	4.091627e-03	9.594443e-03	-8.116891e-02
## freq_r	-2.883746e+00	3.315967e+00	-1.430687e+01
## win_pct_r	-6.191822e-03	4.171456e-03	-1.066440e-01
## duration_avg_win_r	3.407866e-01	-9.326813e-03	-5.235130e-01
## duration_avg_lose_r	3.161461e-01	4.045428e-02	-1.604444e+00
## actions_per_min_avg_r	3.729494e-02	-5.199478e-02	-1.103406e+01
## ancient_kills_avg_r	4.610981e-02	8.448650e-03	-7.892568e-01
## buyback_count_avg_r	2.020064e-02	-9.068589e-03	2.999844e-02
## courier_kills_avg_r	-9.068589e-03	1.703619e-02	-2.909320e-02
## deaths_avg_r	2.999844e-02	-2.909320e-02	1.113864e+00
## denies_avg_r	8.065302e-02	-3.595114e-02	-5.019285e-01
## firstblood_claimed_avg_r	-6.940339e-04	-3.901616e-04	-8.305803e-03
## gold_avg_r	1.090060e+01	-1.739613e-01	-1.780719e+02
## gold_per_min_avg_r	4.618973e-01	-2.646470e-01	-8.753061e+00
## gold_spent_avg_r	1.303398e+02	-1.670074e+01	-6.548635e+02
## hero_damage_avg_r	1.371141e+02	3.642598e-01	4.685227e+02
## hero_healing_avg_r	9.175256e-01	6.606207e+00	-2.247844e+02
## hero_kills_avg_r	-1.095353e-02	4.431937e-03	2.171181e-01
##	denies_avg_r	firstblood_claimed_avg_r	gold_avg_r
## match_id	-3.340901e+08	-1.083416e+06	-1.569879e+10
## radiant_win	5.740548e-02	2.161536e-03	3.006293e+01
## freq_r	-1.776442e+01	-2.444276e-01	5.911051e+02
## win_pct_r	5.978770e-02	1.196911e-03	2.997533e+01
## duration_avg_win_r	2.330947e+00	-6.239804e-03	7.964028e+02
## duration_avg_lose_r	1.212830e+00	4.536388e-02	7.175967e+02
## actions_per_min_avg_r	-1.314982e+01	-9.837905e-02	2.984149e+03
## ancient_kills_avg_r	1.273109e+00	-1.195992e-02	3.389903e+02
## buyback_count_avg_r	8.065302e-02	-6.940339e-04	1.090060e+01
## courier_kills_avg_r	-3.595114e-02	-3.901616e-04	-1.739613e-01
## deaths_avg_r	-5.019285e-01	-8.305803e-03	-1.780719e+02
## denies_avg_r	2.384523e+00	-6.663001e-03	2.555766e+02
## firstblood_claimed_avg_r	-6.663001e-03	2.457685e-03	1.712761e+00
## gold_avg_r	2.555766e+02	1.712761e+00	1.102293e+05
## gold_per_min_avg_r	2.354795e+01	-1.521073e-01	6.999873e+03
## gold_spent_avg_r	1.456725e+03	-7.445914e+00	4.724031e+05
## hero_damage_avg_r	1.316792e+03	-2.520405e+01	4.309591e+05
## hero_healing_avg_r	9.478013e+01	4.080217e+00	5.310519e+04
## hero_kills_avg_r	4.119720e-01	-8.268581e-03	8.892314e+01
##	gold_per_min_avg_r	gold_spent_avg_r	hero_damage_avg_r

## match_id	-2.424628e+09	-8.485418e+10	-3.921494e+10
## radiant_win	2.087510e-01	1.057302e+02	1.676965e+02
## freq_r	3.855685e+02	2.107217e+04	7.983451e+03
## win_pct_r	2.866194e+00	9.203928e+01	4.464531e+01
## duration_avg_win_r	2.675652e+01	5.418983e+03	4.459497e+03
## duration_avg_lose_r	2.704807e+01	6.033117e+03	4.507444e+03
## actions_per_min_avg_r	-1.938945e+02	7.671087e+02	-4.545821e+03
## ancient_kills_avg_r	5.213771e+01	3.106318e+03	2.467554e+03
## buyback_count_avg_r	4.618973e-01	1.303398e+02	1.371141e+02
## courier_kills_avg_r	-2.646470e-01	-1.670074e+01	3.642598e-01
## deaths_avg_r	-8.753061e+00	-6.548635e+02	4.685227e+02
## denies_avg_r	2.354795e+01	1.456725e+03	1.316792e+03
## firstblood_claimed_avg_r	-1.521073e-01	-7.445914e+00	-2.520405e+01
## gold_avg_r	6.999873e+03	4.724031e+05	4.309591e+05
## gold_per_min_avg_r	1.308712e+03	5.564322e+04	6.361496e+04
## gold_spent_avg_r	5.564322e+04	4.087541e+06	3.892729e+06
## hero_damage_avg_r	6.361496e+04	3.892729e+06	6.550844e+06
## hero_healing_avg_r	9.107735e+02	1.256812e+05	-2.402668e+04
## hero_kills_avg_r	2.334770e+01	6.205780e+02	1.635668e+03
##	hero_healing_avg_r	hero_kills_avg_r	
## match_id	1.483909e+10	-1.978409e+07	
## radiant_win	5.277090e+01	7.511191e-03	
## freq_r	-2.347424e+03	-1.330693e+00	
## win_pct_r	3.587565e+01	4.613202e-02	
## duration_avg_win_r	1.406466e+02	-3.205278e-01	
## duration_avg_lose_r	6.768544e+02	-6.138955e-01	
## actions_per_min_avg_r	6.457833e+03	-7.295702e+00	
## ancient_kills_avg_r	9.664748e+01	5.075349e-01	
## buyback_count_avg_r	9.175256e-01	-1.095353e-02	
## courier_kills_avg_r	6.606207e+00	4.431937e-03	
## deaths_avg_r	-2.247844e+02	2.171181e-01	
## denies_avg_r	9.478013e+01	4.119720e-01	
## firstblood_claimed_avg_r	4.080217e+00	-8.268581e-03	
## gold_avg_r	5.310519e+04	8.892314e+01	
## gold_per_min_avg_r	9.107735e+02	2.334770e+01	
## gold_spent_avg_r	1.256812e+05	6.205780e+02	
## hero_damage_avg_r	-2.402668e+04	1.635668e+03	
## hero_healing_avg_r	1.248044e+05	-2.332042e+01	
## hero_kills_avg_r	-2.332042e+01	8.416547e-01	

```
sort(data$match_id)
```

```
## [1] 4347235141 4360290555 4401994907 4466830103 4593309564 4608178386
## [7] 4623556133 4632569639 4678695743 4683207830 4807632060 4823117410
## [13] 4870534464 4872317348 4891379575 4897617647 4919856642 4944287268
## [19] 4946806477 4955630841 4977309728 5037916346 5045191517 5060190446
## [25] 5080525118 5092234458 5113821481 5114714358 5117977273 5134130510
## [31] 5138848511 5139217248 5141912737 5161775909 5176256941 5222672937
## [37] 5224099864 5229367193 5238975147 5242654333 5254796003 5278143666
## [43] 5300030235 5328802719 5340453463 5364053585 5369299134 5405369398
## [49] 5413776697 5418395979 5440791356 5441823282 5449813596 5453918445
## [55] 5466643854 5480282409 5481915530 5485483795 5495184096 5512371848
## [61] 5556432379 5574110489 5581274533 5591952698 5596140059 5600467667
## [67] 5600992860 5628319228 5628456643 5640703973 5640928004 5677418290
```

```
## [73] 5683280528 5683389718 5693264439 5714460100 5723024440 5729519479
## [79] 5730717243 5777777395 5796599901 5796710768 5823758731 5826469616
## [85] 5874061480 5877655195 5877781605 5901414781 5919966201 5950073972
## [91] 5971206893 5987368876 5989112142 5994879529 6002473863 6008406786
## [97] 6010520558 6014646140 6019971220
```

```
order(data$hero_kills_avg_r)
```

```
## [1] 8 13 41 96 34 71 47 12 60 40 33 3 48 77 24 57 29 93 63 81 83 15 94 56 55
## [26] 23 16 42 95 1 2 27 74 89 59 45 10 86 7 6 76 4 91 66 9 64 32 67 98 90
## [51] 39 37 21 46 36 92 69 53 54 5 11 14 17 18 19 20 22 25 26 28 30 31 35 38 43
## [76] 44 49 50 51 52 58 61 62 65 68 70 72 73 75 78 79 80 82 84 85 87 88 97 99
```

```
rank(data$hero_kills_avg_r)
```

```
## [1] 30.5 30.5 12.0 42.0 60.0 40.0 39.0 1.0 45.0 37.0 61.0 8.0 2.0 62.0 22.0
## [16] 27.0 63.0 64.0 65.0 66.0 53.0 67.0 26.0 15.0 68.0 69.0 32.0 70.0 17.0 71.0
## [31] 72.0 47.0 11.0 5.0 73.0 55.0 52.0 74.0 51.0 10.0 3.0 28.0 75.0 76.0 36.0
## [46] 54.0 7.0 13.0 77.0 78.0 79.0 80.0 58.0 59.0 25.0 24.0 16.0 81.0 35.0 9.0
## [61] 82.0 83.0 19.0 46.0 84.0 44.0 48.0 85.0 57.0 86.0 6.0 87.0 88.0 33.0 89.0
## [76] 41.0 14.0 90.0 91.0 92.0 20.0 93.0 21.0 94.0 95.0 38.0 96.0 97.0 34.0 50.0
## [91] 43.0 56.0 18.0 23.0 29.0 4.0 98.0 49.0 99.0
```

```
stack(data)
```

```
##          values          ind
## 1  5.796600e+09 match_id
## 2  5.796711e+09 match_id
## 3  4.632570e+09 match_id
## 4  5.080525e+09 match_id
## 5  5.176257e+09 match_id
## 6  5.989112e+09 match_id
## 7  5.730717e+09 match_id
## 8  5.113821e+09 match_id
## 9  5.628319e+09 match_id
## 10 5.640928e+09 match_id
## 11 4.897618e+09 match_id
## 12 5.480282e+09 match_id
## 13 5.114714e+09 match_id
## 14 4.466830e+09 match_id
## 15 5.640704e+09 match_id
## 16 6.019971e+09 match_id
## 17 5.300030e+09 match_id
## 18 5.971207e+09 match_id
## 19 5.994880e+09 match_id
## 20 5.224100e+09 match_id
## 21 5.901415e+09 match_id
## 22 5.987369e+09 match_id
## 23 5.677418e+09 match_id
## 24 4.891380e+09 match_id
## 25 5.600468e+09 match_id
## 26 5.440791e+09 match_id
```


## 27	5.600993e+09	match_id
## 28	5.340453e+09	match_id
## 29	4.360291e+09	match_id
## 30	5.139217e+09	match_id
## 31	6.014646e+09	match_id
## 32	5.060190e+09	match_id
## 33	4.608178e+09	match_id
## 34	5.874061e+09	match_id
## 35	5.238975e+09	match_id
## 36	5.729519e+09	match_id
## 37	5.369299e+09	match_id
## 38	5.950074e+09	match_id
## 39	4.347235e+09	match_id
## 40	5.823759e+09	match_id
## 41	4.593310e+09	match_id
## 42	6.010521e+09	match_id
## 43	5.777777e+09	match_id
## 44	4.678696e+09	match_id
## 45	4.919857e+09	match_id
## 46	5.574110e+09	match_id
## 47	4.623556e+09	match_id
## 48	4.870534e+09	match_id
## 49	5.418396e+09	match_id
## 50	5.628457e+09	match_id
## 51	5.581275e+09	match_id
## 52	5.441823e+09	match_id
## 53	4.401995e+09	match_id
## 54	4.683208e+09	match_id
## 55	5.092234e+09	match_id
## 56	5.117977e+09	match_id
## 57	5.405369e+09	match_id
## 58	4.946806e+09	match_id
## 59	5.877655e+09	match_id
## 60	5.512372e+09	match_id
## 61	5.141913e+09	match_id
## 62	4.807632e+09	match_id
## 63	5.278144e+09	match_id
## 64	5.222673e+09	match_id
## 65	5.138849e+09	match_id
## 66	4.977310e+09	match_id
## 67	5.723024e+09	match_id
## 68	6.002474e+09	match_id
## 69	5.161776e+09	match_id
## 70	6.008407e+09	match_id
## 71	5.481916e+09	match_id
## 72	5.877782e+09	match_id
## 73	5.596140e+09	match_id
## 74	5.134131e+09	match_id
## 75	5.254796e+09	match_id
## 76	5.693264e+09	match_id
## 77	5.683281e+09	match_id
## 78	5.037916e+09	match_id
## 79	5.328803e+09	match_id
## 80	5.364054e+09	match_id

## 81	5.714460e+09	match_id
## 82	5.453918e+09	match_id
## 83	5.826470e+09	match_id
## 84	5.485484e+09	match_id
## 85	5.413777e+09	match_id
## 86	5.449814e+09	match_id
## 87	4.823117e+09	match_id
## 88	5.045192e+09	match_id
## 89	4.955631e+09	match_id
## 90	5.242654e+09	match_id
## 91	4.944287e+09	match_id
## 92	5.229367e+09	match_id
## 93	5.495184e+09	match_id
## 94	4.872317e+09	match_id
## 95	5.591953e+09	match_id
## 96	5.919966e+09	match_id
## 97	5.683390e+09	match_id
## 98	5.466644e+09	match_id
## 99	5.556432e+09	match_id
## 100	0.000000e+00	radiant_win
## 101	1.000000e+00	radiant_win
## 102	0.000000e+00	radiant_win
## 103	0.000000e+00	radiant_win
## 104	1.000000e+00	radiant_win
## 105	0.000000e+00	radiant_win
## 106	0.000000e+00	radiant_win
## 107	0.000000e+00	radiant_win
## 108	1.000000e+00	radiant_win
## 109	1.000000e+00	radiant_win
## 110	1.000000e+00	radiant_win
## 111	1.000000e+00	radiant_win
## 112	1.000000e+00	radiant_win
## 113	1.000000e+00	radiant_win
## 114	1.000000e+00	radiant_win
## 115	1.000000e+00	radiant_win
## 116	1.000000e+00	radiant_win
## 117	1.000000e+00	radiant_win
## 118	1.000000e+00	radiant_win
## 119	1.000000e+00	radiant_win
## 120	1.000000e+00	radiant_win
## 121	1.000000e+00	radiant_win
## 122	1.000000e+00	radiant_win
## 123	1.000000e+00	radiant_win
## 124	1.000000e+00	radiant_win
## 125	0.000000e+00	radiant_win
## 126	0.000000e+00	radiant_win
## 127	1.000000e+00	radiant_win
## 128	1.000000e+00	radiant_win
## 129	1.000000e+00	radiant_win
## 130	0.000000e+00	radiant_win
## 131	1.000000e+00	radiant_win
## 132	0.000000e+00	radiant_win
## 133	0.000000e+00	radiant_win
## 134	1.000000e+00	radiant_win

## 135	1.000000e+00	radiant_win
## 136	1.000000e+00	radiant_win
## 137	1.000000e+00	radiant_win
## 138	0.000000e+00	radiant_win
## 139	1.000000e+00	radiant_win
## 140	1.000000e+00	radiant_win
## 141	0.000000e+00	radiant_win
## 142	1.000000e+00	radiant_win
## 143	1.000000e+00	radiant_win
## 144	0.000000e+00	radiant_win
## 145	1.000000e+00	radiant_win
## 146	1.000000e+00	radiant_win
## 147	0.000000e+00	radiant_win
## 148	1.000000e+00	radiant_win
## 149	0.000000e+00	radiant_win
## 150	1.000000e+00	radiant_win
## 151	1.000000e+00	radiant_win
## 152	1.000000e+00	radiant_win
## 153	1.000000e+00	radiant_win
## 154	1.000000e+00	radiant_win
## 155	0.000000e+00	radiant_win
## 156	1.000000e+00	radiant_win
## 157	1.000000e+00	radiant_win
## 158	1.000000e+00	radiant_win
## 159	0.000000e+00	radiant_win
## 160	1.000000e+00	radiant_win
## 161	0.000000e+00	radiant_win
## 162	0.000000e+00	radiant_win
## 163	1.000000e+00	radiant_win
## 164	0.000000e+00	radiant_win
## 165	1.000000e+00	radiant_win
## 166	0.000000e+00	radiant_win
## 167	0.000000e+00	radiant_win
## 168	1.000000e+00	radiant_win
## 169	0.000000e+00	radiant_win
## 170	1.000000e+00	radiant_win
## 171	1.000000e+00	radiant_win
## 172	1.000000e+00	radiant_win
## 173	1.000000e+00	radiant_win
## 174	1.000000e+00	radiant_win
## 175	1.000000e+00	radiant_win
## 176	1.000000e+00	radiant_win
## 177	1.000000e+00	radiant_win
## 178	0.000000e+00	radiant_win
## 179	1.000000e+00	radiant_win
## 180	1.000000e+00	radiant_win
## 181	1.000000e+00	radiant_win
## 182	1.000000e+00	radiant_win
## 183	1.000000e+00	radiant_win
## 184	1.000000e+00	radiant_win
## 185	0.000000e+00	radiant_win
## 186	0.000000e+00	radiant_win
## 187	0.000000e+00	radiant_win
## 188	0.000000e+00	radiant_win

## 189	0.000000e+00	radiant_win
## 190	1.000000e+00	radiant_win
## 191	0.000000e+00	radiant_win
## 192	0.000000e+00	radiant_win
## 193	1.000000e+00	radiant_win
## 194	1.000000e+00	radiant_win
## 195	1.000000e+00	radiant_win
## 196	1.000000e+00	radiant_win
## 197	0.000000e+00	radiant_win
## 198	0.000000e+00	radiant_win
## 199	2.980000e+01	freq_r
## 200	2.980000e+01	freq_r
## 201	1.220000e+01	freq_r
## 202	1.100000e+01	freq_r
## 203	4.220000e+01	freq_r
## 204	4.540000e+01	freq_r
## 205	1.706000e+02	freq_r
## 206	2.000000e+00	freq_r
## 207	2.878000e+02	freq_r
## 208	6.540000e+01	freq_r
## 209	5.720000e+01	freq_r
## 210	1.592000e+02	freq_r
## 211	4.250000e+01	freq_r
## 212	1.066000e+02	freq_r
## 213	1.328000e+02	freq_r
## 214	5.620000e+01	freq_r
## 215	1.380000e+01	freq_r
## 216	NA	freq_r
## 217	2.220000e+02	freq_r
## 218	2.800000e+01	freq_r
## 219	2.920000e+01	freq_r
## 220	9.880000e+01	freq_r
## 221	1.784000e+02	freq_r
## 222	1.092000e+02	freq_r
## 223	1.406000e+02	freq_r
## 224	1.866000e+02	freq_r
## 225	2.500000e+00	freq_r
## 226	1.620000e+01	freq_r
## 227	4.680000e+01	freq_r
## 228	5.720000e+01	freq_r
## 229	8.860000e+01	freq_r
## 230	9.000000e+01	freq_r
## 231	7.200000e+00	freq_r
## 232	3.600000e+01	freq_r
## 233	8.560000e+01	freq_r
## 234	2.740000e+02	freq_r
## 235	1.316000e+02	freq_r
## 236	1.980000e+02	freq_r
## 237	6.200000e+00	freq_r
## 238	1.340000e+02	freq_r
## 239	7.520000e+01	freq_r
## 240	1.634000e+02	freq_r
## 241	NA	freq_r
## 242	1.356000e+02	freq_r

## 243	2.660000e+01	freq_r
## 244	2.360000e+01	freq_r
## 245	8.200000e+00	freq_r
## 246	1.760000e+02	freq_r
## 247	1.060000e+02	freq_r
## 248	2.880000e+02	freq_r
## 249	1.586000e+02	freq_r
## 250	1.208000e+02	freq_r
## 251	1.000000e+00	freq_r
## 252	1.820000e+01	freq_r
## 253	4.100000e+01	freq_r
## 254	7.600000e+01	freq_r
## 255	1.800000e+01	freq_r
## 256	NA	freq_r
## 257	8.160000e+01	freq_r
## 258	9.500000e+01	freq_r
## 259	1.972000e+02	freq_r
## 260	3.800000e+01	freq_r
## 261	4.040000e+01	freq_r
## 262	4.000000e+00	freq_r
## 263	4.300000e+01	freq_r
## 264	3.700000e+01	freq_r
## 265	4.540000e+01	freq_r
## 266	9.580000e+01	freq_r
## 267	3.600000e+01	freq_r
## 268	8.580000e+01	freq_r
## 269	1.380000e+01	freq_r
## 270	7.080000e+01	freq_r
## 271	1.950000e+02	freq_r
## 272	7.000000e+00	freq_r
## 273	1.426000e+02	freq_r
## 274	1.336000e+02	freq_r
## 275	1.866000e+02	freq_r
## 276	8.780000e+01	freq_r
## 277	1.000000e+01	freq_r
## 278	2.750000e+01	freq_r
## 279	2.392000e+02	freq_r
## 280	1.362000e+02	freq_r
## 281	7.160000e+01	freq_r
## 282	2.610000e+02	freq_r
## 283	1.010000e+02	freq_r
## 284	7.420000e+01	freq_r
## 285	5.040000e+01	freq_r
## 286	NA	freq_r
## 287	2.360000e+01	freq_r
## 288	3.000000e+00	freq_r
## 289	3.220000e+01	freq_r
## 290	1.370000e+02	freq_r
## 291	1.326000e+02	freq_r
## 292	1.066000e+02	freq_r
## 293	1.312000e+02	freq_r
## 294	3.450000e+01	freq_r
## 295	2.564000e+02	freq_r
## 296	1.010000e+02	freq_r

## 297	1.836000e+02	freq_r
## 298	6.534193e-01	win_pct_r
## 299	6.534193e-01	win_pct_r
## 300	1.404762e-01	win_pct_r
## 301	1.818182e-01	win_pct_r
## 302	4.574555e-01	win_pct_r
## 303	4.193409e-01	win_pct_r
## 304	5.264108e-01	win_pct_r
## 305	0.000000e+00	win_pct_r
## 306	6.203929e-01	win_pct_r
## 307	6.267639e-01	win_pct_r
## 308	5.237555e-01	win_pct_r
## 309	4.788596e-01	win_pct_r
## 310	4.687889e-01	win_pct_r
## 311	5.526349e-01	win_pct_r
## 312	5.097318e-01	win_pct_r
## 313	5.309129e-01	win_pct_r
## 314	5.118581e-01	win_pct_r
## 315	NA	win_pct_r
## 316	4.477352e-01	win_pct_r
## 317	2.258407e-01	win_pct_r
## 318	5.420033e-01	win_pct_r
## 319	4.508924e-01	win_pct_r
## 320	5.515661e-01	win_pct_r
## 321	5.641900e-01	win_pct_r
## 322	4.905469e-01	win_pct_r
## 323	6.526769e-01	win_pct_r
## 324	2.500000e-01	win_pct_r
## 325	2.719114e-01	win_pct_r
## 326	5.963535e-01	win_pct_r
## 327	6.140452e-01	win_pct_r
## 328	5.471228e-01	win_pct_r
## 329	5.321404e-01	win_pct_r
## 330	1.416667e-01	win_pct_r
## 331	2.851800e-01	win_pct_r
## 332	5.934145e-01	win_pct_r
## 333	4.525547e-01	win_pct_r
## 334	5.091375e-01	win_pct_r
## 335	3.959385e-01	win_pct_r
## 336	8.380952e-01	win_pct_r
## 337	5.120051e-01	win_pct_r
## 338	4.830962e-01	win_pct_r
## 339	4.757318e-01	win_pct_r
## 340	NA	win_pct_r
## 341	5.456963e-01	win_pct_r
## 342	5.338041e-01	win_pct_r
## 343	7.799331e-01	win_pct_r
## 344	3.707143e-01	win_pct_r
## 345	6.000000e-01	win_pct_r
## 346	6.295876e-01	win_pct_r
## 347	5.208333e-01	win_pct_r
## 348	6.353311e-01	win_pct_r
## 349	5.778040e-01	win_pct_r
## 350	1.000000e+00	win_pct_r

## 351	6.323300e-01	win_pct_r
## 352	3.534523e-01	win_pct_r
## 353	5.832234e-01	win_pct_r
## 354	6.111111e-01	win_pct_r
## 355	NA	win_pct_r
## 356	6.241557e-01	win_pct_r
## 357	3.568355e-01	win_pct_r
## 358	5.597142e-01	win_pct_r
## 359	5.266667e-01	win_pct_r
## 360	4.460009e-01	win_pct_r
## 361	7.500000e-01	win_pct_r
## 362	4.375337e-01	win_pct_r
## 363	5.138544e-01	win_pct_r
## 364	7.371429e-01	win_pct_r
## 365	2.948403e-01	win_pct_r
## 366	5.000000e-01	win_pct_r
## 367	5.062445e-01	win_pct_r
## 368	1.965640e-01	win_pct_r
## 369	4.508239e-01	win_pct_r
## 370	4.666667e-01	win_pct_r
## 371	1.666667e-01	win_pct_r
## 372	5.643052e-01	win_pct_r
## 373	5.238949e-01	win_pct_r
## 374	5.777078e-01	win_pct_r
## 375	4.582993e-01	win_pct_r
## 376	2.772031e-01	win_pct_r
## 377	7.245372e-01	win_pct_r
## 378	4.113908e-01	win_pct_r
## 379	5.022336e-01	win_pct_r
## 380	4.478010e-01	win_pct_r
## 381	4.674330e-01	win_pct_r
## 382	5.407047e-01	win_pct_r
## 383	4.445639e-01	win_pct_r
## 384	5.157519e-01	win_pct_r
## 385	NA	win_pct_r
## 386	5.948992e-01	win_pct_r
## 387	1.000000e+00	win_pct_r
## 388	5.383834e-01	win_pct_r
## 389	5.328467e-01	win_pct_r
## 390	4.985569e-01	win_pct_r
## 391	6.271506e-01	win_pct_r
## 392	5.557551e-01	win_pct_r
## 393	6.228070e-01	win_pct_r
## 394	5.045965e-01	win_pct_r
## 395	5.049505e-01	win_pct_r
## 396	5.228538e-01	win_pct_r
## 397	3.209696e+01	duration_avg_win_r
## 398	3.209696e+01	duration_avg_win_r
## 399	3.007000e+01	duration_avg_win_r
## 400	2.660000e+01	duration_avg_win_r
## 401	3.408308e+01	duration_avg_win_r
## 402	3.332407e+01	duration_avg_win_r
## 403	3.364308e+01	duration_avg_win_r
## 404	NA	duration_avg_win_r

## 405	3.529406e+01	duration_avg_win_r
## 406	3.735061e+01	duration_avg_win_r
## 407	3.481627e+01	duration_avg_win_r
## 408	3.440844e+01	duration_avg_win_r
## 409	3.293283e+01	duration_avg_win_r
## 410	3.491631e+01	duration_avg_win_r
## 411	3.263575e+01	duration_avg_win_r
## 412	3.697540e+01	duration_avg_win_r
## 413	3.669451e+01	duration_avg_win_r
## 414	NA	duration_avg_win_r
## 415	3.373294e+01	duration_avg_win_r
## 416	3.655568e+01	duration_avg_win_r
## 417	3.601521e+01	duration_avg_win_r
## 418	3.421427e+01	duration_avg_win_r
## 419	3.477052e+01	duration_avg_win_r
## 420	3.421306e+01	duration_avg_win_r
## 421	2.666287e+01	duration_avg_win_r
## 422	3.309384e+01	duration_avg_win_r
## 423	2.783333e+01	duration_avg_win_r
## 424	2.626127e+01	duration_avg_win_r
## 425	3.538575e+01	duration_avg_win_r
## 426	3.613098e+01	duration_avg_win_r
## 427	3.158525e+01	duration_avg_win_r
## 428	3.711181e+01	duration_avg_win_r
## 429	4.150000e+01	duration_avg_win_r
## 430	3.682669e+01	duration_avg_win_r
## 431	3.681754e+01	duration_avg_win_r
## 432	2.483468e+01	duration_avg_win_r
## 433	2.929403e+01	duration_avg_win_r
## 434	3.282533e+01	duration_avg_win_r
## 435	3.179556e+01	duration_avg_win_r
## 436	3.723292e+01	duration_avg_win_r
## 437	3.603718e+01	duration_avg_win_r
## 438	3.213805e+01	duration_avg_win_r
## 439	NA	duration_avg_win_r
## 440	3.685176e+01	duration_avg_win_r
## 441	3.736698e+01	duration_avg_win_r
## 442	2.903526e+01	duration_avg_win_r
## 443	2.894750e+01	duration_avg_win_r
## 444	3.547760e+01	duration_avg_win_r
## 445	3.164839e+01	duration_avg_win_r
## 446	2.502356e+01	duration_avg_win_r
## 447	3.222441e+01	duration_avg_win_r
## 448	3.637714e+01	duration_avg_win_r
## 449	3.195000e+01	duration_avg_win_r
## 450	3.636597e+01	duration_avg_win_r
## 451	3.963583e+01	duration_avg_win_r
## 452	3.822204e+01	duration_avg_win_r
## 453	3.008333e+01	duration_avg_win_r
## 454	NA	duration_avg_win_r
## 455	3.319382e+01	duration_avg_win_r
## 456	3.323157e+01	duration_avg_win_r
## 457	3.363962e+01	duration_avg_win_r
## 458	3.137135e+01	duration_avg_win_r

## 459	4.126471e+01	duration_avg_win_r
## 460	2.901667e+01	duration_avg_win_r
## 461	3.664620e+01	duration_avg_win_r
## 462	3.716783e+01	duration_avg_win_r
## 463	3.236690e+01	duration_avg_win_r
## 464	3.647484e+01	duration_avg_win_r
## 465	4.099630e+01	duration_avg_win_r
## 466	3.346819e+01	duration_avg_win_r
## 467	4.167315e+01	duration_avg_win_r
## 468	3.534769e+01	duration_avg_win_r
## 469	2.787179e+01	duration_avg_win_r
## 470	2.644167e+01	duration_avg_win_r
## 471	3.644053e+01	duration_avg_win_r
## 472	3.704017e+01	duration_avg_win_r
## 473	3.502384e+01	duration_avg_win_r
## 474	3.436435e+01	duration_avg_win_r
## 475	4.096167e+01	duration_avg_win_r
## 476	2.949687e+01	duration_avg_win_r
## 477	3.542402e+01	duration_avg_win_r
## 478	3.644895e+01	duration_avg_win_r
## 479	3.604587e+01	duration_avg_win_r
## 480	2.901148e+01	duration_avg_win_r
## 481	3.313694e+01	duration_avg_win_r
## 482	3.258193e+01	duration_avg_win_r
## 483	4.161598e+01	duration_avg_win_r
## 484	NA	duration_avg_win_r
## 485	2.534776e+01	duration_avg_win_r
## 486	2.653889e+01	duration_avg_win_r
## 487	3.799268e+01	duration_avg_win_r
## 488	4.090571e+01	duration_avg_win_r
## 489	3.657672e+01	duration_avg_win_r
## 490	3.767871e+01	duration_avg_win_r
## 491	3.476998e+01	duration_avg_win_r
## 492	3.239154e+01	duration_avg_win_r
## 493	2.490235e+01	duration_avg_win_r
## 494	2.390588e+01	duration_avg_win_r
## 495	2.826796e+01	duration_avg_win_r
## 496	4.058606e+01	duration_avg_lose_r
## 497	4.058606e+01	duration_avg_lose_r
## 498	4.173286e+01	duration_avg_lose_r
## 499	2.747037e+01	duration_avg_lose_r
## 500	3.186463e+01	duration_avg_lose_r
## 501	3.338017e+01	duration_avg_lose_r
## 502	3.566973e+01	duration_avg_lose_r
## 503	3.550000e+01	duration_avg_lose_r
## 504	3.917398e+01	duration_avg_lose_r
## 505	3.992489e+01	duration_avg_lose_r
## 506	3.538061e+01	duration_avg_lose_r
## 507	3.443275e+01	duration_avg_lose_r
## 508	4.141678e+01	duration_avg_lose_r
## 509	3.629502e+01	duration_avg_lose_r
## 510	3.757946e+01	duration_avg_lose_r
## 511	3.859437e+01	duration_avg_lose_r
## 512	2.837649e+01	duration_avg_lose_r

## 513	NA	duration_avg_lose_r
## 514	3.406393e+01	duration_avg_lose_r
## 515	2.932287e+01	duration_avg_lose_r
## 516	2.905594e+01	duration_avg_lose_r
## 517	3.431869e+01	duration_avg_lose_r
## 518	3.656583e+01	duration_avg_lose_r
## 519	3.627793e+01	duration_avg_lose_r
## 520	2.798546e+01	duration_avg_lose_r
## 521	3.750341e+01	duration_avg_lose_r
## 522	3.026042e+01	duration_avg_lose_r
## 523	3.151014e+01	duration_avg_lose_r
## 524	3.547418e+01	duration_avg_lose_r
## 525	3.968136e+01	duration_avg_lose_r
## 526	3.104065e+01	duration_avg_lose_r
## 527	3.805562e+01	duration_avg_lose_r
## 528	3.040514e+01	duration_avg_lose_r
## 529	3.479625e+01	duration_avg_lose_r
## 530	4.054806e+01	duration_avg_lose_r
## 531	2.505744e+01	duration_avg_lose_r
## 532	2.761938e+01	duration_avg_lose_r
## 533	3.413660e+01	duration_avg_lose_r
## 534	1.908333e+01	duration_avg_lose_r
## 535	3.822815e+01	duration_avg_lose_r
## 536	3.392623e+01	duration_avg_lose_r
## 537	3.665151e+01	duration_avg_lose_r
## 538	NA	duration_avg_lose_r
## 539	3.852503e+01	duration_avg_lose_r
## 540	2.923944e+01	duration_avg_lose_r
## 541	3.775833e+01	duration_avg_lose_r
## 542	2.997950e+01	duration_avg_lose_r
## 543	3.585875e+01	duration_avg_lose_r
## 544	3.895772e+01	duration_avg_lose_r
## 545	2.386002e+01	duration_avg_lose_r
## 546	3.617849e+01	duration_avg_lose_r
## 547	3.497165e+01	duration_avg_lose_r
## 548	NA	duration_avg_lose_r
## 549	4.133917e+01	duration_avg_lose_r
## 550	3.909162e+01	duration_avg_lose_r
## 551	3.674842e+01	duration_avg_lose_r
## 552	2.769762e+01	duration_avg_lose_r
## 553	NA	duration_avg_lose_r
## 554	3.582975e+01	duration_avg_lose_r
## 555	2.890058e+01	duration_avg_lose_r
## 556	3.927421e+01	duration_avg_lose_r
## 557	3.288926e+01	duration_avg_lose_r
## 558	3.877805e+01	duration_avg_lose_r
## 559	2.823333e+01	duration_avg_lose_r
## 560	3.535029e+01	duration_avg_lose_r
## 561	3.770793e+01	duration_avg_lose_r
## 562	3.777717e+01	duration_avg_lose_r
## 563	3.359747e+01	duration_avg_lose_r
## 564	3.527130e+01	duration_avg_lose_r
## 565	3.614235e+01	duration_avg_lose_r
## 566	3.575462e+01	duration_avg_lose_r

## 567	3.332290e+01	duration_avg_lose_r
## 568	2.772933e+01	duration_avg_lose_r
## 569	3.279271e+01	duration_avg_lose_r
## 570	3.617881e+01	duration_avg_lose_r
## 571	3.680197e+01	duration_avg_lose_r
## 572	3.698955e+01	duration_avg_lose_r
## 573	3.497960e+01	duration_avg_lose_r
## 574	3.014838e+01	duration_avg_lose_r
## 575	3.664028e+01	duration_avg_lose_r
## 576	3.439591e+01	duration_avg_lose_r
## 577	3.683189e+01	duration_avg_lose_r
## 578	3.322034e+01	duration_avg_lose_r
## 579	2.731751e+01	duration_avg_lose_r
## 580	3.551741e+01	duration_avg_lose_r
## 581	3.129450e+01	duration_avg_lose_r
## 582	4.204452e+01	duration_avg_lose_r
## 583	NA	duration_avg_lose_r
## 584	3.289506e+01	duration_avg_lose_r
## 585	NA	duration_avg_lose_r
## 586	3.044914e+01	duration_avg_lose_r
## 587	3.782995e+01	duration_avg_lose_r
## 588	3.655982e+01	duration_avg_lose_r
## 589	4.051156e+01	duration_avg_lose_r
## 590	3.863984e+01	duration_avg_lose_r
## 591	3.823507e+01	duration_avg_lose_r
## 592	2.497208e+01	duration_avg_lose_r
## 593	2.496633e+01	duration_avg_lose_r
## 594	2.753402e+01	duration_avg_lose_r
## 595	3.168472e+02	actions_per_min_avg_r
## 596	3.168472e+02	actions_per_min_avg_r
## 597	2.110746e+02	actions_per_min_avg_r
## 598	2.097455e+02	actions_per_min_avg_r
## 599	NaN	actions_per_min_avg_r
## 600	2.545968e+02	actions_per_min_avg_r
## 601	2.829257e+02	actions_per_min_avg_r
## 602	1.225000e+02	actions_per_min_avg_r
## 603	2.356521e+02	actions_per_min_avg_r
## 604	2.639289e+02	actions_per_min_avg_r
## 605	NaN	actions_per_min_avg_r
## 606	1.644252e+02	actions_per_min_avg_r
## 607	2.422746e+02	actions_per_min_avg_r
## 608	NaN	actions_per_min_avg_r
## 609	2.251191e+02	actions_per_min_avg_r
## 610	1.803191e+02	actions_per_min_avg_r
## 611	NaN	actions_per_min_avg_r
## 612	NA	actions_per_min_avg_r
## 613	NaN	actions_per_min_avg_r
## 614	NaN	actions_per_min_avg_r
## 615	2.864950e+02	actions_per_min_avg_r
## 616	NaN	actions_per_min_avg_r
## 617	2.355135e+02	actions_per_min_avg_r
## 618	2.789649e+02	actions_per_min_avg_r
## 619	NaN	actions_per_min_avg_r
## 620	NaN	actions_per_min_avg_r

## 621	2.133333e+02	actions_per_min_avg_r
## 622	NaN	actions_per_min_avg_r
## 623	2.532849e+02	actions_per_min_avg_r
## 624	NaN	actions_per_min_avg_r
## 625	NaN	actions_per_min_avg_r
## 626	2.642459e+02	actions_per_min_avg_r
## 627	1.581417e+02	actions_per_min_avg_r
## 628	2.745261e+02	actions_per_min_avg_r
## 629	NaN	actions_per_min_avg_r
## 630	1.831314e+02	actions_per_min_avg_r
## 631	2.000639e+02	actions_per_min_avg_r
## 632	NaN	actions_per_min_avg_r
## 633	2.201619e+02	actions_per_min_avg_r
## 634	2.392531e+02	actions_per_min_avg_r
## 635	2.011142e+02	actions_per_min_avg_r
## 636	3.113689e+02	actions_per_min_avg_r
## 637	NA	actions_per_min_avg_r
## 638	NaN	actions_per_min_avg_r
## 639	2.049478e+02	actions_per_min_avg_r
## 640	3.153572e+02	actions_per_min_avg_r
## 641	1.817868e+02	actions_per_min_avg_r
## 642	3.079328e+02	actions_per_min_avg_r
## 643	NaN	actions_per_min_avg_r
## 644	NaN	actions_per_min_avg_r
## 645	NaN	actions_per_min_avg_r
## 646	NaN	actions_per_min_avg_r
## 647	1.720000e+02	actions_per_min_avg_r
## 648	1.993891e+02	actions_per_min_avg_r
## 649	2.831100e+02	actions_per_min_avg_r
## 650	3.341866e+02	actions_per_min_avg_r
## 651	2.054722e+02	actions_per_min_avg_r
## 652	NA	actions_per_min_avg_r
## 653	2.674103e+02	actions_per_min_avg_r
## 654	2.580983e+02	actions_per_min_avg_r
## 655	NaN	actions_per_min_avg_r
## 656	NaN	actions_per_min_avg_r
## 657	2.669384e+02	actions_per_min_avg_r
## 658	2.439500e+02	actions_per_min_avg_r
## 659	NaN	actions_per_min_avg_r
## 660	2.371855e+02	actions_per_min_avg_r
## 661	2.108995e+02	actions_per_min_avg_r
## 662	NaN	actions_per_min_avg_r
## 663	1.812222e+02	actions_per_min_avg_r
## 664	NaN	actions_per_min_avg_r
## 665	2.821646e+02	actions_per_min_avg_r
## 666	NaN	actions_per_min_avg_r
## 667	NaN	actions_per_min_avg_r
## 668	3.468125e+02	actions_per_min_avg_r
## 669	NaN	actions_per_min_avg_r
## 670	2.309784e+02	actions_per_min_avg_r
## 671	1.781077e+02	actions_per_min_avg_r
## 672	NaN	actions_per_min_avg_r
## 673	NaN	actions_per_min_avg_r
## 674	NaN	actions_per_min_avg_r

## 675	2.129155e+02	actions_per_min_avg_r
## 676	NaN	actions_per_min_avg_r
## 677	2.849485e+02	actions_per_min_avg_r
## 678	NaN	actions_per_min_avg_r
## 679	NaN	actions_per_min_avg_r
## 680	1.904491e+02	actions_per_min_avg_r
## 681	NaN	actions_per_min_avg_r
## 682	NA	actions_per_min_avg_r
## 683	3.052255e+02	actions_per_min_avg_r
## 684	2.274667e+02	actions_per_min_avg_r
## 685	2.031431e+02	actions_per_min_avg_r
## 686	2.140117e+02	actions_per_min_avg_r
## 687	2.458239e+02	actions_per_min_avg_r
## 688	1.945986e+02	actions_per_min_avg_r
## 689	2.178450e+02	actions_per_min_avg_r
## 690	3.565066e+02	actions_per_min_avg_r
## 691	NaN	actions_per_min_avg_r
## 692	1.820733e+02	actions_per_min_avg_r
## 693	NaN	actions_per_min_avg_r
## 694	6.738015e+00	ancient_kills_avg_r
## 695	6.738015e+00	ancient_kills_avg_r
## 696	5.580159e+00	ancient_kills_avg_r
## 697	2.836364e+00	ancient_kills_avg_r
## 698	NaN	ancient_kills_avg_r
## 699	4.794034e+00	ancient_kills_avg_r
## 700	5.846764e+00	ancient_kills_avg_r
## 701	1.500000e+00	ancient_kills_avg_r
## 702	7.047555e+00	ancient_kills_avg_r
## 703	4.716194e+00	ancient_kills_avg_r
## 704	NaN	ancient_kills_avg_r
## 705	7.548725e+00	ancient_kills_avg_r
## 706	1.884418e+00	ancient_kills_avg_r
## 707	NaN	ancient_kills_avg_r
## 708	7.318837e+00	ancient_kills_avg_r
## 709	8.154634e+00	ancient_kills_avg_r
## 710	NaN	ancient_kills_avg_r
## 711	NA	ancient_kills_avg_r
## 712	NaN	ancient_kills_avg_r
## 713	NaN	ancient_kills_avg_r
## 714	6.154844e+00	ancient_kills_avg_r
## 715	NaN	ancient_kills_avg_r
## 716	5.895857e+00	ancient_kills_avg_r
## 717	4.823121e+00	ancient_kills_avg_r
## 718	NaN	ancient_kills_avg_r
## 719	NaN	ancient_kills_avg_r
## 720	1.666667e-01	ancient_kills_avg_r
## 721	NaN	ancient_kills_avg_r
## 722	1.138049e+01	ancient_kills_avg_r
## 723	NaN	ancient_kills_avg_r
## 724	NaN	ancient_kills_avg_r
## 725	5.840869e+00	ancient_kills_avg_r
## 726	3.308333e+00	ancient_kills_avg_r
## 727	4.968607e+00	ancient_kills_avg_r
## 728	NaN	ancient_kills_avg_r

## 729	3.617518e+00	ancient_kills_avg_r
## 730	4.165082e+00	ancient_kills_avg_r
## 731	NaN	ancient_kills_avg_r
## 732	8.038095e+00	ancient_kills_avg_r
## 733	2.477213e+00	ancient_kills_avg_r
## 734	3.320143e+00	ancient_kills_avg_r
## 735	5.802241e+00	ancient_kills_avg_r
## 736	NA	ancient_kills_avg_r
## 737	NaN	ancient_kills_avg_r
## 738	4.975467e+00	ancient_kills_avg_r
## 739	3.534448e+00	ancient_kills_avg_r
## 740	3.672500e+00	ancient_kills_avg_r
## 741	6.053079e+00	ancient_kills_avg_r
## 742	NaN	ancient_kills_avg_r
## 743	NaN	ancient_kills_avg_r
## 744	NaN	ancient_kills_avg_r
## 745	NaN	ancient_kills_avg_r
## 746	0.000000e+00	ancient_kills_avg_r
## 747	7.450613e+00	ancient_kills_avg_r
## 748	6.074133e+00	ancient_kills_avg_r
## 749	7.174029e+00	ancient_kills_avg_r
## 750	1.000000e+00	ancient_kills_avg_r
## 751	NA	ancient_kills_avg_r
## 752	5.403396e+00	ancient_kills_avg_r
## 753	4.203470e+00	ancient_kills_avg_r
## 754	NaN	ancient_kills_avg_r
## 755	NaN	ancient_kills_avg_r
## 756	4.646955e+00	ancient_kills_avg_r
## 757	2.550000e+00	ancient_kills_avg_r
## 758	NaN	ancient_kills_avg_r
## 759	3.733039e+00	ancient_kills_avg_r
## 760	7.445238e+00	ancient_kills_avg_r
## 761	NaN	ancient_kills_avg_r
## 762	7.277778e+00	ancient_kills_avg_r
## 763	NaN	ancient_kills_avg_r
## 764	4.938189e+00	ancient_kills_avg_r
## 765	NaN	ancient_kills_avg_r
## 766	NaN	ancient_kills_avg_r
## 767	2.250000e+00	ancient_kills_avg_r
## 768	NaN	ancient_kills_avg_r
## 769	6.074320e+00	ancient_kills_avg_r
## 770	6.544853e+00	ancient_kills_avg_r
## 771	NaN	ancient_kills_avg_r
## 772	NaN	ancient_kills_avg_r
## 773	NaN	ancient_kills_avg_r
## 774	5.285206e+00	ancient_kills_avg_r
## 775	NaN	ancient_kills_avg_r
## 776	5.617346e+00	ancient_kills_avg_r
## 777	NaN	ancient_kills_avg_r
## 778	NaN	ancient_kills_avg_r
## 779	5.602324e+00	ancient_kills_avg_r
## 780	NaN	ancient_kills_avg_r
## 781	NA	ancient_kills_avg_r
## 782	4.296101e+00	ancient_kills_avg_r

## 783	3.200000e+00	ancient_kills_avg_r
## 784	3.990445e+00	ancient_kills_avg_r
## 785	8.497810e+00	ancient_kills_avg_r
## 786	4.577898e+00	ancient_kills_avg_r
## 787	7.897695e+00	ancient_kills_avg_r
## 788	5.012745e+00	ancient_kills_avg_r
## 789	2.938596e-01	ancient_kills_avg_r
## 790	NaN	ancient_kills_avg_r
## 791	3.532673e+00	ancient_kills_avg_r
## 792	NaN	ancient_kills_avg_r
## 793	4.672965e-01	buyback_count_avg_r
## 794	4.672965e-01	buyback_count_avg_r
## 795	7.865079e-01	buyback_count_avg_r
## 796	5.454545e-01	buyback_count_avg_r
## 797	NaN	buyback_count_avg_r
## 798	3.359571e-01	buyback_count_avg_r
## 799	3.737818e-01	buyback_count_avg_r
## 800	1.500000e+00	buyback_count_avg_r
## 801	4.745440e-01	buyback_count_avg_r
## 802	4.383924e-01	buyback_count_avg_r
## 803	NaN	buyback_count_avg_r
## 804	4.273753e-01	buyback_count_avg_r
## 805	4.331024e-01	buyback_count_avg_r
## 806	NaN	buyback_count_avg_r
## 807	4.065169e-01	buyback_count_avg_r
## 808	4.874976e-01	buyback_count_avg_r
## 809	NaN	buyback_count_avg_r
## 810	NA	buyback_count_avg_r
## 811	NaN	buyback_count_avg_r
## 812	NaN	buyback_count_avg_r
## 813	3.506897e-01	buyback_count_avg_r
## 814	NaN	buyback_count_avg_r
## 815	4.755131e-01	buyback_count_avg_r
## 816	4.284868e-01	buyback_count_avg_r
## 817	NaN	buyback_count_avg_r
## 818	NaN	buyback_count_avg_r
## 819	4.166667e-01	buyback_count_avg_r
## 820	NaN	buyback_count_avg_r
## 821	5.173823e-01	buyback_count_avg_r
## 822	NaN	buyback_count_avg_r
## 823	NaN	buyback_count_avg_r
## 824	5.374211e-01	buyback_count_avg_r
## 825	5.666667e-01	buyback_count_avg_r
## 826	3.921239e-01	buyback_count_avg_r
## 827	NaN	buyback_count_avg_r
## 828	2.145985e-01	buyback_count_avg_r
## 829	3.969930e-01	buyback_count_avg_r
## 830	NaN	buyback_count_avg_r
## 831	2.666667e-01	buyback_count_avg_r
## 832	4.368864e-01	buyback_count_avg_r
## 833	5.118197e-01	buyback_count_avg_r
## 834	3.981676e-01	buyback_count_avg_r
## 835	NA	buyback_count_avg_r
## 836	NaN	buyback_count_avg_r

## 837	6.616906e-01	buyback_count_avg_r
## 838	2.876254e-01	buyback_count_avg_r
## 839	4.446429e-01	buyback_count_avg_r
## 840	4.770794e-01	buyback_count_avg_r
## 841	NaN	buyback_count_avg_r
## 842	NaN	buyback_count_avg_r
## 843	NaN	buyback_count_avg_r
## 844	NaN	buyback_count_avg_r
## 845	0.000000e+00	buyback_count_avg_r
## 846	5.596433e-01	buyback_count_avg_r
## 847	7.477879e-01	buyback_count_avg_r
## 848	5.773321e-01	buyback_count_avg_r
## 849	4.027778e-01	buyback_count_avg_r
## 850	NA	buyback_count_avg_r
## 851	3.475832e-01	buyback_count_avg_r
## 852	3.249143e-01	buyback_count_avg_r
## 853	NaN	buyback_count_avg_r
## 854	NaN	buyback_count_avg_r
## 855	7.244444e-01	buyback_count_avg_r
## 856	1.500000e-01	buyback_count_avg_r
## 857	NaN	buyback_count_avg_r
## 858	6.838856e-01	buyback_count_avg_r
## 859	4.555952e-01	buyback_count_avg_r
## 860	NaN	buyback_count_avg_r
## 861	7.055556e-01	buyback_count_avg_r
## 862	NaN	buyback_count_avg_r
## 863	6.508590e-01	buyback_count_avg_r
## 864	NaN	buyback_count_avg_r
## 865	NaN	buyback_count_avg_r
## 866	4.583333e-01	buyback_count_avg_r
## 867	NaN	buyback_count_avg_r
## 868	3.959410e-01	buyback_count_avg_r
## 869	3.757826e-01	buyback_count_avg_r
## 870	NaN	buyback_count_avg_r
## 871	NaN	buyback_count_avg_r
## 872	NaN	buyback_count_avg_r
## 873	2.860077e-01	buyback_count_avg_r
## 874	NaN	buyback_count_avg_r
## 875	4.205160e-01	buyback_count_avg_r
## 876	NaN	buyback_count_avg_r
## 877	NaN	buyback_count_avg_r
## 878	2.137333e-01	buyback_count_avg_r
## 879	NaN	buyback_count_avg_r
## 880	NA	buyback_count_avg_r
## 881	3.553514e-01	buyback_count_avg_r
## 882	0.000000e+00	buyback_count_avg_r
## 883	6.703988e-01	buyback_count_avg_r
## 884	4.905109e-01	buyback_count_avg_r
## 885	3.626502e-01	buyback_count_avg_r
## 886	6.984654e-01	buyback_count_avg_r
## 887	4.357026e-01	buyback_count_avg_r
## 888	5.614035e-01	buyback_count_avg_r
## 889	NaN	buyback_count_avg_r
## 890	2.198020e-01	buyback_count_avg_r

## 891	NaN	buyback_count_avg_r
## 892	1.941987e-01	courier_kills_avg_r
## 893	1.941987e-01	courier_kills_avg_r
## 894	1.111111e-02	courier_kills_avg_r
## 895	5.454545e-02	courier_kills_avg_r
## 896	NaN	courier_kills_avg_r
## 897	3.679785e-01	courier_kills_avg_r
## 898	2.625661e-01	courier_kills_avg_r
## 899	0.000000e+00	courier_kills_avg_r
## 900	2.262133e-01	courier_kills_avg_r
## 901	4.599102e-01	courier_kills_avg_r
## 902	NaN	courier_kills_avg_r
## 903	3.110511e-01	courier_kills_avg_r
## 904	3.132783e-02	courier_kills_avg_r
## 905	NaN	courier_kills_avg_r
## 906	2.882618e-01	courier_kills_avg_r
## 907	3.107554e-01	courier_kills_avg_r
## 908	NaN	courier_kills_avg_r
## 909	NA	courier_kills_avg_r
## 910	NaN	courier_kills_avg_r
## 911	NaN	courier_kills_avg_r
## 912	3.108867e-01	courier_kills_avg_r
## 913	NaN	courier_kills_avg_r
## 914	2.913125e-01	courier_kills_avg_r
## 915	3.838870e-02	courier_kills_avg_r
## 916	NaN	courier_kills_avg_r
## 917	NaN	courier_kills_avg_r
## 918	8.333333e-02	courier_kills_avg_r
## 919	NaN	courier_kills_avg_r
## 920	2.532095e-02	courier_kills_avg_r
## 921	NaN	courier_kills_avg_r
## 922	NaN	courier_kills_avg_r
## 923	6.189538e-02	courier_kills_avg_r
## 924	5.000000e-02	courier_kills_avg_r
## 925	1.805778e-01	courier_kills_avg_r
## 926	NaN	courier_kills_avg_r
## 927	2.299270e-01	courier_kills_avg_r
## 928	3.022611e-01	courier_kills_avg_r
## 929	NaN	courier_kills_avg_r
## 930	0.000000e+00	courier_kills_avg_r
## 931	2.635746e-01	courier_kills_avg_r
## 932	3.762334e-02	courier_kills_avg_r
## 933	2.876786e-01	courier_kills_avg_r
## 934	NA	courier_kills_avg_r
## 935	NaN	courier_kills_avg_r
## 936	2.991453e-02	courier_kills_avg_r
## 937	3.541806e-01	courier_kills_avg_r
## 938	1.250000e-02	courier_kills_avg_r
## 939	4.107936e-02	courier_kills_avg_r
## 940	NaN	courier_kills_avg_r
## 941	NaN	courier_kills_avg_r
## 942	NaN	courier_kills_avg_r
## 943	NaN	courier_kills_avg_r
## 944	0.000000e+00	courier_kills_avg_r

## 945	6.369379e-02	courier_kills_avg_r
## 946	8.460419e-02	courier_kills_avg_r
## 947	5.705739e-02	courier_kills_avg_r
## 948	3.055556e-01	courier_kills_avg_r
## 949	NA	courier_kills_avg_r
## 950	2.581712e-01	courier_kills_avg_r
## 951	2.458905e-01	courier_kills_avg_r
## 952	NaN	courier_kills_avg_r
## 953	NaN	courier_kills_avg_r
## 954	1.711741e-01	courier_kills_avg_r
## 955	3.000000e-01	courier_kills_avg_r
## 956	NaN	courier_kills_avg_r
## 957	0.000000e+00	courier_kills_avg_r
## 958	3.316667e-01	courier_kills_avg_r
## 959	NaN	courier_kills_avg_r
## 960	9.444444e-02	courier_kills_avg_r
## 961	NaN	courier_kills_avg_r
## 962	3.340243e-01	courier_kills_avg_r
## 963	NaN	courier_kills_avg_r
## 964	NaN	courier_kills_avg_r
## 965	0.000000e+00	courier_kills_avg_r
## 966	NaN	courier_kills_avg_r
## 967	3.905987e-01	courier_kills_avg_r
## 968	2.892557e-01	courier_kills_avg_r
## 969	NaN	courier_kills_avg_r
## 970	NaN	courier_kills_avg_r
## 971	NaN	courier_kills_avg_r
## 972	3.060135e-01	courier_kills_avg_r
## 973	NaN	courier_kills_avg_r
## 974	2.591523e-01	courier_kills_avg_r
## 975	NaN	courier_kills_avg_r
## 976	NaN	courier_kills_avg_r
## 977	1.757933e-01	courier_kills_avg_r
## 978	NaN	courier_kills_avg_r
## 979	NA	courier_kills_avg_r
## 980	6.373205e-02	courier_kills_avg_r
## 981	2.666667e-01	courier_kills_avg_r
## 982	3.109848e-02	courier_kills_avg_r
## 983	1.430657e-01	courier_kills_avg_r
## 984	3.238672e-01	courier_kills_avg_r
## 985	4.164751e-02	courier_kills_avg_r
## 986	3.661523e-01	courier_kills_avg_r
## 987	1.206140e-01	courier_kills_avg_r
## 988	NaN	courier_kills_avg_r
## 989	2.772277e-01	courier_kills_avg_r
## 990	NaN	courier_kills_avg_r
## 991	4.560102e+00	deaths_avg_r
## 992	4.560102e+00	deaths_avg_r
## 993	6.106349e+00	deaths_avg_r
## 994	7.927273e+00	deaths_avg_r
## 995	4.711898e+00	deaths_avg_r
## 996	5.402652e+00	deaths_avg_r
## 997	5.432516e+00	deaths_avg_r
## 998	1.100000e+01	deaths_avg_r

## 999	4.611322e+00	deaths_avg_r
## 1000	4.506559e+00	deaths_avg_r
## 1001	4.874027e+00	deaths_avg_r
## 1002	4.515245e+00	deaths_avg_r
## 1003	5.729958e+00	deaths_avg_r
## 1004	4.920789e+00	deaths_avg_r
## 1005	4.798605e+00	deaths_avg_r
## 1006	4.842100e+00	deaths_avg_r
## 1007	4.793277e+00	deaths_avg_r
## 1008	NA	deaths_avg_r
## 1009	4.992730e+00	deaths_avg_r
## 1010	6.643301e+00	deaths_avg_r
## 1011	5.926962e+00	deaths_avg_r
## 1012	5.382724e+00	deaths_avg_r
## 1013	5.271816e+00	deaths_avg_r
## 1014	4.293531e+00	deaths_avg_r
## 1015	5.672643e+00	deaths_avg_r
## 1016	4.090174e+00	deaths_avg_r
## 1017	7.583333e+00	deaths_avg_r
## 1018	5.645688e+00	deaths_avg_r
## 1019	4.667953e+00	deaths_avg_r
## 1020	4.400872e+00	deaths_avg_r
## 1021	5.552068e+00	deaths_avg_r
## 1022	3.723037e+00	deaths_avg_r
## 1023	6.716667e+00	deaths_avg_r
## 1024	5.442621e+00	deaths_avg_r
## 1025	4.511010e+00	deaths_avg_r
## 1026	7.040146e+00	deaths_avg_r
## 1027	6.700769e+00	deaths_avg_r
## 1028	5.163855e+00	deaths_avg_r
## 1029	4.066667e+00	deaths_avg_r
## 1030	5.300653e+00	deaths_avg_r
## 1031	5.444394e+00	deaths_avg_r
## 1032	5.432494e+00	deaths_avg_r
## 1033	NA	deaths_avg_r
## 1034	4.491780e+00	deaths_avg_r
## 1035	6.066493e+00	deaths_avg_r
## 1036	4.344147e+00	deaths_avg_r
## 1037	4.733929e+00	deaths_avg_r
## 1038	3.973397e+00	deaths_avg_r
## 1039	4.230302e+00	deaths_avg_r
## 1040	6.197222e+00	deaths_avg_r
## 1041	4.253422e+00	deaths_avg_r
## 1042	4.894941e+00	deaths_avg_r
## 1043	5.000000e+00	deaths_avg_r
## 1044	5.737421e+00	deaths_avg_r
## 1045	5.731768e+00	deaths_avg_r
## 1046	4.250385e+00	deaths_avg_r
## 1047	5.236111e+00	deaths_avg_r
## 1048	NA	deaths_avg_r
## 1049	4.733212e+00	deaths_avg_r
## 1050	5.824076e+00	deaths_avg_r
## 1051	4.914611e+00	deaths_avg_r
## 1052	5.898333e+00	deaths_avg_r

## 1053	5.569141e+00	deaths_avg_r
## 1054	4.250000e+00	deaths_avg_r
## 1055	5.167550e+00	deaths_avg_r
## 1056	6.084116e+00	deaths_avg_r
## 1057	4.866548e+00	deaths_avg_r
## 1058	6.179951e+00	deaths_avg_r
## 1059	7.900000e+00	deaths_avg_r
## 1060	5.131469e+00	deaths_avg_r
## 1061	7.093147e+00	deaths_avg_r
## 1062	5.706797e+00	deaths_avg_r
## 1063	5.831795e+00	deaths_avg_r
## 1064	7.770833e+00	deaths_avg_r
## 1065	4.408638e+00	deaths_avg_r
## 1066	4.250547e+00	deaths_avg_r
## 1067	4.395416e+00	deaths_avg_r
## 1068	4.044745e+00	deaths_avg_r
## 1069	5.434291e+00	deaths_avg_r
## 1070	4.844323e+00	deaths_avg_r
## 1071	5.795786e+00	deaths_avg_r
## 1072	4.497297e+00	deaths_avg_r
## 1073	5.332555e+00	deaths_avg_r
## 1074	6.508046e+00	deaths_avg_r
## 1075	4.901164e+00	deaths_avg_r
## 1076	5.972048e+00	deaths_avg_r
## 1077	6.575259e+00	deaths_avg_r
## 1078	NA	deaths_avg_r
## 1079	5.472759e+00	deaths_avg_r
## 1080	2.000000e+00	deaths_avg_r
## 1081	6.154692e+00	deaths_avg_r
## 1082	6.995620e+00	deaths_avg_r
## 1083	4.560726e+00	deaths_avg_r
## 1084	4.195945e+00	deaths_avg_r
## 1085	4.676432e+00	deaths_avg_r
## 1086	5.247807e+00	deaths_avg_r
## 1087	6.720130e+00	deaths_avg_r
## 1088	6.279208e+00	deaths_avg_r
## 1089	5.298525e+00	deaths_avg_r
## 1090	7.198182e+00	denies_avg_r
## 1091	7.198182e+00	denies_avg_r
## 1092	9.161111e+00	denies_avg_r
## 1093	7.236364e+00	denies_avg_r
## 1094	8.863704e+00	denies_avg_r
## 1095	7.523606e+00	denies_avg_r
## 1096	7.655926e+00	denies_avg_r
## 1097	5.000000e-01	denies_avg_r
## 1098	8.297619e+00	denies_avg_r
## 1099	1.021557e+01	denies_avg_r
## 1100	9.432573e+00	denies_avg_r
## 1101	8.657140e+00	denies_avg_r
## 1102	5.589236e+00	denies_avg_r
## 1103	1.075605e+01	denies_avg_r
## 1104	8.731314e+00	denies_avg_r
## 1105	7.416905e+00	denies_avg_r
## 1106	9.753408e+00	denies_avg_r

## 1107	NA	denies_avg_r
## 1108	6.141778e+00	denies_avg_r
## 1109	6.846857e+00	denies_avg_r
## 1110	6.327603e+00	denies_avg_r
## 1111	6.469243e+00	denies_avg_r
## 1112	8.294118e+00	denies_avg_r
## 1113	8.379813e+00	denies_avg_r
## 1114	2.636285e+00	denies_avg_r
## 1115	9.063177e+00	denies_avg_r
## 1116	8.333333e+00	denies_avg_r
## 1117	9.236072e+00	denies_avg_r
## 1118	1.103511e+01	denies_avg_r
## 1119	8.783352e+00	denies_avg_r
## 1120	6.937697e+00	denies_avg_r
## 1121	9.695483e+00	denies_avg_r
## 1122	8.916667e+00	denies_avg_r
## 1123	6.766460e+00	denies_avg_r
## 1124	1.005631e+01	denies_avg_r
## 1125	5.533577e+00	denies_avg_r
## 1126	7.549091e+00	denies_avg_r
## 1127	6.162576e+00	denies_avg_r
## 1128	9.561905e+00	denies_avg_r
## 1129	5.402712e+00	denies_avg_r
## 1130	7.115617e+00	denies_avg_r
## 1131	6.004197e+00	denies_avg_r
## 1132	NA	denies_avg_r
## 1133	1.047559e+01	denies_avg_r
## 1134	9.567101e+00	denies_avg_r
## 1135	7.634114e+00	denies_avg_r
## 1136	8.568571e+00	denies_avg_r
## 1137	9.072476e+00	denies_avg_r
## 1138	1.084810e+01	denies_avg_r
## 1139	6.544444e+00	denies_avg_r
## 1140	8.452789e+00	denies_avg_r
## 1141	8.866034e+00	denies_avg_r
## 1142	1.100000e+01	denies_avg_r
## 1143	1.324199e+01	denies_avg_r
## 1144	8.443405e+00	denies_avg_r
## 1145	9.238895e+00	denies_avg_r
## 1146	7.236111e+00	denies_avg_r
## 1147	NA	denies_avg_r
## 1148	6.436703e+00	denies_avg_r
## 1149	7.849268e+00	denies_avg_r
## 1150	6.726673e+00	denies_avg_r
## 1151	8.005000e+00	denies_avg_r
## 1152	7.549595e+00	denies_avg_r
## 1153	1.020000e+01	denies_avg_r
## 1154	7.769449e+00	denies_avg_r
## 1155	8.967957e+00	denies_avg_r
## 1156	8.984286e+00	denies_avg_r
## 1157	5.517838e+00	denies_avg_r
## 1158	8.400000e+00	denies_avg_r
## 1159	6.282365e+00	denies_avg_r
## 1160	8.008366e+00	denies_avg_r

## 1161	6.676308e+00	denies_avg_r
## 1162	2.952821e+00	denies_avg_r
## 1163	5.500000e+00	denies_avg_r
## 1164	8.682031e+00	denies_avg_r
## 1165	8.845382e+00	denies_avg_r
## 1166	8.203989e+00	denies_avg_r
## 1167	7.174889e+00	denies_avg_r
## 1168	6.955172e+00	denies_avg_r
## 1169	7.372977e+00	denies_avg_r
## 1170	6.728283e+00	denies_avg_r
## 1171	9.984556e+00	denies_avg_r
## 1172	8.218931e+00	denies_avg_r
## 1173	7.855172e+00	denies_avg_r
## 1174	7.588635e+00	denies_avg_r
## 1175	4.436067e+00	denies_avg_r
## 1176	1.348924e+01	denies_avg_r
## 1177	NA	denies_avg_r
## 1178	6.315406e+00	denies_avg_r
## 1179	1.033333e+01	denies_avg_r
## 1180	9.638278e+00	denies_avg_r
## 1181	8.217518e+00	denies_avg_r
## 1182	9.597612e+00	denies_avg_r
## 1183	9.596300e+00	denies_avg_r
## 1184	8.055816e+00	denies_avg_r
## 1185	7.392544e+00	denies_avg_r
## 1186	5.652676e+00	denies_avg_r
## 1187	6.615842e+00	denies_avg_r
## 1188	3.032302e+00	denies_avg_r
## 1189	1.155893e-01	firstblood_claimed_avg_r
## 1190	1.155893e-01	firstblood_claimed_avg_r
## 1191	5.634921e-02	firstblood_claimed_avg_r
## 1192	1.272727e-01	firstblood_claimed_avg_r
## 1193	1.074291e-01	firstblood_claimed_avg_r
## 1194	1.369479e-01	firstblood_claimed_avg_r
## 1195	9.569794e-02	firstblood_claimed_avg_r
## 1196	0.000000e+00	firstblood_claimed_avg_r
## 1197	1.025190e-01	firstblood_claimed_avg_r
## 1198	1.312782e-01	firstblood_claimed_avg_r
## 1199	1.789726e-01	firstblood_claimed_avg_r
## 1200	9.564238e-02	firstblood_claimed_avg_r
## 1201	4.222836e-01	firstblood_claimed_avg_r
## 1202	8.622230e-02	firstblood_claimed_avg_r
## 1203	1.010242e-01	firstblood_claimed_avg_r
## 1204	9.510196e-02	firstblood_claimed_avg_r
## 1205	4.920635e-02	firstblood_claimed_avg_r
## 1206	NA	firstblood_claimed_avg_r
## 1207	9.112719e-02	firstblood_claimed_avg_r
## 1208	8.736299e-02	firstblood_claimed_avg_r
## 1209	7.617406e-02	firstblood_claimed_avg_r
## 1210	9.809828e-02	firstblood_claimed_avg_r
## 1211	9.417488e-02	firstblood_claimed_avg_r
## 1212	1.013646e-01	firstblood_claimed_avg_r
## 1213	9.604260e-02	firstblood_claimed_avg_r
## 1214	9.858093e-02	firstblood_claimed_avg_r

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## 1215 8.333333e-02 firstblood_claimed_avg_r
## 1216 2.777778e-02 firstblood_claimed_avg_r
## 1217 1.105656e-01 firstblood_claimed_avg_r
## 1218 1.040858e-01 firstblood_claimed_avg_r
## 1219 5.221851e-02 firstblood_claimed_avg_r
## 1220 1.304740e-01 firstblood_claimed_avg_r
## 1221 1.250000e-01 firstblood_claimed_avg_r
## 1222 1.167440e-01 firstblood_claimed_avg_r
## 1223 1.080497e-01 firstblood_claimed_avg_r
## 1224 9.562044e-02 firstblood_claimed_avg_r
## 1225 9.564103e-02 firstblood_claimed_avg_r
## 1226 9.257760e-02 firstblood_claimed_avg_r
## 1227 9.523809e-02 firstblood_claimed_avg_r
## 1228 1.048960e-01 firstblood_claimed_avg_r
## 1229 9.560921e-02 firstblood_claimed_avg_r
## 1230 9.649860e-02 firstblood_claimed_avg_r
## 1231      NA firstblood_claimed_avg_r
## 1232 1.039311e-01 firstblood_claimed_avg_r
## 1233 9.344488e-02 firstblood_claimed_avg_r
## 1234 1.207358e-01 firstblood_claimed_avg_r
## 1235 9.000000e-02 firstblood_claimed_avg_r
## 1236 9.444444e-02 firstblood_claimed_avg_r
## 1237 9.999960e-02 firstblood_claimed_avg_r
## 1238 1.038328e-01 firstblood_claimed_avg_r
## 1239 1.065690e-01 firstblood_claimed_avg_r
## 1240 9.126665e-02 firstblood_claimed_avg_r
## 1241 0.000000e+00 firstblood_claimed_avg_r
## 1242 9.832776e-02 firstblood_claimed_avg_r
## 1243 1.410815e-01 firstblood_claimed_avg_r
## 1244 9.202686e-02 firstblood_claimed_avg_r
## 1245 9.722222e-02 firstblood_claimed_avg_r
## 1246      NA firstblood_claimed_avg_r
## 1247 9.957069e-02 firstblood_claimed_avg_r
## 1248 8.162142e-02 firstblood_claimed_avg_r
## 1249 1.008493e-01 firstblood_claimed_avg_r
## 1250 8.735632e-02 firstblood_claimed_avg_r
## 1251 6.523617e-02 firstblood_claimed_avg_r
## 1252 1.500000e-01 firstblood_claimed_avg_r
## 1253 5.162493e-02 firstblood_claimed_avg_r
## 1254 6.400667e-02 firstblood_claimed_avg_r
## 1255 1.160714e-01 firstblood_claimed_avg_r
## 1256 1.066165e-01 firstblood_claimed_avg_r
## 1257 8.888889e-02 firstblood_claimed_avg_r
## 1258 9.764717e-02 firstblood_claimed_avg_r
## 1259 6.351074e-02 firstblood_claimed_avg_r
## 1260 1.254667e-01 firstblood_claimed_avg_r
## 1261 9.533679e-02 firstblood_claimed_avg_r
## 1262 0.000000e+00 firstblood_claimed_avg_r
## 1263 1.121385e-01 firstblood_claimed_avg_r
## 1264 1.064527e-01 firstblood_claimed_avg_r
## 1265 1.029050e-01 firstblood_claimed_avg_r
## 1266 1.177590e-01 firstblood_claimed_avg_r
## 1267 1.087302e-01 firstblood_claimed_avg_r
## 1268 1.159522e-01 firstblood_claimed_avg_r

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## 1269 8.173703e-02 firstblood_claimed_avg_r
## 1270 9.745057e-02 firstblood_claimed_avg_r
## 1271 8.712531e-02 firstblood_claimed_avg_r
## 1272 1.130769e-01 firstblood_claimed_avg_r
## 1273 1.364290e-01 firstblood_claimed_avg_r
## 1274 8.219178e-02 firstblood_claimed_avg_r
## 1275 9.240837e-02 firstblood_claimed_avg_r
## 1276      NA firstblood_claimed_avg_r
## 1277 1.357017e-01 firstblood_claimed_avg_r
## 1278 0.000000e+00 firstblood_claimed_avg_r
## 1279 9.079974e-02 firstblood_claimed_avg_r
## 1280 9.635036e-02 firstblood_claimed_avg_r
## 1281 6.541434e-02 firstblood_claimed_avg_r
## 1282 1.285320e-01 firstblood_claimed_avg_r
## 1283 1.007588e-01 firstblood_claimed_avg_r
## 1284 8.771930e-02 firstblood_claimed_avg_r
## 1285 9.336512e-02 firstblood_claimed_avg_r
## 1286 9.900990e-02 firstblood_claimed_avg_r
## 1287 9.515420e-02 firstblood_claimed_avg_r
## 1288 2.090211e+03      gold_avg_r
## 1289 2.090211e+03      gold_avg_r
## 1290 1.535913e+03      gold_avg_r
## 1291 9.294182e+02      gold_avg_r
## 1292 1.800730e+03      gold_avg_r
## 1293 1.444232e+03      gold_avg_r
## 1294 1.618636e+03      gold_avg_r
## 1295 5.270000e+02      gold_avg_r
## 1296 1.672130e+03      gold_avg_r
## 1297 2.371730e+03      gold_avg_r
## 1298 1.729057e+03      gold_avg_r
## 1299 1.648990e+03      gold_avg_r
## 1300 1.687398e+03      gold_avg_r
## 1301 1.954431e+03      gold_avg_r
## 1302 1.464886e+03      gold_avg_r
## 1303 1.711100e+03      gold_avg_r
## 1304 1.635644e+03      gold_avg_r
## 1305      NA      gold_avg_r
## 1306 1.501308e+03      gold_avg_r
## 1307 1.043671e+03      gold_avg_r
## 1308 1.760272e+03      gold_avg_r
## 1309 1.484519e+03      gold_avg_r
## 1310 1.922047e+03      gold_avg_r
## 1311 1.799436e+03      gold_avg_r
## 1312 1.619503e+03      gold_avg_r
## 1313 1.803809e+03      gold_avg_r
## 1314 1.023833e+03      gold_avg_r
## 1315 1.471262e+03      gold_avg_r
## 1316 1.711917e+03      gold_avg_r
## 1317 1.871269e+03      gold_avg_r
## 1318 1.513089e+03      gold_avg_r
## 1319 2.187627e+03      gold_avg_r
## 1320 1.344417e+03      gold_avg_r
## 1321 1.523031e+03      gold_avg_r
## 1322 2.049225e+03      gold_avg_r

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## 1323	1.177828e+03	gold_avg_r
## 1324	1.574521e+03	gold_avg_r
## 1325	1.442117e+03	gold_avg_r
## 1326	2.191729e+03	gold_avg_r
## 1327	1.695564e+03	gold_avg_r
## 1328	1.729555e+03	gold_avg_r
## 1329	1.607583e+03	gold_avg_r
## 1330	NA	gold_avg_r
## 1331	2.081132e+03	gold_avg_r
## 1332	1.660848e+03	gold_avg_r
## 1333	1.627727e+03	gold_avg_r
## 1334	1.111688e+03	gold_avg_r
## 1335	2.079298e+03	gold_avg_r
## 1336	1.770027e+03	gold_avg_r
## 1337	1.301471e+03	gold_avg_r
## 1338	1.689959e+03	gold_avg_r
## 1339	1.805434e+03	gold_avg_r
## 1340	2.133000e+03	gold_avg_r
## 1341	2.435565e+03	gold_avg_r
## 1342	1.889394e+03	gold_avg_r
## 1343	2.122665e+03	gold_avg_r
## 1344	1.371944e+03	gold_avg_r
## 1345	NA	gold_avg_r
## 1346	1.555792e+03	gold_avg_r
## 1347	1.225581e+03	gold_avg_r
## 1348	1.566556e+03	gold_avg_r
## 1349	1.338580e+03	gold_avg_r
## 1350	1.865648e+03	gold_avg_r
## 1351	1.937000e+03	gold_avg_r
## 1352	1.734651e+03	gold_avg_r
## 1353	1.870150e+03	gold_avg_r
## 1354	1.575808e+03	gold_avg_r
## 1355	1.359422e+03	gold_avg_r
## 1356	1.997867e+03	gold_avg_r
## 1357	1.796494e+03	gold_avg_r
## 1358	1.397414e+03	gold_avg_r
## 1359	1.605315e+03	gold_avg_r
## 1360	1.584259e+03	gold_avg_r
## 1361	1.084438e+03	gold_avg_r
## 1362	1.746321e+03	gold_avg_r
## 1363	2.030817e+03	gold_avg_r
## 1364	1.727077e+03	gold_avg_r
## 1365	1.503973e+03	gold_avg_r
## 1366	1.540806e+03	gold_avg_r
## 1367	1.674105e+03	gold_avg_r
## 1368	1.442429e+03	gold_avg_r
## 1369	1.787592e+03	gold_avg_r
## 1370	1.816679e+03	gold_avg_r
## 1371	1.361687e+03	gold_avg_r
## 1372	1.590630e+03	gold_avg_r
## 1373	1.649060e+03	gold_avg_r
## 1374	2.184895e+03	gold_avg_r
## 1375	NA	gold_avg_r
## 1376	1.267266e+03	gold_avg_r

## 1377	1.534533e+03	gold_avg_r
## 1378	1.857311e+03	gold_avg_r
## 1379	2.069768e+03	gold_avg_r
## 1380	1.737796e+03	gold_avg_r
## 1381	1.813546e+03	gold_avg_r
## 1382	1.734307e+03	gold_avg_r
## 1383	1.763189e+03	gold_avg_r
## 1384	1.290751e+03	gold_avg_r
## 1385	1.193448e+03	gold_avg_r
## 1386	1.684929e+03	gold_avg_r
## 1387	4.355398e+02	gold_per_min_avg_r
## 1388	4.355398e+02	gold_per_min_avg_r
## 1389	4.221270e+02	gold_per_min_avg_r
## 1390	4.139455e+02	gold_per_min_avg_r
## 1391	4.161454e+02	gold_per_min_avg_r
## 1392	4.257679e+02	gold_per_min_avg_r
## 1393	4.274632e+02	gold_per_min_avg_r
## 1394	2.200000e+02	gold_per_min_avg_r
## 1395	4.291646e+02	gold_per_min_avg_r
## 1396	4.218050e+02	gold_per_min_avg_r
## 1397	4.284165e+02	gold_per_min_avg_r
## 1398	4.151208e+02	gold_per_min_avg_r
## 1399	3.578580e+02	gold_per_min_avg_r
## 1400	4.510239e+02	gold_per_min_avg_r
## 1401	4.133724e+02	gold_per_min_avg_r
## 1402	4.518551e+02	gold_per_min_avg_r
## 1403	4.101627e+02	gold_per_min_avg_r
## 1404	NA	gold_per_min_avg_r
## 1405	4.078471e+02	gold_per_min_avg_r
## 1406	3.782052e+02	gold_per_min_avg_r
## 1407	4.498124e+02	gold_per_min_avg_r
## 1408	4.269546e+02	gold_per_min_avg_r
## 1409	4.111654e+02	gold_per_min_avg_r
## 1410	4.272083e+02	gold_per_min_avg_r
## 1411	4.367192e+02	gold_per_min_avg_r
## 1412	4.182633e+02	gold_per_min_avg_r
## 1413	3.520000e+02	gold_per_min_avg_r
## 1414	3.820660e+02	gold_per_min_avg_r
## 1415	4.418902e+02	gold_per_min_avg_r
## 1416	4.902357e+02	gold_per_min_avg_r
## 1417	4.493487e+02	gold_per_min_avg_r
## 1418	4.897112e+02	gold_per_min_avg_r
## 1419	3.438083e+02	gold_per_min_avg_r
## 1420	3.747267e+02	gold_per_min_avg_r
## 1421	4.470122e+02	gold_per_min_avg_r
## 1422	4.392299e+02	gold_per_min_avg_r
## 1423	4.432365e+02	gold_per_min_avg_r
## 1424	4.021836e+02	gold_per_min_avg_r
## 1425	4.558571e+02	gold_per_min_avg_r
## 1426	3.831000e+02	gold_per_min_avg_r
## 1427	3.819791e+02	gold_per_min_avg_r
## 1428	4.122647e+02	gold_per_min_avg_r
## 1429	NA	gold_per_min_avg_r
## 1430	4.399766e+02	gold_per_min_avg_r

## 1431	4.213582e+02	gold_per_min_avg_r
## 1432	4.102826e+02	gold_per_min_avg_r
## 1433	3.992936e+02	gold_per_min_avg_r
## 1434	4.463422e+02	gold_per_min_avg_r
## 1435	4.151810e+02	gold_per_min_avg_r
## 1436	4.284389e+02	gold_per_min_avg_r
## 1437	4.100112e+02	gold_per_min_avg_r
## 1438	4.242117e+02	gold_per_min_avg_r
## 1439	4.310000e+02	gold_per_min_avg_r
## 1440	5.131136e+02	gold_per_min_avg_r
## 1441	4.235532e+02	gold_per_min_avg_r
## 1442	4.512671e+02	gold_per_min_avg_r
## 1443	3.724722e+02	gold_per_min_avg_r
## 1444	NA	gold_per_min_avg_r
## 1445	4.293482e+02	gold_per_min_avg_r
## 1446	3.793819e+02	gold_per_min_avg_r
## 1447	4.556805e+02	gold_per_min_avg_r
## 1448	4.284000e+02	gold_per_min_avg_r
## 1449	4.093069e+02	gold_per_min_avg_r
## 1450	4.311500e+02	gold_per_min_avg_r
## 1451	4.220257e+02	gold_per_min_avg_r
## 1452	4.421946e+02	gold_per_min_avg_r
## 1453	4.582301e+02	gold_per_min_avg_r
## 1454	3.918829e+02	gold_per_min_avg_r
## 1455	4.841444e+02	gold_per_min_avg_r
## 1456	4.268282e+02	gold_per_min_avg_r
## 1457	3.694664e+02	gold_per_min_avg_r
## 1458	4.035540e+02	gold_per_min_avg_r
## 1459	4.259426e+02	gold_per_min_avg_r
## 1460	3.550625e+02	gold_per_min_avg_r
## 1461	4.326577e+02	gold_per_min_avg_r
## 1462	4.382662e+02	gold_per_min_avg_r
## 1463	4.333273e+02	gold_per_min_avg_r
## 1464	4.312833e+02	gold_per_min_avg_r
## 1465	3.694933e+02	gold_per_min_avg_r
## 1466	4.500130e+02	gold_per_min_avg_r
## 1467	4.068836e+02	gold_per_min_avg_r
## 1468	4.155804e+02	gold_per_min_avg_r
## 1469	4.120275e+02	gold_per_min_avg_r
## 1470	4.301632e+02	gold_per_min_avg_r
## 1471	4.101112e+02	gold_per_min_avg_r
## 1472	4.209840e+02	gold_per_min_avg_r
## 1473	5.225796e+02	gold_per_min_avg_r
## 1474	NA	gold_per_min_avg_r
## 1475	4.553431e+02	gold_per_min_avg_r
## 1476	4.488667e+02	gold_per_min_avg_r
## 1477	4.316329e+02	gold_per_min_avg_r
## 1478	5.125255e+02	gold_per_min_avg_r
## 1479	4.161030e+02	gold_per_min_avg_r
## 1480	4.588147e+02	gold_per_min_avg_r
## 1481	4.083827e+02	gold_per_min_avg_r
## 1482	3.714518e+02	gold_per_min_avg_r
## 1483	4.408231e+02	gold_per_min_avg_r
## 1484	4.170376e+02	gold_per_min_avg_r

## 1485	4.232984e+02	gold_per_min_avg_r
## 1486	1.309380e+04	gold_spent_avg_r
## 1487	1.309380e+04	gold_spent_avg_r
## 1488	1.525444e+04	gold_spent_avg_r
## 1489	1.012664e+04	gold_spent_avg_r
## 1490	1.242880e+04	gold_spent_avg_r
## 1491	1.255189e+04	gold_spent_avg_r
## 1492	1.341273e+04	gold_spent_avg_r
## 1493	6.742500e+03	gold_spent_avg_r
## 1494	1.410171e+04	gold_spent_avg_r
## 1495	1.380291e+04	gold_spent_avg_r
## 1496	1.341387e+04	gold_spent_avg_r
## 1497	1.274816e+04	gold_spent_avg_r
## 1498	1.107886e+04	gold_spent_avg_r
## 1499	1.432876e+04	gold_spent_avg_r
## 1500	1.308162e+04	gold_spent_avg_r
## 1501	1.553420e+04	gold_spent_avg_r
## 1502	1.254223e+04	gold_spent_avg_r
## 1503	NA	gold_spent_avg_r
## 1504	1.241636e+04	gold_spent_avg_r
## 1505	1.083180e+04	gold_spent_avg_r
## 1506	1.361108e+04	gold_spent_avg_r
## 1507	1.301037e+04	gold_spent_avg_r
## 1508	1.264314e+04	gold_spent_avg_r
## 1509	1.352129e+04	gold_spent_avg_r
## 1510	1.021475e+04	gold_spent_avg_r
## 1511	1.281494e+04	gold_spent_avg_r
## 1512	8.851667e+03	gold_spent_avg_r
## 1513	1.070791e+04	gold_spent_avg_r
## 1514	1.382402e+04	gold_spent_avg_r
## 1515	1.685247e+04	gold_spent_avg_r
## 1516	1.265234e+04	gold_spent_avg_r
## 1517	1.645788e+04	gold_spent_avg_r
## 1518	9.400375e+03	gold_spent_avg_r
## 1519	1.212348e+04	gold_spent_avg_r
## 1520	1.535227e+04	gold_spent_avg_r
## 1521	9.810526e+03	gold_spent_avg_r
## 1522	1.100101e+04	gold_spent_avg_r
## 1523	1.216869e+04	gold_spent_avg_r
## 1524	1.237764e+04	gold_spent_avg_r
## 1525	1.268292e+04	gold_spent_avg_r
## 1526	1.161339e+04	gold_spent_avg_r
## 1527	1.266390e+04	gold_spent_avg_r
## 1528	NA	gold_spent_avg_r
## 1529	1.442142e+04	gold_spent_avg_r
## 1530	1.260060e+04	gold_spent_avg_r
## 1531	1.143614e+04	gold_spent_avg_r
## 1532	1.109462e+04	gold_spent_avg_r
## 1533	1.401765e+04	gold_spent_avg_r
## 1534	1.255306e+04	gold_spent_avg_r
## 1535	9.354003e+03	gold_spent_avg_r
## 1536	1.228265e+04	gold_spent_avg_r
## 1537	1.347587e+04	gold_spent_avg_r
## 1538	1.261000e+04	gold_spent_avg_r

## 1539	1.695437e+04	gold_spent_avg_r
## 1540	1.438842e+04	gold_spent_avg_r
## 1541	1.519395e+04	gold_spent_avg_r
## 1542	9.717569e+03	gold_spent_avg_r
## 1543	NA	gold_spent_avg_r
## 1544	1.323466e+04	gold_spent_avg_r
## 1545	1.069277e+04	gold_spent_avg_r
## 1546	1.511193e+04	gold_spent_avg_r
## 1547	1.242657e+04	gold_spent_avg_r
## 1548	1.379530e+04	gold_spent_avg_r
## 1549	1.108125e+04	gold_spent_avg_r
## 1550	1.362044e+04	gold_spent_avg_r
## 1551	1.444344e+04	gold_spent_avg_r
## 1552	1.432841e+04	gold_spent_avg_r
## 1553	1.213444e+04	gold_spent_avg_r
## 1554	1.649928e+04	gold_spent_avg_r
## 1555	1.304059e+04	gold_spent_avg_r
## 1556	1.220289e+04	gold_spent_avg_r
## 1557	1.258602e+04	gold_spent_avg_r
## 1558	1.032970e+04	gold_spent_avg_r
## 1559	1.014719e+04	gold_spent_avg_r
## 1560	1.435734e+04	gold_spent_avg_r
## 1561	1.435573e+04	gold_spent_avg_r
## 1562	1.418903e+04	gold_spent_avg_r
## 1563	1.335499e+04	gold_spent_avg_r
## 1564	1.078340e+04	gold_spent_avg_r
## 1565	1.274455e+04	gold_spent_avg_r
## 1566	1.277784e+04	gold_spent_avg_r
## 1567	1.378167e+04	gold_spent_avg_r
## 1568	1.275459e+04	gold_spent_avg_r
## 1569	1.073296e+04	gold_spent_avg_r
## 1570	1.259840e+04	gold_spent_avg_r
## 1571	1.165619e+04	gold_spent_avg_r
## 1572	1.918133e+04	gold_spent_avg_r
## 1573	NA	gold_spent_avg_r
## 1574	1.173578e+04	gold_spent_avg_r
## 1575	1.099367e+04	gold_spent_avg_r
## 1576	1.311717e+04	gold_spent_avg_r
## 1577	1.824018e+04	gold_spent_avg_r
## 1578	1.365426e+04	gold_spent_avg_r
## 1579	1.599187e+04	gold_spent_avg_r
## 1580	1.309904e+04	gold_spent_avg_r
## 1581	1.083064e+04	gold_spent_avg_r
## 1582	9.755707e+03	gold_spent_avg_r
## 1583	9.077455e+03	gold_spent_avg_r
## 1584	1.021257e+04	gold_spent_avg_r
## 1585	1.624117e+04	hero_damage_avg_r
## 1586	1.624117e+04	hero_damage_avg_r
## 1587	1.899002e+04	hero_damage_avg_r
## 1588	1.791127e+04	hero_damage_avg_r
## 1589	1.531471e+04	hero_damage_avg_r
## 1590	1.703104e+04	hero_damage_avg_r
## 1591	1.718368e+04	hero_damage_avg_r
## 1592	9.898500e+03	hero_damage_avg_r

## 1593	1.907478e+04	hero_damage_avg_r
## 1594	1.964792e+04	hero_damage_avg_r
## 1595	1.620845e+04	hero_damage_avg_r
## 1596	1.603574e+04	hero_damage_avg_r
## 1597	1.420774e+04	hero_damage_avg_r
## 1598	1.722489e+04	hero_damage_avg_r
## 1599	1.684133e+04	hero_damage_avg_r
## 1600	1.933443e+04	hero_damage_avg_r
## 1601	1.822386e+04	hero_damage_avg_r
## 1602	NA	hero_damage_avg_r
## 1603	1.609103e+04	hero_damage_avg_r
## 1604	1.476278e+04	hero_damage_avg_r
## 1605	1.848824e+04	hero_damage_avg_r
## 1606	1.594749e+04	hero_damage_avg_r
## 1607	1.680731e+04	hero_damage_avg_r
## 1608	1.616007e+04	hero_damage_avg_r
## 1609	1.400074e+04	hero_damage_avg_r
## 1610	1.681229e+04	hero_damage_avg_r
## 1611	1.238542e+04	hero_damage_avg_r
## 1612	1.582225e+04	hero_damage_avg_r
## 1613	1.593680e+04	hero_damage_avg_r
## 1614	1.959103e+04	hero_damage_avg_r
## 1615	1.921966e+04	hero_damage_avg_r
## 1616	1.998107e+04	hero_damage_avg_r
## 1617	1.398350e+04	hero_damage_avg_r
## 1618	1.569131e+04	hero_damage_avg_r
## 1619	1.905064e+04	hero_damage_avg_r
## 1620	1.550375e+04	hero_damage_avg_r
## 1621	1.868987e+04	hero_damage_avg_r
## 1622	1.570220e+04	hero_damage_avg_r
## 1623	1.598298e+04	hero_damage_avg_r
## 1624	1.685541e+04	hero_damage_avg_r
## 1625	1.457780e+04	hero_damage_avg_r
## 1626	1.806607e+04	hero_damage_avg_r
## 1627	NA	hero_damage_avg_r
## 1628	1.635637e+04	hero_damage_avg_r
## 1629	1.685977e+04	hero_damage_avg_r
## 1630	1.708522e+04	hero_damage_avg_r
## 1631	1.332699e+04	hero_damage_avg_r
## 1632	1.561014e+04	hero_damage_avg_r
## 1633	1.556663e+04	hero_damage_avg_r
## 1634	1.482173e+04	hero_damage_avg_r
## 1635	1.661137e+04	hero_damage_avg_r
## 1636	1.764858e+04	hero_damage_avg_r
## 1637	2.168000e+04	hero_damage_avg_r
## 1638	2.593979e+04	hero_damage_avg_r
## 1639	1.804847e+04	hero_damage_avg_r
## 1640	1.887157e+04	hero_damage_avg_r
## 1641	1.428768e+04	hero_damage_avg_r
## 1642	NA	hero_damage_avg_r
## 1643	1.708359e+04	hero_damage_avg_r
## 1644	1.514466e+04	hero_damage_avg_r
## 1645	1.826729e+04	hero_damage_avg_r
## 1646	1.561902e+04	hero_damage_avg_r

## 1647	1.838515e+04	hero_damage_avg_r
## 1648	1.522460e+04	hero_damage_avg_r
## 1649	1.769105e+04	hero_damage_avg_r
## 1650	1.924315e+04	hero_damage_avg_r
## 1651	1.804265e+04	hero_damage_avg_r
## 1652	1.633115e+04	hero_damage_avg_r
## 1653	2.600474e+04	hero_damage_avg_r
## 1654	1.809702e+04	hero_damage_avg_r
## 1655	1.635082e+04	hero_damage_avg_r
## 1656	1.690289e+04	hero_damage_avg_r
## 1657	1.404609e+04	hero_damage_avg_r
## 1658	1.942633e+04	hero_damage_avg_r
## 1659	1.685553e+04	hero_damage_avg_r
## 1660	1.941102e+04	hero_damage_avg_r
## 1661	1.656453e+04	hero_damage_avg_r
## 1662	1.522489e+04	hero_damage_avg_r
## 1663	1.511807e+04	hero_damage_avg_r
## 1664	1.929437e+04	hero_damage_avg_r
## 1665	1.686406e+04	hero_damage_avg_r
## 1666	1.631755e+04	hero_damage_avg_r
## 1667	1.717482e+04	hero_damage_avg_r
## 1668	1.751967e+04	hero_damage_avg_r
## 1669	1.591747e+04	hero_damage_avg_r
## 1670	1.580998e+04	hero_damage_avg_r
## 1671	3.199528e+04	hero_damage_avg_r
## 1672	NA	hero_damage_avg_r
## 1673	1.575498e+04	hero_damage_avg_r
## 1674	1.507060e+04	hero_damage_avg_r
## 1675	1.854515e+04	hero_damage_avg_r
## 1676	2.382575e+04	hero_damage_avg_r
## 1677	1.726451e+04	hero_damage_avg_r
## 1678	1.713489e+04	hero_damage_avg_r
## 1679	1.764192e+04	hero_damage_avg_r
## 1680	1.500380e+04	hero_damage_avg_r
## 1681	1.504431e+04	hero_damage_avg_r
## 1682	1.505409e+04	hero_damage_avg_r
## 1683	1.421322e+04	hero_damage_avg_r
## 1684	1.593956e+03	hero_healing_avg_r
## 1685	1.593956e+03	hero_healing_avg_r
## 1686	5.308056e+02	hero_healing_avg_r
## 1687	3.085455e+02	hero_healing_avg_r
## 1688	7.335144e+02	hero_healing_avg_r
## 1689	7.798330e+02	hero_healing_avg_r
## 1690	9.015848e+02	hero_healing_avg_r
## 1691	2.000000e+02	hero_healing_avg_r
## 1692	1.249951e+03	hero_healing_avg_r
## 1693	1.234891e+03	hero_healing_avg_r
## 1694	9.989974e+02	hero_healing_avg_r
## 1695	9.108228e+02	hero_healing_avg_r
## 1696	1.428151e+03	hero_healing_avg_r
## 1697	1.123324e+03	hero_healing_avg_r
## 1698	1.210807e+03	hero_healing_avg_r
## 1699	1.123272e+03	hero_healing_avg_r
## 1700	3.234545e+02	hero_healing_avg_r

## 1701	NA	hero_healing_avg_r
## 1702	7.753407e+02	hero_healing_avg_r
## 1703	6.744580e+02	hero_healing_avg_r
## 1704	5.612931e+02	hero_healing_avg_r
## 1705	8.870524e+02	hero_healing_avg_r
## 1706	1.046708e+03	hero_healing_avg_r
## 1707	9.021901e+02	hero_healing_avg_r
## 1708	5.363279e+02	hero_healing_avg_r
## 1709	1.314024e+03	hero_healing_avg_r
## 1710	2.684167e+02	hero_healing_avg_r
## 1711	9.277343e+02	hero_healing_avg_r
## 1712	9.408772e+02	hero_healing_avg_r
## 1713	1.124033e+03	hero_healing_avg_r
## 1714	8.464000e+02	hero_healing_avg_r
## 1715	8.448126e+02	hero_healing_avg_r
## 1716	5.006000e+02	hero_healing_avg_r
## 1717	7.509585e+02	hero_healing_avg_r
## 1718	1.677827e+03	hero_healing_avg_r
## 1719	3.425168e+02	hero_healing_avg_r
## 1720	8.233236e+02	hero_healing_avg_r
## 1721	7.770462e+02	hero_healing_avg_r
## 1722	1.572481e+03	hero_healing_avg_r
## 1723	9.586250e+02	hero_healing_avg_r
## 1724	1.113622e+03	hero_healing_avg_r
## 1725	8.024899e+02	hero_healing_avg_r
## 1726	NA	hero_healing_avg_r
## 1727	1.114628e+03	hero_healing_avg_r
## 1728	7.836677e+02	hero_healing_avg_r
## 1729	1.861612e+03	hero_healing_avg_r
## 1730	6.375864e+02	hero_healing_avg_r
## 1731	9.309312e+02	hero_healing_avg_r
## 1732	1.141216e+03	hero_healing_avg_r
## 1733	5.236417e+02	hero_healing_avg_r
## 1734	1.150688e+03	hero_healing_avg_r
## 1735	1.190343e+03	hero_healing_avg_r
## 1736	2.000000e+02	hero_healing_avg_r
## 1737	1.252627e+03	hero_healing_avg_r
## 1738	9.326884e+02	hero_healing_avg_r
## 1739	1.035047e+03	hero_healing_avg_r
## 1740	1.379458e+03	hero_healing_avg_r
## 1741	NA	hero_healing_avg_r
## 1742	1.397298e+03	hero_healing_avg_r
## 1743	7.025446e+02	hero_healing_avg_r
## 1744	7.428161e+02	hero_healing_avg_r
## 1745	7.591717e+02	hero_healing_avg_r
## 1746	9.591142e+02	hero_healing_avg_r
## 1747	9.489000e+02	hero_healing_avg_r
## 1748	8.984615e+02	hero_healing_avg_r
## 1749	1.203787e+03	hero_healing_avg_r
## 1750	1.292320e+03	hero_healing_avg_r
## 1751	9.105925e+02	hero_healing_avg_r
## 1752	5.867500e+02	hero_healing_avg_r
## 1753	7.126506e+02	hero_healing_avg_r
## 1754	1.100832e+03	hero_healing_avg_r

## 1755	6.618366e+02	hero_healing_avg_r
## 1756	4.838185e+02	hero_healing_avg_r
## 1757	7.374583e+02	hero_healing_avg_r
## 1758	9.435258e+02	hero_healing_avg_r
## 1759	9.784958e+02	hero_healing_avg_r
## 1760	1.008232e+03	hero_healing_avg_r
## 1761	7.376219e+02	hero_healing_avg_r
## 1762	8.457343e+02	hero_healing_avg_r
## 1763	6.067979e+02	hero_healing_avg_r
## 1764	8.626804e+02	hero_healing_avg_r
## 1765	8.682011e+02	hero_healing_avg_r
## 1766	1.210855e+03	hero_healing_avg_r
## 1767	6.800828e+02	hero_healing_avg_r
## 1768	9.112173e+02	hero_healing_avg_r
## 1769	4.637105e+02	hero_healing_avg_r
## 1770	9.010576e+02	hero_healing_avg_r
## 1771	NA	hero_healing_avg_r
## 1772	1.144306e+03	hero_healing_avg_r
## 1773	7.777333e+02	hero_healing_avg_r
## 1774	1.008307e+03	hero_healing_avg_r
## 1775	5.444847e+02	hero_healing_avg_r
## 1776	1.260062e+03	hero_healing_avg_r
## 1777	1.458278e+03	hero_healing_avg_r
## 1778	8.664152e+02	hero_healing_avg_r
## 1779	1.574993e+03	hero_healing_avg_r
## 1780	4.270143e+02	hero_healing_avg_r
## 1781	6.061465e+02	hero_healing_avg_r
## 1782	5.716321e+02	hero_healing_avg_r
## 1783	5.283281e+00	hero_kills_avg_r
## 1784	5.283281e+00	hero_kills_avg_r
## 1785	4.627778e+00	hero_kills_avg_r
## 1786	5.781818e+00	hero_kills_avg_r
## 1787	NaN	hero_kills_avg_r
## 1788	5.675387e+00	hero_kills_avg_r
## 1789	5.648934e+00	hero_kills_avg_r
## 1790	3.500000e+00	hero_kills_avg_r
## 1791	5.891800e+00	hero_kills_avg_r
## 1792	5.528579e+00	hero_kills_avg_r
## 1793	NaN	hero_kills_avg_r
## 1794	4.387813e+00	hero_kills_avg_r
## 1795	3.672167e+00	hero_kills_avg_r
## 1796	NaN	hero_kills_avg_r
## 1797	5.042040e+00	hero_kills_avg_r
## 1798	5.167810e+00	hero_kills_avg_r
## 1799	NaN	hero_kills_avg_r
## 1800	NA	hero_kills_avg_r
## 1801	NaN	hero_kills_avg_r
## 1802	NaN	hero_kills_avg_r
## 1803	6.459097e+00	hero_kills_avg_r
## 1804	NaN	hero_kills_avg_r
## 1805	5.161955e+00	hero_kills_avg_r
## 1806	4.757202e+00	hero_kills_avg_r
## 1807	NaN	hero_kills_avg_r
## 1808	NaN	hero_kills_avg_r

## 1809	5.416667e+00	hero_kills_avg_r
## 1810	NaN	hero_kills_avg_r
## 1811	4.837244e+00	hero_kills_avg_r
## 1812	NaN	hero_kills_avg_r
## 1813	NaN	hero_kills_avg_r
## 1814	5.915651e+00	hero_kills_avg_r
## 1815	4.450000e+00	hero_kills_avg_r
## 1816	4.279910e+00	hero_kills_avg_r
## 1817	NaN	hero_kills_avg_r
## 1818	6.530657e+00	hero_kills_avg_r
## 1819	6.450699e+00	hero_kills_avg_r
## 1820	NaN	hero_kills_avg_r
## 1821	6.357143e+00	hero_kills_avg_r
## 1822	4.444848e+00	hero_kills_avg_r
## 1823	4.144631e+00	hero_kills_avg_r
## 1824	5.197132e+00	hero_kills_avg_r
## 1825	NA	hero_kills_avg_r
## 1826	NaN	hero_kills_avg_r
## 1827	5.520382e+00	hero_kills_avg_r
## 1828	6.482609e+00	hero_kills_avg_r
## 1829	4.377143e+00	hero_kills_avg_r
## 1830	4.628063e+00	hero_kills_avg_r
## 1831	NaN	hero_kills_avg_r
## 1832	NaN	hero_kills_avg_r
## 1833	NaN	hero_kills_avg_r
## 1834	NaN	hero_kills_avg_r
## 1835	9.000000e+00	hero_kills_avg_r
## 1836	9.106503e+00	hero_kills_avg_r
## 1837	5.135491e+00	hero_kills_avg_r
## 1838	5.081123e+00	hero_kills_avg_r
## 1839	4.805556e+00	hero_kills_avg_r
## 1840	NA	hero_kills_avg_r
## 1841	5.514407e+00	hero_kills_avg_r
## 1842	4.440337e+00	hero_kills_avg_r
## 1843	NaN	hero_kills_avg_r
## 1844	NaN	hero_kills_avg_r
## 1845	4.950967e+00	hero_kills_avg_r
## 1846	5.900000e+00	hero_kills_avg_r
## 1847	NaN	hero_kills_avg_r
## 1848	5.888303e+00	hero_kills_avg_r
## 1849	6.104524e+00	hero_kills_avg_r
## 1850	NaN	hero_kills_avg_r
## 1851	7.411111e+00	hero_kills_avg_r
## 1852	NaN	hero_kills_avg_r
## 1853	4.296816e+00	hero_kills_avg_r
## 1854	NaN	hero_kills_avg_r
## 1855	NaN	hero_kills_avg_r
## 1856	5.500000e+00	hero_kills_avg_r
## 1857	NaN	hero_kills_avg_r
## 1858	5.739360e+00	hero_kills_avg_r
## 1859	4.719688e+00	hero_kills_avg_r
## 1860	NaN	hero_kills_avg_r
## 1861	NaN	hero_kills_avg_r
## 1862	NaN	hero_kills_avg_r

```
## 1863 4.952054e+00      hero_kills_avg_r
## 1864           NaN      hero_kills_avg_r
## 1865 5.008575e+00      hero_kills_avg_r
## 1866           NaN      hero_kills_avg_r
## 1867           NaN      hero_kills_avg_r
## 1868 5.536327e+00      hero_kills_avg_r
## 1869           NaN      hero_kills_avg_r
## 1870           NA       hero_kills_avg_r
## 1871 5.506301e+00      hero_kills_avg_r
## 1872 6.200000e+00      hero_kills_avg_r
## 1873 5.858468e+00      hero_kills_avg_r
## 1874 7.040876e+00      hero_kills_avg_r
## 1875 4.935961e+00      hero_kills_avg_r
## 1876 5.063132e+00      hero_kills_avg_r
## 1877 5.199240e+00      hero_kills_avg_r
## 1878 4.179825e+00      hero_kills_avg_r
## 1879           NaN      hero_kills_avg_r
## 1880 6.164356e+00      hero_kills_avg_r
## 1881           NaN      hero_kills_avg_r
```

```
unstack(data)
```

```
## $'23177.593753333'
## [1] 5600992860
##
## $'25834.221809861'
## [1] 4608178386
##
## $'26703.818751787'
## [1] 5466643854
##
## $'26842.3677127'
## [1] 4623556133
##
## $'27431.072622225'
## [1] 5405369398
##
## $'27805.585556599'
## [1] 5729519479
##
## $'28583.485991296'
## [1] 5512371848
##
## $'29138.364486003'
## [1] 5114714358
##
## $'29784.781387368'
## [1] 4593309564
##
## $'29953.35'
## [1] 5222672937
##
## $'29989.32491476'
## [1] 5080525118
```

```

##
## $'30025.205549088'
## [1] 5919966201
##
## $'30350.910949759'
## [1] 5449813596
##
## $'30767.486000767'
## [1] 4955630841
##
## $'30868.08540896'
## [1] 5874061480
##
## $'31821.401917857'
## [1] 5481915530
##
## $'32178.723465153'
## [1] 5480282409
##
## $'32186.171871633'
## [1] 5134130510
##
## $'32624.118659992'
## [1] 5989112142
##
## $'32651.84520003'
## [1] 4919856642
##
## $'32851.268179532'
## [1] 5574110489
##
## $'32887.155079114'
## [1] 4347235141
##
## $'32900.674476749'
## [1] 5714460100
##
## $'32947.71315164'
## [1] 5369299134
##
## $'33044.279751842'
## [1] 5823758731
##
## $'33260.619853758'
## [1] 4360290555
##
## $'33293.228941414'
## [1] 4891379575
##
## $'33342.648334889'
## [1] 5677418290
##
## $'33468.346752751'
## [1] 5640703973

```

```

##
## $'33664.566575066'
## [1] 4870534464
##
## $'33821.179514168'
## [1] 5826469616
##
## $'33899.219215347'
## [1] 5796599901
##
## $'33900.219215347'
## [1] 5796710768
##
## $'34092.768068787'
## [1] 5730717243
##
## $'34119.561591018'
## [1] 6010520558
##
## $'34143.141515741'
## [1] 5877655195
##
## $'34197.926967628'
## [1] 5591952698
##
## $'34385.121232463'
## [1] 5683280528
##
## $'34809.21408844'
## [1] 5495184096
##
## $'35278.617615372'
## [1] 5901414781
##
## $'35291.329727904'
## [1] 4944287268
##
## $'35826.02799025'
## [1] 5278143666
##
## $'36052.908362099'
## [1] 5723024440
##
## $'36113.081225853'
## [1] 5092234458
##
## $'37054.855243309'
## [1] 4632569639
##
## $'37153.92677597'
## [1] 5628319228
##
## $'37266.038125407'
## [1] 4872317348

```

```
##
## $'37578.710901025'
## [1] 4977309728
##
## $'37680.072165691'
## [1] 5693264439
##
## $'37913.480620686'
## [1] 5640928004
##
## $'38186.710814308'
## [1] 5117977273
##
## $'38494.951365563'
## [1] 6019971220
##
## $'40417.9591452'
## [1] 5060190446
##
## $'45654.471424919'
## [1] 5229367193
##
## $'45899.645373978'
## [1] 5161775909
##
## $'47428.650809984'
## [1] 4683207830
##
## $'NaN'
## [1] 5176256941 4897617647 4466830103 5300030235 5994879529 5224099864
## [7] 5987368876 5600467667 5440791356 5340453463 5139217248 6014646140
## [13] 5238975147 5950073972 4678695743 5418395979 5628456643 5581274533
## [19] 5441823282 5141912737 4807632060 5138848511 6002473863 6008406786
## [25] 5877781605 5596140059 5254796003 5037916346 5328802719 5364053585
## [31] 5453918445 5485483795 5413776697 4823117410 5683389718 5556432379
```

rowMeans(data)

```
## [1] 305085989 305091825 243821405 267397637      NaN 315218146 301618491
## [8]      NA 296229283 296892943      NaN 288437610 269197026      NaN
## [15] 296880918 316842617      NaN      NA      NaN      NaN 310602635
## [22]      NaN 298813244 257442783      NaN      NaN 294790318      NaN
## [29] 229490727      NaN      NaN 266327940 242537064 309162755      NaN
## [36] 301555120 282596425      NaN 228803580 306515357 241754703 316344983
## [43]      NA      NaN 258941542 293375965 243346472 256345691      NaN
## [50]      NaN      NaN      NaN      NA 246487119 268014241 269369235
## [57] 284494570      NA 309352070 290126338      NaN      NaN 277798921
## [64] 274879099      NaN 261965648 301213710      NaN 271674832      NaN
## [71] 288523545      NaN      NaN 270219089      NaN 299647480 299121838
## [78]      NaN      NaN      NaN 300762790      NaN 306658076      NaN
## [85]      NaN 286833892      NaN      NA 260824295      NA 260227503
## [92] 275232255 289222048 256439717 294315100 311578749      NaN 287719503
## [99]      NaN
```

```
rowMeans(data ,na.rm=TRUE)
```

```
## [1] 305085989 305091825 243821405 267397637 369734840 315218146
## [7] 301618491 284102180 296229283 296892943 349832184 288437610
## [13] 269197026 319061813 296880918 316842617 378575962 2985603447
## [19] 428207930 373151976 310602635 427671487 298813244 257442783
## [25] 400035334 388630342 294790318 381463062 229490727 367089809
## [31] 429620070 266327940 242537064 309162755 374215279 301555120
## [37] 282596425 425007482 228803580 306515357 241754703 316344983
## [43] 2888888698 334195027 258941542 293375965 243346472 256345691
## [49] 387030544 402034530 398664780 388704145 244557344 246487119
## [55] 268014241 269369235 284494570 2473403239 309352070 290126338
## [61] 367282083 343404482 277798921 274879099 367063072 261965648
## [67] 301213710 428750369 271674832 429174359 288523545 419843851
## [73] 399726228 270219089 375345041 299647480 299121838 359853412
## [79] 380630819 383149176 300762790 389567989 306658076 391822489
## [85] 386700593 286833892 344512311 2522595759 260824295 291260191
## [91] 260227503 275232255 289222048 256439717 294315100 311578749
## [97] 405958357 287719503 396889981
```

```
colMeans(data ,na.rm=TRUE)
```

```
##          match_id          radiant_win          freq_r
##          5.362544e+09          6.565657e-01          9.070105e+01
##          win_pct_r          duration_avg_win_r          duration_avg_lose_r
##          5.068004e-01          3.369213e+01          3.434455e+01
##          actions_per_min_avg_r          ancient_kills_avg_r          buyback_count_avg_r
##          2.387934e+02          4.974041e+00          4.610139e-01
##          courier_kills_avg_r          deaths_avg_r          denies_avg_r
##          1.798939e-01          5.364039e+00          7.899317e+00
##          firstblood_claimed_avg_r          gold_avg_r          gold_per_min_avg_r
##          9.861294e-02          1.658304e+03          4.218619e+02
##          gold_spent_avg_r          hero_damage_avg_r          hero_healing_avg_r
##          1.274413e+04          1.710437e+04          9.126852e+02
##          hero_kills_avg_r
##          5.426119e+00
```

```
rowSums(data,na.rm=TRUE)
```

```
## [1] 5796633800 5796744668 4632606694 5080555107 5176287758 5989144766
## [7] 5730751336 5113839247 5628356382 5640965917 4897650569 5480314588
## [13] 5114743496 4466865381 5640737441 6020009715 5300063465 5971206894
## [19] 5994911023 5224127664 5901450060 5987400813 5677451633 4891412868
## [25] 5600494680 5440824790 5601016038 5340482864 4360323816 5139257325
## [31] 6014680985 5060230864 4608204220 5874092348 5239013903 5729547285
## [37] 5369332082 5950104742 4347268028 5823791775 4593339349 6010554678
## [43] 5777777396 4678730384 4919889294 5574143340 4623582975 4870568129
## [49] 5418427619 5628483423 5581306919 5441858034 4402032193 4683255259
## [55] 5092270571 5118015460 5405396829 4946806478 5877689338 5512400431
## [61] 5141949165 4807662749 5278179492 5222702890 5138883006 4977347307
## [67] 5723060493 6002505168 5161821809 6008441027 5481947351 5877813918
## [73] 5596167190 5134162696 5254830568 5693302119 5683314913 5037947769
```

```
## [79] 5328831470 5364088463 5714493001 5453951841 5826503437 5485514853
## [85] 5413808309 5449843947 4823172350 5045191517 4955661608 5242683438
## [91] 4944322559 5229412847 5495218905 4872354614 5591986896 5919996226
## [97] 5683416997 5466670558 5556459733
```

```
matdata=as.matrix(data)
```

```
matdata
```

```
##      match_id radiant_win freq_r win_pct_r duration_avg_win_r
## [1,] 5796599901         0   29.8 0.6534193          32.09696
## [2,] 5796710768         1   29.8 0.6534193          32.09696
## [3,] 4632569639         0   12.2 0.1404762          30.07000
## [4,] 5080525118         0   11.0 0.1818182          26.60000
## [5,] 5176256941         1   42.2 0.4574555          34.08308
## [6,] 5989112142         0   45.4 0.4193409          33.32407
## [7,] 5730717243         0  170.6 0.5264108          33.64308
## [8,] 5113821481         0    2.0 0.0000000              NA
## [9,] 5628319228         1  287.8 0.6203929          35.29406
## [10,] 5640928004         1   65.4 0.6267639          37.35061
## [11,] 4897617647         1   57.2 0.5237555          34.81627
## [12,] 5480282409         1  159.2 0.4788596          34.40844
## [13,] 5114714358         1   42.5 0.4687889          32.93283
## [14,] 4466830103         1  106.6 0.5526349          34.91631
## [15,] 5640703973         1  132.8 0.5097318          32.63575
## [16,] 6019971220         1   56.2 0.5309129          36.97540
## [17,] 5300030235         1   13.8 0.5118581          36.69451
## [18,] 5971206893         1    NA         NA              NA
## [19,] 5994879529         1  222.0 0.4477352          33.73294
## [20,] 5224099864         1   28.0 0.2258407          36.55568
## [21,] 5901414781         1   29.2 0.5420033          36.01521
## [22,] 5987368876         1   98.8 0.4508924          34.21427
## [23,] 5677418290         1  178.4 0.5515661          34.77052
## [24,] 4891379575         1  109.2 0.5641900          34.21306
## [25,] 5600467667         1  140.6 0.4905469          26.66287
## [26,] 5440791356         0  186.6 0.6526769          33.09384
## [27,] 5600992860         0    2.5 0.2500000          27.83333
## [28,] 5340453463         1   16.2 0.2719114          26.26127
## [29,] 4360290555         1   46.8 0.5963535          35.38575
## [30,] 5139217248         1   57.2 0.6140452          36.13098
## [31,] 6014646140         0   88.6 0.5471228          31.58525
## [32,] 5060190446         1   90.0 0.5321404          37.11181
## [33,] 4608178386         0    7.2 0.1416667          41.50000
## [34,] 5874061480         0   36.0 0.2851800          36.82669
## [35,] 5238975147         1   85.6 0.5934145          36.81754
## [36,] 5729519479         1  274.0 0.4525547          24.83468
## [37,] 5369299134         1  131.6 0.5091375          29.29403
## [38,] 5950073972         1  198.0 0.3959385          32.82533
## [39,] 4347235141         0    6.2 0.8380952          31.79556
## [40,] 5823758731         1  134.0 0.5120051          37.23292
## [41,] 4593309564         1   75.2 0.4830962          36.03718
## [42,] 6010520558         0  163.4 0.4757318          32.13805
## [43,] 5777777395         1    NA         NA              NA
```


##	[44,]	4678695743	1	135.6	0.5456963	36.85176
##	[45,]	4919856642	0	26.6	0.5338041	37.36698
##	[46,]	5574110489	1	23.6	0.7799331	29.03526
##	[47,]	4623556133	1	8.2	0.3707143	28.94750
##	[48,]	4870534464	0	176.0	0.6000000	35.47760
##	[49,]	5418395979	1	106.0	0.6295876	31.64839
##	[50,]	5628456643	0	288.0	0.5208333	25.02356
##	[51,]	5581274533	1	158.6	0.6353311	32.22441
##	[52,]	5441823282	1	120.8	0.5778040	36.37714
##	[53,]	4401994907	1	1.0	1.0000000	31.95000
##	[54,]	4683207830	1	18.2	0.6323300	36.36597
##	[55,]	5092234458	1	41.0	0.3534523	39.63583
##	[56,]	5117977273	0	76.0	0.5832234	38.22204
##	[57,]	5405369398	1	18.0	0.6111111	30.08333
##	[58,]	4946806477	1	NA	NA	NA
##	[59,]	5877655195	1	81.6	0.6241557	33.19382
##	[60,]	5512371848	0	95.0	0.3568355	33.23157
##	[61,]	5141912737	1	197.2	0.5597142	33.63962
##	[62,]	4807632060	0	38.0	0.5266667	31.37135
##	[63,]	5278143666	0	40.4	0.4460009	41.26471
##	[64,]	5222672937	1	4.0	0.7500000	29.01667
##	[65,]	5138848511	0	43.0	0.4375337	36.64620
##	[66,]	4977309728	1	37.0	0.5138544	37.16783
##	[67,]	5723024440	0	45.4	0.7371429	32.36690
##	[68,]	6002473863	0	95.8	0.2948403	36.47484
##	[69,]	5161775909	1	36.0	0.5000000	40.99630
##	[70,]	6008406786	0	85.8	0.5062445	33.46819
##	[71,]	5481915530	1	13.8	0.1965640	41.67315
##	[72,]	5877781605	1	70.8	0.4508239	35.34769
##	[73,]	5596140059	1	195.0	0.4666667	27.87179
##	[74,]	5134130510	1	7.0	0.1666667	26.44167
##	[75,]	5254796003	1	142.6	0.5643052	36.44053
##	[76,]	5693264439	1	133.6	0.5238949	37.04017
##	[77,]	5683280528	1	186.6	0.5777078	35.02384
##	[78,]	5037916346	1	87.8	0.4582993	34.36435
##	[79,]	5328802719	0	10.0	0.2772031	40.96167
##	[80,]	5364053585	1	27.5	0.7245372	29.49687
##	[81,]	5714460100	1	239.2	0.4113908	35.42402
##	[82,]	5453918445	1	136.2	0.5022336	36.44895
##	[83,]	5826469616	1	71.6	0.4478010	36.04587
##	[84,]	5485483795	1	261.0	0.4674330	29.01148
##	[85,]	5413776697	1	101.0	0.5407047	33.13694
##	[86,]	5449813596	0	74.2	0.4445639	32.58193
##	[87,]	4823117410	0	50.4	0.5157519	41.61598
##	[88,]	5045191517	0	NA	NA	NA
##	[89,]	4955630841	0	23.6	0.5948992	25.34776
##	[90,]	5242654333	0	3.0	1.0000000	26.53889
##	[91,]	4944287268	1	32.2	0.5383834	37.99268
##	[92,]	5229367193	0	137.0	0.5328467	40.90571
##	[93,]	5495184096	0	132.6	0.4985569	36.57672
##	[94,]	4872317348	1	106.6	0.6271506	37.67871
##	[95,]	5591952698	1	131.2	0.5557551	34.76998
##	[96,]	5919966201	1	34.5	0.6228070	32.39154
##	[97,]	5683389718	1	256.4	0.5045965	24.90235

##	[98,]	5466643854	0	101.0	0.5049505	23.90588
##	[99,]	5556432379	0	183.6	0.5228538	28.26796
##		duration_avg_lose_r		actions_per_min_avg_r		ancient_kills_avg_r
##	[1,]	40.58606		316.8472		6.7380148
##	[2,]	40.58606		316.8472		6.7380148
##	[3,]	41.73286		211.0746		5.5801587
##	[4,]	27.47037		209.7455		2.8363636
##	[5,]	31.86463		NaN		NaN
##	[6,]	33.38017		254.5968		4.7940335
##	[7,]	35.66973		282.9257		5.8467637
##	[8,]	35.50000		122.5000		1.5000000
##	[9,]	39.17398		235.6521		7.0475549
##	[10,]	39.92489		263.9289		4.7161939
##	[11,]	35.38061		NaN		NaN
##	[12,]	34.43275		164.4252		7.5487252
##	[13,]	41.41678		242.2746		1.8844178
##	[14,]	36.29502		NaN		NaN
##	[15,]	37.57946		225.1191		7.3188367
##	[16,]	38.59437		180.3191		8.1546344
##	[17,]	28.37649		NaN		NaN
##	[18,]	NA		NA		NA
##	[19,]	34.06393		NaN		NaN
##	[20,]	29.32287		NaN		NaN
##	[21,]	29.05594		286.4950		6.1548440
##	[22,]	34.31869		NaN		NaN
##	[23,]	36.56583		235.5135		5.8958571
##	[24,]	36.27793		278.9649		4.8231206
##	[25,]	27.98546		NaN		NaN
##	[26,]	37.50341		NaN		NaN
##	[27,]	30.26042		213.3333		0.1666667
##	[28,]	31.51014		NaN		NaN
##	[29,]	35.47418		253.2849		11.3804929
##	[30,]	39.68136		NaN		NaN
##	[31,]	31.04065		NaN		NaN
##	[32,]	38.05562		264.2459		5.8408687
##	[33,]	30.40514		158.1417		3.3083333
##	[34,]	34.79625		274.5261		4.9686066
##	[35,]	40.54806		NaN		NaN
##	[36,]	25.05744		183.1314		3.6175182
##	[37,]	27.61938		200.0639		4.1650816
##	[38,]	34.13660		NaN		NaN
##	[39,]	19.08333		220.1619		8.0380952
##	[40,]	38.22815		239.2531		2.4772126
##	[41,]	33.92623		201.1142		3.3201434
##	[42,]	36.65151		311.3689		5.8022409
##	[43,]	NA		NA		NA
##	[44,]	38.52503		NaN		NaN
##	[45,]	29.23944		204.9478		4.9754672
##	[46,]	37.75833		315.3572		3.5344482
##	[47,]	29.97950		181.7868		3.6725000
##	[48,]	35.85875		307.9328		6.0530794
##	[49,]	38.95772		NaN		NaN
##	[50,]	23.86002		NaN		NaN
##	[51,]	36.17849		NaN		NaN

##	[52,]	34.97165	NaN	NaN	
##	[53,]	NA	172.0000	0.0000000	
##	[54,]	41.33917	199.3891	7.4506132	
##	[55,]	39.09162	283.1100	6.0741333	
##	[56,]	36.74842	334.1866	7.1740293	
##	[57,]	27.69762	205.4722	1.0000000	
##	[58,]	NA	NA	NA	
##	[59,]	35.82975	267.4103	5.4033962	
##	[60,]	28.90058	258.0983	4.2034703	
##	[61,]	39.27421	NaN	NaN	
##	[62,]	32.88926	NaN	NaN	
##	[63,]	38.77805	266.9384	4.6469546	
##	[64,]	28.23333	243.9500	2.5500000	
##	[65,]	35.35029	NaN	NaN	
##	[66,]	37.70793	237.1855	3.7330389	
##	[67,]	37.77717	210.8995	7.4452381	
##	[68,]	33.59747	NaN	NaN	
##	[69,]	35.27130	181.2222	7.2777778	
##	[70,]	36.14235	NaN	NaN	
##	[71,]	35.75462	282.1646	4.9381886	
##	[72,]	33.32290	NaN	NaN	
##	[73,]	27.72933	NaN	NaN	
##	[74,]	32.79271	346.8125	2.2500000	
##	[75,]	36.17881	NaN	NaN	
##	[76,]	36.80197	230.9784	6.0743196	
##	[77,]	36.98955	178.1077	6.5448533	
##	[78,]	34.97960	NaN	NaN	
##	[79,]	30.14838	NaN	NaN	
##	[80,]	36.64028	NaN	NaN	
##	[81,]	34.39591	212.9155	5.2852064	
##	[82,]	36.83189	NaN	NaN	
##	[83,]	33.22034	284.9485	5.6173464	
##	[84,]	27.31751	NaN	NaN	
##	[85,]	35.51741	NaN	NaN	
##	[86,]	31.29450	190.4491	5.6023236	
##	[87,]	42.04452	NaN	NaN	
##	[88,]	NA	NA	NA	
##	[89,]	32.89506	305.2255	4.2961012	
##	[90,]	NA	227.4667	3.2000000	
##	[91,]	30.44914	203.1431	3.9904445	
##	[92,]	37.82995	214.0117	8.4978102	
##	[93,]	36.55982	245.8239	4.5778979	
##	[94,]	40.51156	194.5986	7.8976951	
##	[95,]	38.63984	217.8450	5.0127452	
##	[96,]	38.23507	356.5066	0.2938596	
##	[97,]	24.97208	NaN	NaN	
##	[98,]	24.96633	182.0733	3.5326733	
##	[99,]	27.53402	NaN	NaN	
##	buyback_count_avg_r courier_kills_avg_r deaths_avg_r denies_avg_r				
##	[1,]	0.4672965	0.19419870	4.560102	7.198182
##	[2,]	0.4672965	0.19419870	4.560102	7.198182
##	[3,]	0.7865079	0.01111111	6.106349	9.161111
##	[4,]	0.5454545	0.05454545	7.927273	7.236364
##	[5,]	NaN	NaN	4.711898	8.863704

##	[6,]	0.3359571	0.36797854	5.402652	7.523606
##	[7,]	0.3737818	0.26256606	5.432516	7.655926
##	[8,]	1.5000000	0.00000000	11.000000	0.500000
##	[9,]	0.4745440	0.22621332	4.611322	8.297619
##	[10,]	0.4383924	0.45991022	4.506559	10.215568
##	[11,]	NaN	NaN	4.874027	9.432573
##	[12,]	0.4273753	0.31105107	4.515245	8.657140
##	[13,]	0.4331024	0.03132783	5.729958	5.589236
##	[14,]	NaN	NaN	4.920789	10.756053
##	[15,]	0.4065169	0.28826177	4.798605	8.731314
##	[16,]	0.4874976	0.31075535	4.842100	7.416905
##	[17,]	NaN	NaN	4.793277	9.753408
##	[18,]	NA	NA	NA	NA
##	[19,]	NaN	NaN	4.992730	6.141778
##	[20,]	NaN	NaN	6.643301	6.846857
##	[21,]	0.3506897	0.31088670	5.926962	6.327603
##	[22,]	NaN	NaN	5.382724	6.469243
##	[23,]	0.4755131	0.29131253	5.271816	8.294118
##	[24,]	0.4284868	0.03838870	4.293531	8.379813
##	[25,]	NaN	NaN	5.672643	2.636285
##	[26,]	NaN	NaN	4.090174	9.063177
##	[27,]	0.4166667	0.08333333	7.583333	8.333333
##	[28,]	NaN	NaN	5.645688	9.236072
##	[29,]	0.5173823	0.02532095	4.667953	11.035112
##	[30,]	NaN	NaN	4.400872	8.783352
##	[31,]	NaN	NaN	5.552068	6.937697
##	[32,]	0.5374211	0.06189538	3.723037	9.695483
##	[33,]	0.5666667	0.05000000	6.716667	8.916667
##	[34,]	0.3921239	0.18057780	5.442621	6.766460
##	[35,]	NaN	NaN	4.511010	10.056311
##	[36,]	0.2145985	0.22992701	7.040146	5.533577
##	[37,]	0.3969930	0.30226107	6.700769	7.549091
##	[38,]	NaN	NaN	5.163855	6.162576
##	[39,]	0.2666667	0.00000000	4.066667	9.561905
##	[40,]	0.4368864	0.26357464	5.300653	5.402712
##	[41,]	0.5118197	0.03762334	5.444394	7.115617
##	[42,]	0.3981676	0.28767857	5.432494	6.004197
##	[43,]	NA	NA	NA	NA
##	[44,]	NaN	NaN	4.491780	10.475591
##	[45,]	0.6616906	0.02991453	6.066493	9.567101
##	[46,]	0.2876254	0.35418060	4.344147	7.634114
##	[47,]	0.4446429	0.01250000	4.733929	8.568571
##	[48,]	0.4770794	0.04107936	3.973397	9.072476
##	[49,]	NaN	NaN	4.230302	10.848097
##	[50,]	NaN	NaN	6.197222	6.544444
##	[51,]	NaN	NaN	4.253422	8.452789
##	[52,]	NaN	NaN	4.894941	8.866034
##	[53,]	0.0000000	0.00000000	5.000000	11.000000
##	[54,]	0.5596433	0.06369379	5.737421	13.241992
##	[55,]	0.7477879	0.08460419	5.731768	8.443405
##	[56,]	0.5773321	0.05705739	4.250385	9.238895
##	[57,]	0.4027778	0.30555556	5.236111	7.236111
##	[58,]	NA	NA	NA	NA
##	[59,]	0.3475832	0.25817119	4.733212	6.436703

##	[60,]	0.3249143	0.24589046	5.824076	7.849268
##	[61,]	NaN	NaN	4.914611	6.726673
##	[62,]	NaN	NaN	5.898333	8.005000
##	[63,]	0.7244444	0.17117409	5.569141	7.549595
##	[64,]	0.1500000	0.30000000	4.250000	10.200000
##	[65,]	NaN	NaN	5.167550	7.769449
##	[66,]	0.6838856	0.00000000	6.084116	8.967957
##	[67,]	0.4555952	0.33166667	4.866548	8.984286
##	[68,]	NaN	NaN	6.179951	5.517838
##	[69,]	0.7055556	0.09444444	7.900000	8.400000
##	[70,]	NaN	NaN	5.131469	6.282365
##	[71,]	0.6508590	0.33402428	7.093147	8.008366
##	[72,]	NaN	NaN	5.706797	6.676308
##	[73,]	NaN	NaN	5.831795	2.952821
##	[74,]	0.4583333	0.00000000	7.770833	5.500000
##	[75,]	NaN	NaN	4.408638	8.682031
##	[76,]	0.3959410	0.39059866	4.250547	8.845382
##	[77,]	0.3757826	0.28925567	4.395416	8.203989
##	[78,]	NaN	NaN	4.044745	7.174889
##	[79,]	NaN	NaN	5.434291	6.955172
##	[80,]	NaN	NaN	4.844323	7.372977
##	[81,]	0.2860077	0.30601351	5.795786	6.728283
##	[82,]	NaN	NaN	4.497297	9.984556
##	[83,]	0.4205160	0.25915233	5.332555	8.218931
##	[84,]	NaN	NaN	6.508046	7.855172
##	[85,]	NaN	NaN	4.901164	7.588635
##	[86,]	0.2137333	0.17579331	5.972048	4.436067
##	[87,]	NaN	NaN	6.575259	13.489240
##	[88,]	NA	NA	NA	NA
##	[89,]	0.3553514	0.06373205	5.472759	6.315406
##	[90,]	0.0000000	0.26666667	2.000000	10.333333
##	[91,]	0.6703988	0.03109848	6.154692	9.638278
##	[92,]	0.4905109	0.14306569	6.995620	8.217518
##	[93,]	0.3626502	0.32386722	4.560726	9.597612
##	[94,]	0.6984654	0.04164751	4.195945	9.596300
##	[95,]	0.4357026	0.36615230	4.676432	8.055816
##	[96,]	0.5614035	0.12061403	5.247807	7.392544
##	[97,]	NaN	NaN	6.720130	5.652676
##	[98,]	0.2198020	0.27722772	6.279208	6.615842
##	[99,]	NaN	NaN	5.298525	3.032302
##	firstblood_claimed_avg_r gold_avg_r gold_per_min_avg_r gold_spent_avg_r				
##	[1,]	0.11558934	2090.2111	435.5398	13093.804
##	[2,]	0.11558934	2090.2111	435.5398	13093.804
##	[3,]	0.05634921	1535.9135	422.1270	15254.440
##	[4,]	0.12727273	929.4182	413.9455	10126.636
##	[5,]	0.10742910	1800.7297	416.1454	12428.797
##	[6,]	0.13694791	1444.2325	425.7679	12551.892
##	[7,]	0.09569794	1618.6363	427.4632	13412.727
##	[8,]	0.00000000	527.0000	220.0000	6742.500
##	[9,]	0.10251900	1672.1302	429.1646	14101.707
##	[10,]	0.13127817	2371.7296	421.8050	13802.910
##	[11,]	0.17897263	1729.0566	428.4165	13413.870
##	[12,]	0.09564238	1648.9903	415.1208	12748.162
##	[13,]	0.42228362	1687.3979	357.8580	11078.859

##	[14,]	0.08622230	1954.4311	451.0239	14328.762
##	[15,]	0.10102421	1464.8855	413.3724	13081.620
##	[16,]	0.09510196	1711.0999	451.8551	15534.202
##	[17,]	0.04920635	1635.6442	410.1627	12542.228
##	[18,]	NA	NA	NA	NA
##	[19,]	0.09112719	1501.3084	407.8471	12416.358
##	[20,]	0.08736299	1043.6715	378.2052	10831.799
##	[21,]	0.07617406	1760.2718	449.8124	13611.084
##	[22,]	0.09809828	1484.5191	426.9546	13010.368
##	[23,]	0.09417488	1922.0471	411.1654	12643.136
##	[24,]	0.10136461	1799.4364	427.2083	13521.287
##	[25,]	0.09604260	1619.5032	436.7192	10214.750
##	[26,]	0.09858093	1803.8093	418.2633	12814.944
##	[27,]	0.08333333	1023.8333	352.0000	8851.667
##	[28,]	0.02777778	1471.2618	382.0660	10707.909
##	[29,]	0.11056559	1711.9166	441.8902	13824.018
##	[30,]	0.10408576	1871.2691	490.2357	16852.468
##	[31,]	0.05221851	1513.0887	449.3487	12652.336
##	[32,]	0.13047398	2187.6270	489.7112	16457.884
##	[33,]	0.12500000	1344.4167	343.8083	9400.375
##	[34,]	0.11674400	1523.0306	374.7267	12123.478
##	[35,]	0.10804968	2049.2248	447.0122	15352.271
##	[36,]	0.09562044	1177.8285	439.2299	9810.526
##	[37,]	0.09564103	1574.5207	443.2365	11001.013
##	[38,]	0.09257760	1442.1170	402.1836	12168.689
##	[39,]	0.09523809	2191.7286	455.8571	12377.643
##	[40,]	0.10489600	1695.5643	383.1000	12682.923
##	[41,]	0.09560921	1729.5553	381.9791	11613.391
##	[42,]	0.09649860	1607.5835	412.2647	12663.903
##	[43,]	NA	NA	NA	NA
##	[44,]	0.10393110	2081.1323	439.9766	14421.420
##	[45,]	0.09344488	1660.8480	421.3582	12600.596
##	[46,]	0.12073579	1627.7271	410.2826	11436.139
##	[47,]	0.09000000	1111.6879	399.2936	11094.623
##	[48,]	0.09444444	2079.2982	446.3422	14017.647
##	[49,]	0.09999960	1770.0267	415.1810	12553.060
##	[50,]	0.10383275	1301.4708	428.4389	9354.003
##	[51,]	0.10656904	1689.9589	410.0112	12282.646
##	[52,]	0.09126665	1805.4340	424.2117	13475.872
##	[53,]	0.00000000	2133.0000	431.0000	12610.000
##	[54,]	0.09832776	2435.5651	513.1136	16954.374
##	[55,]	0.14108149	1889.3937	423.5532	14388.423
##	[56,]	0.09202686	2122.6653	451.2671	15193.948
##	[57,]	0.09722222	1371.9444	372.4722	9717.569
##	[58,]	NA	NA	NA	NA
##	[59,]	0.09957069	1555.7924	429.3482	13234.662
##	[60,]	0.08162142	1225.5809	379.3819	10692.766
##	[61,]	0.10084930	1566.5555	455.6805	15111.928
##	[62,]	0.08735632	1338.5800	428.4000	12426.567
##	[63,]	0.06523617	1865.6477	409.3069	13795.302
##	[64,]	0.15000000	1937.0000	431.1500	11081.250
##	[65,]	0.05162493	1734.6509	422.0257	13620.439
##	[66,]	0.06400667	1870.1505	442.1946	14443.436
##	[67,]	0.11607143	1575.8081	458.2301	14328.414

##	[68,]	0.10661651	1359.4224	391.8829	12134.441
##	[69,]	0.08888889	1997.8667	484.1444	16499.278
##	[70,]	0.09764717	1796.4940	426.8282	13040.587
##	[71,]	0.06351074	1397.4143	369.4664	12202.891
##	[72,]	0.12546674	1605.3151	403.5540	12586.020
##	[73,]	0.09533679	1584.2595	425.9426	10329.697
##	[74,]	0.00000000	1084.4375	355.0625	10147.188
##	[75,]	0.11213853	1746.3211	432.6577	14357.338
##	[76,]	0.10645274	2030.8174	438.2662	14355.728
##	[77,]	0.10290504	1727.0768	433.3273	14189.027
##	[78,]	0.11775903	1503.9732	431.2833	13354.991
##	[79,]	0.10873016	1540.8057	369.4933	10783.404
##	[80,]	0.11595216	1674.1048	450.0130	12744.547
##	[81,]	0.08173703	1442.4293	406.8836	12777.843
##	[82,]	0.09745057	1787.5919	415.5804	13781.669
##	[83,]	0.08712531	1816.6788	412.0275	12754.590
##	[84,]	0.11307692	1361.6874	430.1632	10732.962
##	[85,]	0.13642899	1590.6302	410.1112	12598.400
##	[86,]	0.08219178	1649.0599	420.9840	11656.190
##	[87,]	0.09240837	2184.8947	522.5796	19181.332
##	[88,]	NA	NA	NA	NA
##	[89,]	0.13570166	1267.2660	455.3431	11735.782
##	[90,]	0.00000000	1534.5333	448.8667	10993.667
##	[91,]	0.09079974	1857.3110	431.6329	13117.170
##	[92,]	0.09635036	2069.7679	512.5255	18240.182
##	[93,]	0.06541434	1737.7961	416.1030	13654.257
##	[94,]	0.12853196	1813.5462	458.8147	15991.868
##	[95,]	0.10075881	1734.3070	408.3827	13099.044
##	[96,]	0.08771930	1763.1886	371.4518	10830.636
##	[97,]	0.09336512	1290.7507	440.8231	9755.707
##	[98,]	0.09900990	1193.4475	417.0376	9077.455
##	[99,]	0.09515420	1684.9287	423.2984	10212.566
##	hero_damage_avg_r hero_healing_avg_r hero_kills_avg_r				
##	[1,]	16241.17	1593.9560	5.283281	
##	[2,]	16241.17	1593.9560	5.283281	
##	[3,]	18990.02	530.8056	4.627778	
##	[4,]	17911.27	308.5455	5.781818	
##	[5,]	15314.71	733.5144	NaN	
##	[6,]	17031.04	779.8330	5.675387	
##	[7,]	17183.68	901.5848	5.648934	
##	[8,]	9898.50	200.0000	3.500000	
##	[9,]	19074.78	1249.9510	5.891800	
##	[10,]	19647.92	1234.8912	5.528579	
##	[11,]	16208.45	998.9974	NaN	
##	[12,]	16035.74	910.8228	4.387813	
##	[13,]	14207.74	1428.1513	3.672167	
##	[14,]	17224.89	1123.3245	NaN	
##	[15,]	16841.33	1210.8069	5.042040	
##	[16,]	19334.43	1123.2719	5.167810	
##	[17,]	18223.86	323.4545	NaN	
##	[18,]	NA	NA	NA	
##	[19,]	16091.03	775.3407	NaN	
##	[20,]	14762.78	674.4580	NaN	
##	[21,]	18488.24	561.2931	6.459097	

##	[22,]	15947.49	887.0524	NaN
##	[23,]	16807.31	1046.7079	5.161955
##	[24,]	16160.07	902.1901	4.757202
##	[25,]	14000.74	536.3279	NaN
##	[26,]	16812.29	1314.0239	NaN
##	[27,]	12385.42	268.4167	5.416667
##	[28,]	15822.25	927.7343	NaN
##	[29,]	15936.80	940.8772	4.837244
##	[30,]	19591.03	1124.0332	NaN
##	[31,]	19219.66	846.4000	NaN
##	[32,]	19981.07	844.8126	5.915651
##	[33,]	13983.50	500.6000	4.450000
##	[34,]	15691.31	750.9585	4.279910
##	[35,]	19050.64	1677.8267	NaN
##	[36,]	15503.75	342.5168	6.530657
##	[37,]	18689.87	823.3236	6.450699
##	[38,]	15702.20	777.0462	NaN
##	[39,]	15982.98	1572.4810	6.357143
##	[40,]	16855.41	958.6250	4.444848
##	[41,]	14577.80	1113.6222	4.144631
##	[42,]	18066.07	802.4899	5.197132
##	[43,]	NA	NA	NA
##	[44,]	16356.37	1114.6276	NaN
##	[45,]	16859.77	783.6677	5.520382
##	[46,]	17085.22	1861.6124	6.482609
##	[47,]	13326.99	637.5864	4.377143
##	[48,]	15610.14	930.9312	4.628063
##	[49,]	15566.63	1141.2163	NaN
##	[50,]	14821.73	523.6417	NaN
##	[51,]	16611.37	1150.6876	NaN
##	[52,]	17648.58	1190.3431	NaN
##	[53,]	21680.00	200.0000	9.000000
##	[54,]	25939.79	1252.6274	9.106503
##	[55,]	18048.47	932.6884	5.135491
##	[56,]	18871.57	1035.0474	5.081123
##	[57,]	14287.68	1379.4583	4.805556
##	[58,]	NA	NA	NA
##	[59,]	17083.59	1397.2984	5.514407
##	[60,]	15144.66	702.5446	4.440337
##	[61,]	18267.29	742.8161	NaN
##	[62,]	15619.02	759.1717	NaN
##	[63,]	18385.15	959.1142	4.950967
##	[64,]	15224.60	948.9000	5.900000
##	[65,]	17691.05	898.4615	NaN
##	[66,]	19243.15	1203.7867	5.888303
##	[67,]	18042.65	1292.3196	6.104524
##	[68,]	16331.15	910.5925	NaN
##	[69,]	26004.74	586.7500	7.411111
##	[70,]	18097.02	712.6506	NaN
##	[71,]	16350.82	1100.8320	4.296816
##	[72,]	16902.89	661.8366	NaN
##	[73,]	14046.09	483.8185	NaN
##	[74,]	19426.33	737.4583	5.500000
##	[75,]	16855.53	943.5258	NaN


```
## [76,]      19411.02      978.4958      5.739360
## [77,]      16564.53     1008.2316      4.719688
## [78,]      15224.89      737.6219      NaN
## [79,]      15118.07      845.7343      NaN
## [80,]      19294.37      606.7979      NaN
## [81,]      16864.06      862.6804      4.952054
## [82,]      16317.55      868.2011      NaN
## [83,]      17174.82     1210.8549      5.008575
## [84,]      17519.67      680.0828      NaN
## [85,]      15917.47      911.2173      NaN
## [86,]      15809.98      463.7105      5.536327
## [87,]      31995.28      901.0576      NaN
## [88,]           NA           NA           NA
## [89,]      15754.98     1144.3062      5.506301
## [90,]      15070.60      777.7333      6.200000
## [91,]      18545.15     1008.3074      5.858468
## [92,]      23825.75      544.4847      7.040876
## [93,]      17264.51     1260.0623      4.935961
## [94,]      17134.89     1458.2781      5.063132
## [95,]      17641.92      866.4152      5.199240
## [96,]      15003.80     1574.9934      4.179825
## [97,]      15044.31      427.0143      NaN
## [98,]      15054.09      606.1465      6.164356
## [99,]      14213.22      571.6321      NaN
```

```
class(matdata)
```

```
## [1] "matrix" "array"
```

```
str(matdata)
```

```
## num [1:99, 1:19] 5.80e+09 5.80e+09 4.63e+09 5.08e+09 5.18e+09 ...
## - attr(*, "dimnames")=List of 2
## ..$ : NULL
## ..$ : chr [1:19] "match_id" "radiant_win" "freq_r" "win_pct_r" ...
```

```
matdata[3,3]
```

```
## freq_r
## 12.2
```

```
matdata[3,1:4]
```

```
## match_id radiant_win freq_r win_pct_r
## 4.632570e+09 0.000000e+00 1.220000e+01 1.404762e-01
```

```
matdata[,1]
```

```
## [1] 5796599901 5796710768 4632569639 5080525118 5176256941 5989112142
## [7] 5730717243 5113821481 5628319228 5640928004 4897617647 5480282409
```

```
## [13] 5114714358 4466830103 5640703973 6019971220 5300030235 5971206893
## [19] 5994879529 5224099864 5901414781 5987368876 5677418290 4891379575
## [25] 5600467667 5440791356 5600992860 5340453463 4360290555 5139217248
## [31] 6014646140 5060190446 4608178386 5874061480 5238975147 5729519479
## [37] 5369299134 5950073972 4347235141 5823758731 4593309564 6010520558
## [43] 5777777395 4678695743 4919856642 5574110489 4623556133 4870534464
## [49] 5418395979 5628456643 5581274533 5441823282 4401994907 4683207830
## [55] 5092234458 5117977273 5405369398 4946806477 5877655195 5512371848
## [61] 5141912737 4807632060 5278143666 5222672937 5138848511 4977309728
## [67] 5723024440 6002473863 5161775909 6008406786 5481915530 5877781605
## [73] 5596140059 5134130510 5254796003 5693264439 5683280528 5037916346
## [79] 5328802719 5364053585 5714460100 5453918445 5826469616 5485483795
## [85] 5413776697 5449813596 4823117410 5045191517 4955630841 5242654333
## [91] 4944287268 5229367193 5495184096 4872317348 5591952698 5919966201
## [97] 5683389718 5466643854 5556432379
```

```
matdata[1,]
```

```
##          match_id          radiant_win          freq_r
##          5.796600e+09          0.000000e+00          2.980000e+01
##          win_pct_r          duration_avg_win_r          duration_avg_lose_r
##          6.534193e-01          3.209696e+01          4.058606e+01
##          actions_per_min_avg_r          ancient_kills_avg_r          buyback_count_avg_r
##          3.168472e+02          6.738015e+00          4.672965e-01
##          courier_kills_avg_r          deaths_avg_r          denies_avg_r
##          1.941987e-01          4.560102e+00          7.198182e+00
##          firstblood_claimed_avg_r          gold_avg_r          gold_per_min_avg_r
##          1.155893e-01          2.090211e+03          4.355398e+02
##          gold_spent_avg_r          hero_damage_avg_r          hero_healing_avg_r
##          1.309380e+04          1.624117e+04          1.593956e+03
##          hero_kills_avg_r
##          5.283281e+00
```

```
matdata[c(1,3,5,7),]
```

```
##          match_id radiant_win freq_r win_pct_r duration_avg_win_r
## [1,] 5796599901          0   29.8 0.6534193          32.09696
## [2,] 4632569639          0  12.2 0.1404762          30.07000
## [3,] 5176256941          1  42.2 0.4574555          34.08308
## [4,] 5730717243          0 170.6 0.5264108          33.64308
##          duration_avg_lose_r actions_per_min_avg_r ancient_kills_avg_r
## [1,]          40.58606          316.8472          6.738015
## [2,]          41.73286          211.0746          5.580159
## [3,]          31.86463             NaN             NaN
## [4,]          35.66973          282.9257          5.846764
##          buyback_count_avg_r courier_kills_avg_r deaths_avg_r denies_avg_r
## [1,]          0.4672965          0.19419870          4.560102          7.198182
## [2,]          0.7865079          0.01111111          6.106349          9.161111
## [3,]             NaN             NaN          4.711898          8.863704
## [4,]          0.3737818          0.26256606          5.432516          7.655926
##          firstblood_claimed_avg_r gold_avg_r gold_per_min_avg_r gold_spent_avg_r
## [1,]          0.11558934          2090.211          435.5398          13093.80
## [2,]          0.05634921          1535.913          422.1270          15254.44
```

```
## [3,]          0.10742910    1800.730          416.1454          12428.80
## [4,]          0.09569794    1618.636          427.4632          13412.73
##      hero_damage_avg_r hero_healing_avg_r hero_kills_avg_r
## [1,]          16241.17          1593.9560          5.283281
## [2,]          18990.02          530.8056          4.627778
## [3,]          15314.71          733.5144          NaN
## [4,]          17183.68          901.5848          5.648934
```

```
matdata[c(1,3,5,7),4]
```

```
## [1] 0.6534193 0.1404762 0.4574555 0.5264108
```

```
matdata[c(1,3,5,7),"hero_healing_avg_r"]
```

```
## [1] 1593.9560 530.8056 733.5144 901.5848
```

```
matdata[3]
```

```
## [1] 4632569639
```

```
sort(matdata)
```

```
## [1] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [6] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [11] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [16] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [21] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [26] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [31] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [36] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [41] 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## [46] 0.000000e+00 0.000000e+00 1.111111e-02 1.250000e-02 2.532095e-02
## [51] 2.777778e-02 2.991453e-02 3.109848e-02 3.132783e-02 3.762334e-02
## [56] 3.838870e-02 4.107936e-02 4.164751e-02 4.920635e-02 5.000000e-02
## [61] 5.162493e-02 5.221851e-02 5.454545e-02 5.634921e-02 5.705739e-02
## [66] 6.189538e-02 6.351074e-02 6.369379e-02 6.373205e-02 6.400667e-02
## [71] 6.523617e-02 6.541434e-02 7.617406e-02 8.162142e-02 8.173703e-02
## [76] 8.219178e-02 8.333333e-02 8.333333e-02 8.460419e-02 8.622230e-02
## [81] 8.712531e-02 8.735632e-02 8.736299e-02 8.771930e-02 8.888889e-02
## [86] 9.000000e-02 9.079974e-02 9.112719e-02 9.126665e-02 9.202686e-02
## [91] 9.240837e-02 9.257760e-02 9.336512e-02 9.344488e-02 9.417488e-02
## [96] 9.444444e-02 9.444444e-02 9.510196e-02 9.515420e-02 9.523809e-02
## [101] 9.533679e-02 9.560921e-02 9.562044e-02 9.564103e-02 9.564238e-02
## [106] 9.569794e-02 9.604260e-02 9.635036e-02 9.649860e-02 9.722222e-02
## [111] 9.745057e-02 9.764717e-02 9.809828e-02 9.832776e-02 9.858093e-02
## [116] 9.900990e-02 9.957069e-02 9.999960e-02 1.007588e-01 1.008493e-01
## [121] 1.010242e-01 1.013646e-01 1.025190e-01 1.029050e-01 1.038328e-01
## [126] 1.039311e-01 1.040858e-01 1.048960e-01 1.064527e-01 1.065690e-01
## [131] 1.066165e-01 1.074291e-01 1.080497e-01 1.087302e-01 1.105656e-01
## [136] 1.121385e-01 1.130769e-01 1.155893e-01 1.155893e-01 1.159522e-01
## [141] 1.160714e-01 1.167440e-01 1.177590e-01 1.206140e-01 1.207358e-01
```

```

## [146] 1.250000e-01 1.254667e-01 1.272727e-01 1.285320e-01 1.304740e-01
## [151] 1.312782e-01 1.357017e-01 1.364290e-01 1.369479e-01 1.404762e-01
## [156] 1.410815e-01 1.416667e-01 1.430657e-01 1.500000e-01 1.500000e-01
## [161] 1.666667e-01 1.666667e-01 1.711741e-01 1.757933e-01 1.789726e-01
## [166] 1.805778e-01 1.818182e-01 1.941987e-01 1.941987e-01 1.965640e-01
## [171] 2.137333e-01 2.145985e-01 2.198020e-01 2.258407e-01 2.262133e-01
## [176] 2.299270e-01 2.458905e-01 2.500000e-01 2.581712e-01 2.591523e-01
## [181] 2.625661e-01 2.635746e-01 2.666667e-01 2.666667e-01 2.719114e-01
## [186] 2.772031e-01 2.772277e-01 2.851800e-01 2.860077e-01 2.876254e-01
## [191] 2.876786e-01 2.882618e-01 2.892557e-01 2.913125e-01 2.938596e-01
## [196] 2.948403e-01 3.000000e-01 3.022611e-01 3.055556e-01 3.060135e-01
## [201] 3.107554e-01 3.108867e-01 3.110511e-01 3.238672e-01 3.249143e-01
## [206] 3.316667e-01 3.340243e-01 3.359571e-01 3.475832e-01 3.506897e-01
## [211] 3.534523e-01 3.541806e-01 3.553514e-01 3.568355e-01 3.626502e-01
## [216] 3.661523e-01 3.679785e-01 3.707143e-01 3.737818e-01 3.757826e-01
## [221] 3.905987e-01 3.921239e-01 3.959385e-01 3.959410e-01 3.969930e-01
## [226] 3.981676e-01 4.027778e-01 4.065169e-01 4.113908e-01 4.166667e-01
## [231] 4.193409e-01 4.205160e-01 4.222836e-01 4.273753e-01 4.284868e-01
## [236] 4.331024e-01 4.357026e-01 4.368864e-01 4.375337e-01 4.383924e-01
## [241] 4.445639e-01 4.446429e-01 4.460009e-01 4.477352e-01 4.478010e-01
## [246] 4.508239e-01 4.508924e-01 4.525547e-01 4.555952e-01 4.574555e-01
## [251] 4.582993e-01 4.583333e-01 4.599102e-01 4.666667e-01 4.672965e-01
## [256] 4.672965e-01 4.674330e-01 4.687889e-01 4.745440e-01 4.755131e-01
## [261] 4.757318e-01 4.770794e-01 4.788596e-01 4.830962e-01 4.874976e-01
## [266] 4.905109e-01 4.905469e-01 4.985569e-01 5.000000e-01 5.000000e-01
## [271] 5.022336e-01 5.045965e-01 5.049505e-01 5.062445e-01 5.091375e-01
## [276] 5.097318e-01 5.118197e-01 5.118581e-01 5.120051e-01 5.138544e-01
## [281] 5.157519e-01 5.173823e-01 5.208333e-01 5.228538e-01 5.237555e-01
## [286] 5.238949e-01 5.264108e-01 5.266667e-01 5.309129e-01 5.321404e-01
## [291] 5.328467e-01 5.338041e-01 5.374211e-01 5.383834e-01 5.407047e-01
## [296] 5.420033e-01 5.454545e-01 5.456963e-01 5.471228e-01 5.515661e-01
## [301] 5.526349e-01 5.557551e-01 5.596433e-01 5.597142e-01 5.614035e-01
## [306] 5.641900e-01 5.643052e-01 5.666667e-01 5.773321e-01 5.777078e-01
## [311] 5.778040e-01 5.832234e-01 5.934145e-01 5.948992e-01 5.963535e-01
## [316] 6.000000e-01 6.111111e-01 6.140452e-01 6.203929e-01 6.228070e-01
## [321] 6.241557e-01 6.267639e-01 6.271506e-01 6.295876e-01 6.323300e-01
## [326] 6.353311e-01 6.508590e-01 6.526769e-01 6.534193e-01 6.534193e-01
## [331] 6.616906e-01 6.703988e-01 6.838856e-01 6.984654e-01 7.055556e-01
## [336] 7.244444e-01 7.245372e-01 7.371429e-01 7.477879e-01 7.500000e-01
## [341] 7.799331e-01 7.865079e-01 8.380952e-01 1.000000e+00 1.000000e+00
## [346] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [351] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [356] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [361] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [366] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [371] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [376] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [381] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [386] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [391] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [396] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [401] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [406] 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00 1.000000e+00
## [411] 1.000000e+00 1.000000e+00 1.500000e+00 1.500000e+00 1.884418e+00

```

```

## [416] 2.000000e+00 2.000000e+00 2.250000e+00 2.477213e+00 2.500000e+00
## [421] 2.550000e+00 2.636285e+00 2.836364e+00 2.952821e+00 3.000000e+00
## [426] 3.032302e+00 3.200000e+00 3.308333e+00 3.320143e+00 3.500000e+00
## [431] 3.532673e+00 3.534448e+00 3.617518e+00 3.672167e+00 3.672500e+00
## [436] 3.723037e+00 3.733039e+00 3.973397e+00 3.990445e+00 4.000000e+00
## [441] 4.044745e+00 4.066667e+00 4.090174e+00 4.144631e+00 4.165082e+00
## [446] 4.179825e+00 4.195945e+00 4.203470e+00 4.230302e+00 4.250000e+00
## [451] 4.250385e+00 4.250547e+00 4.253422e+00 4.279910e+00 4.293531e+00
## [456] 4.296101e+00 4.296816e+00 4.344147e+00 4.377143e+00 4.387813e+00
## [461] 4.395416e+00 4.400872e+00 4.408638e+00 4.436067e+00 4.440337e+00
## [466] 4.444848e+00 4.450000e+00 4.491780e+00 4.497297e+00 4.506559e+00
## [471] 4.511010e+00 4.515245e+00 4.560102e+00 4.560102e+00 4.560726e+00
## [476] 4.577898e+00 4.611322e+00 4.627778e+00 4.628063e+00 4.646955e+00
## [481] 4.667953e+00 4.676432e+00 4.711898e+00 4.716194e+00 4.719688e+00
## [486] 4.733212e+00 4.733929e+00 4.757202e+00 4.793277e+00 4.794034e+00
## [491] 4.798605e+00 4.805556e+00 4.823121e+00 4.837244e+00 4.842100e+00
## [496] 4.844323e+00 4.866548e+00 4.874027e+00 4.894941e+00 4.901164e+00
## [501] 4.914611e+00 4.920789e+00 4.935961e+00 4.938189e+00 4.950967e+00
## [506] 4.952054e+00 4.968607e+00 4.975467e+00 4.992730e+00 5.000000e+00
## [511] 5.008575e+00 5.012745e+00 5.042040e+00 5.063132e+00 5.081123e+00
## [516] 5.131469e+00 5.135491e+00 5.161955e+00 5.163855e+00 5.167550e+00
## [521] 5.167810e+00 5.197132e+00 5.199240e+00 5.236111e+00 5.247807e+00
## [526] 5.271816e+00 5.283281e+00 5.283281e+00 5.285206e+00 5.298525e+00
## [531] 5.300653e+00 5.332555e+00 5.382724e+00 5.402652e+00 5.402712e+00
## [536] 5.403396e+00 5.416667e+00 5.432494e+00 5.432516e+00 5.434291e+00
## [541] 5.442621e+00 5.444394e+00 5.472759e+00 5.500000e+00 5.500000e+00
## [546] 5.506301e+00 5.514407e+00 5.517838e+00 5.520382e+00 5.528579e+00
## [551] 5.533577e+00 5.536327e+00 5.552068e+00 5.569141e+00 5.580159e+00
## [556] 5.589236e+00 5.602324e+00 5.617346e+00 5.645688e+00 5.648934e+00
## [561] 5.652676e+00 5.672643e+00 5.675387e+00 5.706797e+00 5.729958e+00
## [566] 5.731768e+00 5.737421e+00 5.739360e+00 5.781818e+00 5.795786e+00
## [571] 5.802241e+00 5.824076e+00 5.831795e+00 5.840869e+00 5.846764e+00
## [576] 5.858468e+00 5.888303e+00 5.891800e+00 5.895857e+00 5.898333e+00
## [581] 5.900000e+00 5.915651e+00 5.926962e+00 5.972048e+00 6.004197e+00
## [586] 6.053079e+00 6.066493e+00 6.074133e+00 6.074320e+00 6.084116e+00
## [591] 6.104524e+00 6.106349e+00 6.141778e+00 6.154692e+00 6.154844e+00
## [596] 6.162576e+00 6.164356e+00 6.179951e+00 6.197222e+00 6.200000e+00
## [601] 6.200000e+00 6.279208e+00 6.282365e+00 6.315406e+00 6.327603e+00
## [606] 6.357143e+00 6.436703e+00 6.450699e+00 6.459097e+00 6.469243e+00
## [611] 6.482609e+00 6.508046e+00 6.530657e+00 6.544444e+00 6.544853e+00
## [616] 6.575259e+00 6.615842e+00 6.643301e+00 6.676308e+00 6.700769e+00
## [621] 6.716667e+00 6.720130e+00 6.726673e+00 6.728283e+00 6.738015e+00
## [626] 6.738015e+00 6.766460e+00 6.846857e+00 6.937697e+00 6.955172e+00
## [631] 6.995620e+00 7.000000e+00 7.040146e+00 7.040876e+00 7.047555e+00
## [636] 7.093147e+00 7.115617e+00 7.174029e+00 7.174889e+00 7.198182e+00
## [641] 7.198182e+00 7.200000e+00 7.236111e+00 7.236364e+00 7.277778e+00
## [646] 7.318837e+00 7.372977e+00 7.392544e+00 7.411111e+00 7.416905e+00
## [651] 7.445238e+00 7.450613e+00 7.523606e+00 7.548725e+00 7.549091e+00
## [656] 7.549595e+00 7.583333e+00 7.588635e+00 7.634114e+00 7.655926e+00
## [661] 7.769449e+00 7.770833e+00 7.849268e+00 7.855172e+00 7.897695e+00
## [666] 7.900000e+00 7.927273e+00 8.005000e+00 8.008366e+00 8.038095e+00
## [671] 8.055816e+00 8.154634e+00 8.200000e+00 8.203989e+00 8.217518e+00
## [676] 8.218931e+00 8.294118e+00 8.297619e+00 8.333333e+00 8.379813e+00
## [681] 8.400000e+00 8.443405e+00 8.452789e+00 8.497810e+00 8.568571e+00

```

```

## [686] 8.657140e+00 8.682031e+00 8.731314e+00 8.783352e+00 8.845382e+00
## [691] 8.863704e+00 8.866034e+00 8.916667e+00 8.967957e+00 8.984286e+00
## [696] 9.000000e+00 9.063177e+00 9.072476e+00 9.106503e+00 9.161111e+00
## [701] 9.236072e+00 9.238895e+00 9.432573e+00 9.561905e+00 9.567101e+00
## [706] 9.596300e+00 9.597612e+00 9.638278e+00 9.695483e+00 9.753408e+00
## [711] 9.984556e+00 1.000000e+01 1.005631e+01 1.020000e+01 1.021557e+01
## [716] 1.033333e+01 1.047559e+01 1.075605e+01 1.084810e+01 1.100000e+01
## [721] 1.100000e+01 1.100000e+01 1.103511e+01 1.138049e+01 1.220000e+01
## [726] 1.324199e+01 1.348924e+01 1.380000e+01 1.380000e+01 1.620000e+01
## [731] 1.800000e+01 1.820000e+01 1.908333e+01 2.360000e+01 2.360000e+01
## [736] 2.386002e+01 2.390588e+01 2.483468e+01 2.490235e+01 2.496633e+01
## [741] 2.497208e+01 2.502356e+01 2.505744e+01 2.534776e+01 2.626127e+01
## [746] 2.644167e+01 2.653889e+01 2.660000e+01 2.660000e+01 2.666287e+01
## [751] 2.731751e+01 2.747037e+01 2.750000e+01 2.753402e+01 2.761938e+01
## [756] 2.769762e+01 2.772933e+01 2.783333e+01 2.787179e+01 2.798546e+01
## [761] 2.800000e+01 2.823333e+01 2.826796e+01 2.837649e+01 2.890058e+01
## [766] 2.894750e+01 2.901148e+01 2.901667e+01 2.903526e+01 2.905594e+01
## [771] 2.920000e+01 2.923944e+01 2.929403e+01 2.932287e+01 2.949687e+01
## [776] 2.980000e+01 2.980000e+01 2.997950e+01 3.007000e+01 3.008333e+01
## [781] 3.014838e+01 3.026042e+01 3.040514e+01 3.044914e+01 3.104065e+01
## [786] 3.129450e+01 3.137135e+01 3.151014e+01 3.158525e+01 3.164839e+01
## [791] 3.179556e+01 3.186463e+01 3.195000e+01 3.209696e+01 3.209696e+01
## [796] 3.213805e+01 3.220000e+01 3.222441e+01 3.236690e+01 3.239154e+01
## [801] 3.258193e+01 3.263575e+01 3.279271e+01 3.282533e+01 3.288926e+01
## [806] 3.289506e+01 3.293283e+01 3.309384e+01 3.313694e+01 3.319382e+01
## [811] 3.322034e+01 3.323157e+01 3.332290e+01 3.332407e+01 3.338017e+01
## [816] 3.346819e+01 3.359747e+01 3.363962e+01 3.364308e+01 3.373294e+01
## [821] 3.392623e+01 3.406393e+01 3.408308e+01 3.413660e+01 3.421306e+01
## [826] 3.421427e+01 3.431869e+01 3.436435e+01 3.439591e+01 3.440844e+01
## [831] 3.443275e+01 3.450000e+01 3.476998e+01 3.477052e+01 3.479625e+01
## [836] 3.481627e+01 3.491631e+01 3.497165e+01 3.497960e+01 3.502384e+01
## [841] 3.527130e+01 3.529406e+01 3.534769e+01 3.535029e+01 3.538061e+01
## [846] 3.538575e+01 3.542402e+01 3.547418e+01 3.547760e+01 3.550000e+01
## [851] 3.551741e+01 3.566973e+01 3.575462e+01 3.582975e+01 3.585875e+01
## [856] 3.600000e+01 3.600000e+01 3.601521e+01 3.603718e+01 3.604587e+01
## [861] 3.613098e+01 3.614235e+01 3.617849e+01 3.617881e+01 3.627793e+01
## [866] 3.629502e+01 3.636597e+01 3.637714e+01 3.644053e+01 3.644895e+01
## [871] 3.647484e+01 3.655568e+01 3.655982e+01 3.656583e+01 3.657672e+01
## [876] 3.664028e+01 3.664620e+01 3.665151e+01 3.669451e+01 3.674842e+01
## [881] 3.680197e+01 3.681754e+01 3.682669e+01 3.683189e+01 3.685176e+01
## [886] 3.697540e+01 3.698955e+01 3.700000e+01 3.704017e+01 3.711181e+01
## [891] 3.716783e+01 3.723292e+01 3.735061e+01 3.736698e+01 3.750341e+01
## [896] 3.757946e+01 3.767871e+01 3.770793e+01 3.775833e+01 3.777717e+01
## [901] 3.782995e+01 3.799268e+01 3.800000e+01 3.805562e+01 3.822204e+01
## [906] 3.822815e+01 3.823507e+01 3.852503e+01 3.859437e+01 3.863984e+01
## [911] 3.877805e+01 3.895772e+01 3.909162e+01 3.917398e+01 3.927421e+01
## [916] 3.963583e+01 3.968136e+01 3.992489e+01 4.040000e+01 4.051156e+01
## [921] 4.054806e+01 4.058606e+01 4.058606e+01 4.090571e+01 4.096167e+01
## [926] 4.099630e+01 4.100000e+01 4.126471e+01 4.133917e+01 4.141678e+01
## [931] 4.150000e+01 4.161598e+01 4.167315e+01 4.173286e+01 4.204452e+01
## [936] 4.220000e+01 4.250000e+01 4.300000e+01 4.540000e+01 4.540000e+01
## [941] 4.680000e+01 5.040000e+01 5.620000e+01 5.720000e+01 5.720000e+01
## [946] 6.540000e+01 7.080000e+01 7.160000e+01 7.420000e+01 7.520000e+01
## [951] 7.600000e+01 8.160000e+01 8.560000e+01 8.580000e+01 8.780000e+01

```

```

## [956] 8.860000e+01 9.000000e+01 9.500000e+01 9.580000e+01 9.880000e+01
## [961] 1.010000e+02 1.010000e+02 1.060000e+02 1.066000e+02 1.066000e+02
## [966] 1.092000e+02 1.208000e+02 1.225000e+02 1.312000e+02 1.316000e+02
## [971] 1.326000e+02 1.328000e+02 1.336000e+02 1.340000e+02 1.356000e+02
## [976] 1.362000e+02 1.370000e+02 1.406000e+02 1.426000e+02 1.581417e+02
## [981] 1.586000e+02 1.592000e+02 1.634000e+02 1.644252e+02 1.706000e+02
## [986] 1.720000e+02 1.760000e+02 1.781077e+02 1.784000e+02 1.803191e+02
## [991] 1.812222e+02 1.817868e+02 1.820733e+02 1.831314e+02 1.836000e+02
## [996] 1.866000e+02 1.866000e+02 1.904491e+02 1.945986e+02 1.950000e+02
## [1001] 1.972000e+02 1.980000e+02 1.993891e+02 2.000000e+02 2.000000e+02
## [1006] 2.000639e+02 2.011142e+02 2.031431e+02 2.049478e+02 2.054722e+02
## [1011] 2.097455e+02 2.108995e+02 2.110746e+02 2.129155e+02 2.133333e+02
## [1016] 2.140117e+02 2.178450e+02 2.200000e+02 2.201619e+02 2.220000e+02
## [1021] 2.251191e+02 2.274667e+02 2.309784e+02 2.355135e+02 2.356521e+02
## [1026] 2.371855e+02 2.392000e+02 2.392531e+02 2.422746e+02 2.439500e+02
## [1031] 2.458239e+02 2.532849e+02 2.545968e+02 2.564000e+02 2.580983e+02
## [1036] 2.610000e+02 2.639289e+02 2.642459e+02 2.669384e+02 2.674103e+02
## [1041] 2.684167e+02 2.740000e+02 2.745261e+02 2.789649e+02 2.821646e+02
## [1046] 2.829257e+02 2.831100e+02 2.849485e+02 2.864950e+02 2.878000e+02
## [1051] 2.880000e+02 3.052255e+02 3.079328e+02 3.085455e+02 3.113689e+02
## [1056] 3.153572e+02 3.168472e+02 3.168472e+02 3.234545e+02 3.341866e+02
## [1061] 3.425168e+02 3.438083e+02 3.468125e+02 3.520000e+02 3.550625e+02
## [1066] 3.565066e+02 3.578580e+02 3.694664e+02 3.694933e+02 3.714518e+02
## [1071] 3.724722e+02 3.747267e+02 3.782052e+02 3.793819e+02 3.819791e+02
## [1076] 3.820660e+02 3.831000e+02 3.918829e+02 3.992936e+02 4.021836e+02
## [1081] 4.035540e+02 4.068836e+02 4.078471e+02 4.083827e+02 4.093069e+02
## [1086] 4.100112e+02 4.101112e+02 4.101627e+02 4.102826e+02 4.111654e+02
## [1091] 4.120275e+02 4.122647e+02 4.133724e+02 4.139455e+02 4.151208e+02
## [1096] 4.151810e+02 4.155804e+02 4.161030e+02 4.161454e+02 4.170376e+02
## [1101] 4.182633e+02 4.209840e+02 4.213582e+02 4.218050e+02 4.220257e+02
## [1106] 4.221270e+02 4.232984e+02 4.235532e+02 4.242117e+02 4.257679e+02
## [1111] 4.259426e+02 4.268282e+02 4.269546e+02 4.270143e+02 4.272083e+02
## [1116] 4.274632e+02 4.284000e+02 4.284165e+02 4.284389e+02 4.291646e+02
## [1121] 4.293482e+02 4.301632e+02 4.310000e+02 4.311500e+02 4.312833e+02
## [1126] 4.316329e+02 4.326577e+02 4.333273e+02 4.355398e+02 4.355398e+02
## [1131] 4.367192e+02 4.382662e+02 4.392299e+02 4.399766e+02 4.408231e+02
## [1136] 4.418902e+02 4.421946e+02 4.432365e+02 4.463422e+02 4.470122e+02
## [1141] 4.488667e+02 4.493487e+02 4.498124e+02 4.500130e+02 4.510239e+02
## [1146] 4.512671e+02 4.518551e+02 4.553431e+02 4.556805e+02 4.558571e+02
## [1151] 4.582301e+02 4.588147e+02 4.637105e+02 4.838185e+02 4.841444e+02
## [1156] 4.897112e+02 4.902357e+02 5.006000e+02 5.125255e+02 5.131136e+02
## [1161] 5.225796e+02 5.236417e+02 5.270000e+02 5.308056e+02 5.363279e+02
## [1166] 5.444847e+02 5.612931e+02 5.716321e+02 5.867500e+02 6.061465e+02
## [1171] 6.067979e+02 6.375864e+02 6.618366e+02 6.744580e+02 6.800828e+02
## [1176] 7.025446e+02 7.126506e+02 7.335144e+02 7.374583e+02 7.376219e+02
## [1181] 7.428161e+02 7.509585e+02 7.591717e+02 7.753407e+02 7.770462e+02
## [1186] 7.777333e+02 7.798330e+02 7.836677e+02 8.024899e+02 8.233236e+02
## [1191] 8.448126e+02 8.457343e+02 8.464000e+02 8.626804e+02 8.664152e+02
## [1196] 8.682011e+02 8.870524e+02 8.984615e+02 9.010576e+02 9.015848e+02
## [1201] 9.021901e+02 9.105925e+02 9.108228e+02 9.112173e+02 9.277343e+02
## [1206] 9.294182e+02 9.309312e+02 9.326884e+02 9.408772e+02 9.435258e+02
## [1211] 9.489000e+02 9.586250e+02 9.591142e+02 9.784958e+02 9.989974e+02
## [1216] 1.008232e+03 1.008307e+03 1.023833e+03 1.035047e+03 1.043671e+03
## [1221] 1.046708e+03 1.084438e+03 1.100832e+03 1.111688e+03 1.113622e+03

```

```

## [1226] 1.114628e+03 1.123272e+03 1.123324e+03 1.124033e+03 1.141216e+03
## [1231] 1.144306e+03 1.150688e+03 1.177828e+03 1.190343e+03 1.193448e+03
## [1236] 1.203787e+03 1.210807e+03 1.210855e+03 1.225581e+03 1.234891e+03
## [1241] 1.249951e+03 1.252627e+03 1.260062e+03 1.267266e+03 1.290751e+03
## [1246] 1.292320e+03 1.301471e+03 1.314024e+03 1.338580e+03 1.344417e+03
## [1251] 1.359422e+03 1.361687e+03 1.371944e+03 1.379458e+03 1.397298e+03
## [1256] 1.397414e+03 1.428151e+03 1.442117e+03 1.442429e+03 1.444232e+03
## [1261] 1.458278e+03 1.464886e+03 1.471262e+03 1.484519e+03 1.501308e+03
## [1266] 1.503973e+03 1.513089e+03 1.523031e+03 1.534533e+03 1.535913e+03
## [1271] 1.540806e+03 1.555792e+03 1.566556e+03 1.572481e+03 1.574521e+03
## [1276] 1.574993e+03 1.575808e+03 1.584259e+03 1.590630e+03 1.593956e+03
## [1281] 1.593956e+03 1.605315e+03 1.607583e+03 1.618636e+03 1.619503e+03
## [1286] 1.627727e+03 1.635644e+03 1.648990e+03 1.649060e+03 1.660848e+03
## [1291] 1.672130e+03 1.674105e+03 1.677827e+03 1.684929e+03 1.687398e+03
## [1296] 1.689959e+03 1.695564e+03 1.711100e+03 1.711917e+03 1.727077e+03
## [1301] 1.729057e+03 1.729555e+03 1.734307e+03 1.734651e+03 1.737796e+03
## [1306] 1.746321e+03 1.760272e+03 1.763189e+03 1.770027e+03 1.787592e+03
## [1311] 1.796494e+03 1.799436e+03 1.800730e+03 1.803809e+03 1.805434e+03
## [1316] 1.813546e+03 1.816679e+03 1.857311e+03 1.861612e+03 1.865648e+03
## [1321] 1.870150e+03 1.871269e+03 1.889394e+03 1.922047e+03 1.937000e+03
## [1326] 1.954431e+03 1.997867e+03 2.030817e+03 2.049225e+03 2.069768e+03
## [1331] 2.079298e+03 2.081132e+03 2.090211e+03 2.090211e+03 2.122665e+03
## [1336] 2.133000e+03 2.184895e+03 2.187627e+03 2.191729e+03 2.371730e+03
## [1341] 2.435565e+03 6.742500e+03 8.851667e+03 9.077455e+03 9.354003e+03
## [1346] 9.400375e+03 9.717569e+03 9.755707e+03 9.810526e+03 9.898500e+03
## [1351] 1.012664e+04 1.014719e+04 1.021257e+04 1.021475e+04 1.032970e+04
## [1356] 1.069277e+04 1.070791e+04 1.073296e+04 1.078340e+04 1.083064e+04
## [1361] 1.083180e+04 1.099367e+04 1.100101e+04 1.107886e+04 1.108125e+04
## [1366] 1.109462e+04 1.143614e+04 1.161339e+04 1.165619e+04 1.173578e+04
## [1371] 1.212348e+04 1.213444e+04 1.216869e+04 1.220289e+04 1.228265e+04
## [1376] 1.237764e+04 1.238542e+04 1.241636e+04 1.242657e+04 1.242880e+04
## [1381] 1.254223e+04 1.255189e+04 1.255306e+04 1.258602e+04 1.259840e+04
## [1386] 1.260060e+04 1.261000e+04 1.264314e+04 1.265234e+04 1.266390e+04
## [1391] 1.268292e+04 1.274455e+04 1.274816e+04 1.275459e+04 1.277784e+04
## [1396] 1.281494e+04 1.301037e+04 1.304059e+04 1.308162e+04 1.309380e+04
## [1401] 1.309380e+04 1.309904e+04 1.311717e+04 1.323466e+04 1.332699e+04
## [1406] 1.335499e+04 1.341273e+04 1.341387e+04 1.347587e+04 1.352129e+04
## [1411] 1.361108e+04 1.362044e+04 1.365426e+04 1.378167e+04 1.379530e+04
## [1416] 1.380291e+04 1.382402e+04 1.398350e+04 1.400074e+04 1.401765e+04
## [1421] 1.404609e+04 1.410171e+04 1.418903e+04 1.420774e+04 1.421322e+04
## [1426] 1.428768e+04 1.432841e+04 1.432876e+04 1.435573e+04 1.435734e+04
## [1431] 1.438842e+04 1.442142e+04 1.444344e+04 1.457780e+04 1.476278e+04
## [1436] 1.482173e+04 1.500380e+04 1.504431e+04 1.505409e+04 1.507060e+04
## [1441] 1.511193e+04 1.511807e+04 1.514466e+04 1.519395e+04 1.522460e+04
## [1446] 1.522489e+04 1.525444e+04 1.531471e+04 1.535227e+04 1.550375e+04
## [1451] 1.553420e+04 1.556663e+04 1.561014e+04 1.561902e+04 1.569131e+04
## [1456] 1.570220e+04 1.575498e+04 1.580998e+04 1.582225e+04 1.591747e+04
## [1461] 1.593680e+04 1.594749e+04 1.598298e+04 1.599187e+04 1.603574e+04
## [1466] 1.609103e+04 1.616007e+04 1.620845e+04 1.624117e+04 1.624117e+04
## [1471] 1.631755e+04 1.633115e+04 1.635082e+04 1.635637e+04 1.645788e+04
## [1476] 1.649928e+04 1.656453e+04 1.661137e+04 1.680731e+04 1.681229e+04
## [1481] 1.684133e+04 1.685247e+04 1.685541e+04 1.685553e+04 1.685977e+04
## [1486] 1.686406e+04 1.690289e+04 1.695437e+04 1.703104e+04 1.708359e+04
## [1491] 1.708522e+04 1.713489e+04 1.717482e+04 1.718368e+04 1.722489e+04

```



```
## [1496] 1.726451e+04 1.751967e+04 1.764192e+04 1.764858e+04 1.769105e+04
## [1501] 1.791127e+04 1.804265e+04 1.804847e+04 1.806607e+04 1.809702e+04
## [1506] 1.822386e+04 1.824018e+04 1.826729e+04 1.838515e+04 1.848824e+04
## [1511] 1.854515e+04 1.868987e+04 1.887157e+04 1.899002e+04 1.905064e+04
## [1516] 1.907478e+04 1.918133e+04 1.921966e+04 1.924315e+04 1.929437e+04
## [1521] 1.933443e+04 1.941102e+04 1.942633e+04 1.959103e+04 1.964792e+04
## [1526] 1.998107e+04 2.168000e+04 2.382575e+04 2.593979e+04 2.600474e+04
## [1531] 3.199528e+04 4.347235e+09 4.360291e+09 4.401995e+09 4.466830e+09
## [1536] 4.593310e+09 4.608178e+09 4.623556e+09 4.632570e+09 4.678696e+09
## [1541] 4.683208e+09 4.807632e+09 4.823117e+09 4.870534e+09 4.872317e+09
## [1546] 4.891380e+09 4.897618e+09 4.919857e+09 4.944287e+09 4.946806e+09
## [1551] 4.955631e+09 4.977310e+09 5.037916e+09 5.045192e+09 5.060190e+09
## [1556] 5.080525e+09 5.092234e+09 5.113821e+09 5.114714e+09 5.117977e+09
## [1561] 5.134131e+09 5.138849e+09 5.139217e+09 5.141913e+09 5.161776e+09
## [1566] 5.176257e+09 5.222673e+09 5.224100e+09 5.229367e+09 5.238975e+09
## [1571] 5.242654e+09 5.254796e+09 5.278144e+09 5.300030e+09 5.328803e+09
## [1576] 5.340453e+09 5.364054e+09 5.369299e+09 5.405369e+09 5.413777e+09
## [1581] 5.418396e+09 5.440791e+09 5.441823e+09 5.449814e+09 5.453918e+09
## [1586] 5.466644e+09 5.480282e+09 5.481916e+09 5.485484e+09 5.495184e+09
## [1591] 5.512372e+09 5.556432e+09 5.574110e+09 5.581275e+09 5.591953e+09
## [1596] 5.596140e+09 5.600468e+09 5.600993e+09 5.628319e+09 5.628457e+09
## [1601] 5.640704e+09 5.640928e+09 5.677418e+09 5.683281e+09 5.683390e+09
## [1606] 5.693264e+09 5.714460e+09 5.723024e+09 5.729519e+09 5.730717e+09
## [1611] 5.777777e+09 5.796600e+09 5.796711e+09 5.823759e+09 5.826470e+09
## [1616] 5.874061e+09 5.877655e+09 5.877782e+09 5.901415e+09 5.919966e+09
## [1621] 5.950074e+09 5.971207e+09 5.987369e+09 5.989112e+09 5.994880e+09
## [1626] 6.002474e+09 6.008407e+09 6.010521e+09 6.014646e+09 6.019971e+09
```

```
order(matdata[c(1,3,5,7),4])
```

```
## [1] 2 3 4 1
```

```
rank(matdata[c(1,3,5,7),4])
```

```
## [1] 4 1 2 3
```

```
sort(matdata[,1])
```

```
## [1] 4347235141 4360290555 4401994907 4466830103 4593309564 4608178386
## [7] 4623556133 4632569639 4678695743 4683207830 4807632060 4823117410
## [13] 4870534464 4872317348 4891379575 4897617647 4919856642 4944287268
## [19] 4946806477 4955630841 4977309728 5037916346 5045191517 5060190446
## [25] 5080525118 5092234458 5113821481 5114714358 5117977273 5134130510
## [31] 5138848511 5139217248 5141912737 5161775909 5176256941 5222672937
## [37] 5224099864 5229367193 5238975147 5242654333 5254796003 5278143666
## [43] 5300030235 5328802719 5340453463 5364053585 5369299134 5405369398
## [49] 5413776697 5418395979 5440791356 5441823282 5449813596 5453918445
## [55] 5466643854 5480282409 5481915530 5485483795 5495184096 5512371848
## [61] 5556432379 5574110489 5581274533 5591952698 5596140059 5600467667
## [67] 5600992860 5628319228 5628456643 5640703973 5640928004 5677418290
## [73] 5683280528 5683389718 5693264439 5714460100 5723024440 5729519479
## [79] 5730717243 5777777395 5796599901 5796710768 5823758731 5826469616
```

```
## [85] 5874061480 5877655195 5877781605 5901414781 5919966201 5950073972
## [91] 5971206893 5987368876 5989112142 5994879529 6002473863 6008406786
## [97] 6010520558 6014646140 6019971220
```

```
listdata=as.list(data)
```

```
listdata
```

```
## $match_id
```

```
## [1] 5796599901 5796710768 4632569639 5080525118 5176256941 5989112142
## [7] 5730717243 5113821481 5628319228 5640928004 4897617647 5480282409
## [13] 5114714358 4466830103 5640703973 6019971220 5300030235 5971206893
## [19] 5994879529 5224099864 5901414781 5987368876 5677418290 4891379575
## [25] 5600467667 5440791356 5600992860 5340453463 4360290555 5139217248
## [31] 6014646140 5060190446 4608178386 5874061480 5238975147 5729519479
## [37] 5369299134 5950073972 4347235141 5823758731 4593309564 6010520558
## [43] 5777777395 4678695743 4919856642 5574110489 4623556133 4870534464
## [49] 5418395979 5628456643 5581274533 5441823282 4401994907 4683207830
## [55] 5092234458 5117977273 5405369398 4946806477 5877655195 5512371848
## [61] 5141912737 4807632060 5278143666 5222672937 5138848511 4977309728
## [67] 5723024440 6002473863 5161775909 6008406786 5481915530 5877781605
## [73] 5596140059 5134130510 5254796003 5693264439 5683280528 5037916346
## [79] 5328802719 5364053585 5714460100 5453918445 5826469616 5485483795
## [85] 5413776697 5449813596 4823117410 5045191517 4955630841 5242654333
## [91] 4944287268 5229367193 5495184096 4872317348 5591952698 5919966201
## [97] 5683389718 5466643854 5556432379
```

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##
```

```
## $radiant_win
```

```
## [1] FALSE TRUE FALSE FALSE TRUE FALSE FALSE FALSE TRUE TRUE TRUE TRUE
## [13] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [25] TRUE FALSE FALSE TRUE TRUE TRUE FALSE TRUE FALSE FALSE TRUE TRUE
## [37] TRUE TRUE FALSE TRUE TRUE TRUE FALSE TRUE TRUE FALSE TRUE TRUE FALSE
## [49] TRUE FALSE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE FALSE
## [61] TRUE FALSE FALSE TRUE FALSE TRUE FALSE FALSE TRUE FALSE TRUE TRUE
## [73] TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE TRUE
## [85] TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE TRUE TRUE TRUE
## [97] TRUE FALSE FALSE
```

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##
```

```
## $freq_r
```

```
## [1] 29.8 29.8 12.2 11.0 42.2 45.4 170.6 2.0 287.8 65.4 57.2 159.2
## [13] 42.5 106.6 132.8 56.2 13.8 NA 222.0 28.0 29.2 98.8 178.4 109.2
## [25] 140.6 186.6 2.5 16.2 46.8 57.2 88.6 90.0 7.2 36.0 85.6 274.0
## [37] 131.6 198.0 6.2 134.0 75.2 163.4 NA 135.6 26.6 23.6 8.2 176.0
## [49] 106.0 288.0 158.6 120.8 1.0 18.2 41.0 76.0 18.0 NA 81.6 95.0
## [61] 197.2 38.0 40.4 4.0 43.0 37.0 45.4 95.8 36.0 85.8 13.8 70.8
## [73] 195.0 7.0 142.6 133.6 186.6 87.8 10.0 27.5 239.2 136.2 71.6 261.0
## [85] 101.0 74.2 50.4 NA 23.6 3.0 32.2 137.0 132.6 106.6 131.2 34.5
## [97] 256.4 101.0 183.6
```

```
##
```

```
## $win_pct_r
```

```
## [1] 0.6534193 0.6534193 0.1404762 0.1818182 0.4574555 0.4193409 0.5264108
## [8] 0.0000000 0.6203929 0.6267639 0.5237555 0.4788596 0.4687889 0.5526349
## [15] 0.5097318 0.5309129 0.5118581 NA 0.4477352 0.2258407 0.5420033
```

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## [22] 0.4508924 0.5515661 0.5641900 0.4905469 0.6526769 0.2500000 0.2719114
## [29] 0.5963535 0.6140452 0.5471228 0.5321404 0.1416667 0.2851800 0.5934145
## [36] 0.4525547 0.5091375 0.3959385 0.8380952 0.5120051 0.4830962 0.4757318
## [43]      NA 0.5456963 0.5338041 0.7799331 0.3707143 0.6000000 0.6295876
## [50] 0.5208333 0.6353311 0.5778040 1.0000000 0.6323300 0.3534523 0.5832234
## [57] 0.6111111      NA 0.6241557 0.3568355 0.5597142 0.5266667 0.4460009
## [64] 0.7500000 0.4375337 0.5138544 0.7371429 0.2948403 0.5000000 0.5062445
## [71] 0.1965640 0.4508239 0.4666667 0.1666667 0.5643052 0.5238949 0.5777078
## [78] 0.4582993 0.2772031 0.7245372 0.4113908 0.5022336 0.4478010 0.4674330
## [85] 0.5407047 0.4445639 0.5157519      NA 0.5948992 1.0000000 0.5383834
## [92] 0.5328467 0.4985569 0.6271506 0.5557551 0.6228070 0.5045965 0.5049505
## [99] 0.5228538
##
## $duration_avg_win_r
## [1] 32.09696 32.09696 30.07000 26.60000 34.08308 33.32407 33.64308      NA
## [9] 35.29406 37.35061 34.81627 34.40844 32.93283 34.91631 32.63575 36.97540
## [17] 36.69451      NA 33.73294 36.55568 36.01521 34.21427 34.77052 34.21306
## [25] 26.66287 33.09384 27.83333 26.26127 35.38575 36.13098 31.58525 37.11181
## [33] 41.50000 36.82669 36.81754 24.83468 29.29403 32.82533 31.79556 37.23292
## [41] 36.03718 32.13805      NA 36.85176 37.36698 29.03526 28.94750 35.47760
## [49] 31.64839 25.02356 32.22441 36.37714 31.95000 36.36597 39.63583 38.22204
## [57] 30.08333      NA 33.19382 33.23157 33.63962 31.37135 41.26471 29.01667
## [65] 36.64620 37.16783 32.36690 36.47484 40.99630 33.46819 41.67315 35.34769
## [73] 27.87179 26.44167 36.44053 37.04017 35.02384 34.36435 40.96167 29.49687
## [81] 35.42402 36.44895 36.04587 29.01148 33.13694 32.58193 41.61598      NA
## [89] 25.34776 26.53889 37.99268 40.90571 36.57672 37.67871 34.76998 32.39154
## [97] 24.90235 23.90588 28.26796
##
## $duration_avg_lose_r
## [1] 40.58606 40.58606 41.73286 27.47037 31.86463 33.38017 35.66973 35.50000
## [9] 39.17398 39.92489 35.38061 34.43275 41.41678 36.29502 37.57946 38.59437
## [17] 28.37649      NA 34.06393 29.32287 29.05594 34.31869 36.56583 36.27793
## [25] 27.98546 37.50341 30.26042 31.51014 35.47418 39.68136 31.04065 38.05562
## [33] 30.40514 34.79625 40.54806 25.05744 27.61938 34.13660 19.08333 38.22815
## [41] 33.92623 36.65151      NA 38.52503 29.23944 37.75833 29.97950 35.85875
## [49] 38.95772 23.86002 36.17849 34.97165      NA 41.33917 39.09162 36.74842
## [57] 27.69762      NA 35.82975 28.90058 39.27421 32.88926 38.77805 28.23333
## [65] 35.35029 37.70793 37.77717 33.59747 35.27130 36.14235 35.75462 33.32290
## [73] 27.72933 32.79271 36.17881 36.80197 36.98955 34.97960 30.14838 36.64028
## [81] 34.39591 36.83189 33.22034 27.31751 35.51741 31.29450 42.04452      NA
## [89] 32.89506      NA 30.44914 37.82995 36.55982 40.51156 38.63984 38.23507
## [97] 24.97208 24.96633 27.53402
##
## $actions_per_min_avg_r
## [1] 316.8472 316.8472 211.0746 209.7455      NaN 254.5968 282.9257 122.5000
## [9] 235.6521 263.9289      NaN 164.4252 242.2746      NaN 225.1191 180.3191
## [17]      NaN      NA      NaN      NaN 286.4950      NaN 235.5135 278.9649
## [25]      NaN      NaN 213.3333      NaN 253.2849      NaN      NaN 264.2459
## [33] 158.1417 274.5261      NaN 183.1314 200.0639      NaN 220.1619 239.2531
## [41] 201.1142 311.3689      NA      NaN 204.9478 315.3572 181.7868 307.9328
## [49]      NaN      NaN      NaN      NaN 172.0000 199.3891 283.1100 334.1866
## [57] 205.4722      NA 267.4103 258.0983      NaN      NaN 266.9384 243.9500
## [65]      NaN 237.1855 210.8995      NaN 181.2222      NaN 282.1646      NaN
## [73]      NaN 346.8125      NaN 230.9784 178.1077      NaN      NaN      NaN

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## [81] 212.9155      NaN 284.9485      NaN      NaN 190.4491      NaN      NA
## [89] 305.2255 227.4667 203.1431 214.0117 245.8239 194.5986 217.8450 356.5066
## [97]      NaN 182.0733      NaN
##
## $sancient_kills_avg_r
## [1] 6.7380148 6.7380148 5.5801587 2.8363636      NaN 4.7940335
## [7] 5.8467637 1.5000000 7.0475549 4.7161939      NaN 7.5487252
## [13] 1.8844178      NaN 7.3188367 8.1546344      NaN      NA
## [19]      NaN      NaN 6.1548440      NaN 5.8958571 4.8231206
## [25]      NaN      NaN 0.1666667      NaN 11.3804929      NaN
## [31]      NaN 5.8408687 3.3083333 4.9686066      NaN 3.6175182
## [37] 4.1650816      NaN 8.0380952 2.4772126 3.3201434 5.8022409
## [43]      NA      NaN 4.9754672 3.5344482 3.6725000 6.0530794
## [49]      NaN      NaN      NaN      NaN 0.0000000 7.4506132
## [55] 6.0741333 7.1740293 1.0000000      NA 5.4033962 4.2034703
## [61]      NaN      NaN 4.6469546 2.5500000      NaN 3.7330389
## [67] 7.4452381      NaN 7.2777778      NaN 4.9381886      NaN
## [73]      NaN 2.2500000      NaN 6.0743196 6.5448533      NaN
## [79]      NaN      NaN 5.2852064      NaN 5.6173464      NaN
## [85]      NaN 5.6023236      NaN      NA 4.2961012 3.2000000
## [91] 3.9904445 8.4978102 4.5778979 7.8976951 5.0127452 0.2938596
## [97]      NaN 3.5326733      NaN
##
## $buyback_count_avg_r
## [1] 0.4672965 0.4672965 0.7865079 0.5454545      NaN 0.3359571 0.3737818
## [8] 1.5000000 0.4745440 0.4383924      NaN 0.4273753 0.4331024      NaN
## [15] 0.4065169 0.4874976      NaN      NA      NaN      NaN 0.3506897
## [22]      NaN 0.4755131 0.4284868      NaN      NaN 0.4166667      NaN
## [29] 0.5173823      NaN      NaN 0.5374211 0.5666667 0.3921239      NaN
## [36] 0.2145985 0.3969930      NaN 0.2666667 0.4368864 0.5118197 0.3981676
## [43]      NA      NaN 0.6616906 0.2876254 0.4446429 0.4770794      NaN
## [50]      NaN      NaN      NaN 0.0000000 0.5596433 0.7477879 0.5773321
## [57] 0.4027778      NA 0.3475832 0.3249143      NaN      NaN 0.7244444
## [64] 0.1500000      NaN 0.6838856 0.4555952      NaN 0.7055556      NaN
## [71] 0.6508590      NaN      NaN 0.4583333      NaN 0.3959410 0.3757826
## [78]      NaN      NaN      NaN 0.2860077      NaN 0.4205160      NaN
## [85]      NaN 0.2137333      NaN      NA 0.3553514 0.0000000 0.6703988
## [92] 0.4905109 0.3626502 0.6984654 0.4357026 0.5614035      NaN 0.2198020
## [99]      NaN
##
## $courier_kills_avg_r
## [1] 0.19419870 0.19419870 0.01111111 0.05454545      NaN 0.36797854
## [7] 0.26256606 0.00000000 0.22621332 0.45991022      NaN 0.31105107
## [13] 0.03132783      NaN 0.28826177 0.31075535      NaN      NA
## [19]      NaN      NaN 0.31088670      NaN 0.29131253 0.03838870
## [25]      NaN      NaN 0.08333333      NaN 0.02532095      NaN
## [31]      NaN 0.06189538 0.05000000 0.18057780      NaN 0.22992701
## [37] 0.30226107      NaN 0.00000000 0.26357464 0.03762334 0.28767857
## [43]      NA      NaN 0.02991453 0.35418060 0.01250000 0.04107936
## [49]      NaN      NaN      NaN      NaN 0.00000000 0.06369379
## [55] 0.08460419 0.05705739 0.30555556      NA 0.25817119 0.24589046
## [61]      NaN      NaN 0.17117409 0.30000000      NaN 0.00000000
## [67] 0.33166667      NaN 0.09444444      NaN 0.33402428      NaN
## [73]      NaN 0.00000000      NaN 0.39059866 0.28925567      NaN

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## [79]      NaN      NaN 0.30601351      NaN 0.25915233      NaN
## [85]      NaN 0.17579331      NaN      NA 0.06373205 0.26666667
## [91] 0.03109848 0.14306569 0.32386722 0.04164751 0.36615230 0.12061403
## [97]      NaN 0.27722772      NaN
##
## $deaths_avg_r
## [1] 4.560102 4.560102 6.106349 7.927273 4.711898 5.402652 5.432516
## [8] 11.000000 4.611322 4.506559 4.874027 4.515245 5.729958 4.920789
## [15] 4.798605 4.842100 4.793277      NA 4.992730 6.643301 5.926962
## [22] 5.382724 5.271816 4.293531 5.672643 4.090174 7.583333 5.645688
## [29] 4.667953 4.400872 5.552068 3.723037 6.716667 5.442621 4.511010
## [36] 7.040146 6.700769 5.163855 4.066667 5.300653 5.444394 5.432494
## [43]      NA 4.491780 6.066493 4.344147 4.733929 3.973397 4.230302
## [50] 6.197222 4.253422 4.894941 5.000000 5.737421 5.731768 4.250385
## [57] 5.236111      NA 4.733212 5.824076 4.914611 5.898333 5.569141
## [64] 4.250000 5.167550 6.084116 4.866548 6.179951 7.900000 5.131469
## [71] 7.093147 5.706797 5.831795 7.770833 4.408638 4.250547 4.395416
## [78] 4.044745 5.434291 4.844323 5.795786 4.497297 5.332555 6.508046
## [85] 4.901164 5.972048 6.575259      NA 5.472759 2.000000 6.154692
## [92] 6.995620 4.560726 4.195945 4.676432 5.247807 6.720130 6.279208
## [99] 5.298525
##
## $denies_avg_r
## [1] 7.198182 7.198182 9.161111 7.236364 8.863704 7.523606 7.655926
## [8] 0.500000 8.297619 10.215568 9.432573 8.657140 5.589236 10.756053
## [15] 8.731314 7.416905 9.753408      NA 6.141778 6.846857 6.327603
## [22] 6.469243 8.294118 8.379813 2.636285 9.063177 8.333333 9.236072
## [29] 11.035112 8.783352 6.937697 9.695483 8.916667 6.766460 10.056311
## [36] 5.533577 7.549091 6.162576 9.561905 5.402712 7.115617 6.004197
## [43]      NA 10.475591 9.567101 7.634114 8.568571 9.072476 10.848097
## [50] 6.544444 8.452789 8.866034 11.000000 13.241992 8.443405 9.238895
## [57] 7.236111      NA 6.436703 7.849268 6.726673 8.005000 7.549595
## [64] 10.200000 7.769449 8.967957 8.984286 5.517838 8.400000 6.282365
## [71] 8.008366 6.676308 2.952821 5.500000 8.682031 8.845382 8.203989
## [78] 7.174889 6.955172 7.372977 6.728283 9.984556 8.218931 7.855172
## [85] 7.588635 4.436067 13.489240      NA 6.315406 10.333333 9.638278
## [92] 8.217518 9.597612 9.596300 8.055816 7.392544 5.652676 6.615842
## [99] 3.032302
##
## $firstblood_claimed_avg_r
## [1] 0.11558934 0.11558934 0.05634921 0.12727273 0.10742910 0.13694791
## [7] 0.09569794 0.00000000 0.10251900 0.13127817 0.17897263 0.09564238
## [13] 0.42228362 0.08622230 0.10102421 0.09510196 0.04920635      NA
## [19] 0.09112719 0.08736299 0.07617406 0.09809828 0.09417488 0.10136461
## [25] 0.09604260 0.09858093 0.08333333 0.02777778 0.11056559 0.10408576
## [31] 0.05221851 0.13047398 0.12500000 0.11674400 0.10804968 0.09562044
## [37] 0.09564103 0.09257760 0.09523809 0.10489600 0.09560921 0.09649860
## [43]      NA 0.10393110 0.09344488 0.12073579 0.09000000 0.09444444
## [49] 0.09999960 0.10383275 0.10656904 0.09126665 0.00000000 0.09832776
## [55] 0.14108149 0.09202686 0.09722222      NA 0.09957069 0.08162142
## [61] 0.10084930 0.08735632 0.06523617 0.15000000 0.05162493 0.06400667
## [67] 0.11607143 0.10661651 0.08888889 0.09764717 0.06351074 0.12546674
## [73] 0.09533679 0.00000000 0.11213853 0.10645274 0.10290504 0.11775903
## [79] 0.10873016 0.11595216 0.08173703 0.09745057 0.08712531 0.11307692

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## [85] 0.13642899 0.08219178 0.09240837          NA 0.13570166 0.00000000
## [91] 0.09079974 0.09635036 0.06541434 0.12853196 0.10075881 0.08771930
## [97] 0.09336512 0.09900990 0.09515420
##
## $gold_avg_r
## [1] 2090.2111 2090.2111 1535.9135  929.4182 1800.7297 1444.2325 1618.6363
## [8]  527.0000 1672.1302 2371.7296 1729.0566 1648.9903 1687.3979 1954.4311
## [15] 1464.8855 1711.0999 1635.6442          NA 1501.3084 1043.6715 1760.2718
## [22] 1484.5191 1922.0471 1799.4364 1619.5032 1803.8093 1023.8333 1471.2618
## [29] 1711.9166 1871.2691 1513.0887 2187.6270 1344.4167 1523.0306 2049.2248
## [36] 1177.8285 1574.5207 1442.1170 2191.7286 1695.5643 1729.5553 1607.5835
## [43]          NA 2081.1323 1660.8480 1627.7271 1111.6879 2079.2982 1770.0267
## [50] 1301.4708 1689.9589 1805.4340 2133.0000 2435.5651 1889.3937 2122.6653
## [57] 1371.9444          NA 1555.7924 1225.5809 1566.5555 1338.5800 1865.6477
## [64] 1937.0000 1734.6509 1870.1505 1575.8081 1359.4224 1997.8667 1796.4940
## [71] 1397.4143 1605.3151 1584.2595 1084.4375 1746.3211 2030.8174 1727.0768
## [78] 1503.9732 1540.8057 1674.1048 1442.4293 1787.5919 1816.6788 1361.6874
## [85] 1590.6302 1649.0599 2184.8947          NA 1267.2660 1534.5333 1857.3110
## [92] 2069.7679 1737.7961 1813.5462 1734.3070 1763.1886 1290.7507 1193.4475
## [99] 1684.9287
##
## $gold_per_min_avg_r
## [1] 435.5398 435.5398 422.1270 413.9455 416.1454 425.7679 427.4632 220.0000
## [9] 429.1646 421.8050 428.4165 415.1208 357.8580 451.0239 413.3724 451.8551
## [17] 410.1627          NA 407.8471 378.2052 449.8124 426.9546 411.1654 427.2083
## [25] 436.7192 418.2633 352.0000 382.0660 441.8902 490.2357 449.3487 489.7112
## [33] 343.8083 374.7267 447.0122 439.2299 443.2365 402.1836 455.8571 383.1000
## [41] 381.9791 412.2647          NA 439.9766 421.3582 410.2826 399.2936 446.3422
## [49] 415.1810 428.4389 410.0112 424.2117 431.0000 513.1136 423.5532 451.2671
## [57] 372.4722          NA 429.3482 379.3819 455.6805 428.4000 409.3069 431.1500
## [65] 422.0257 442.1946 458.2301 391.8829 484.1444 426.8282 369.4664 403.5540
## [73] 425.9426 355.0625 432.6577 438.2662 433.3273 431.2833 369.4933 450.0130
## [81] 406.8836 415.5804 412.0275 430.1632 410.1112 420.9840 522.5796          NA
## [89] 455.3431 448.8667 431.6329 512.5255 416.1030 458.8147 408.3827 371.4518
## [97] 440.8231 417.0376 423.2984
##
## $gold_spent_avg_r
## [1] 13093.804 13093.804 15254.440 10126.636 12428.797 12551.892 13412.727
## [8]  6742.500 14101.707 13802.910 13413.870 12748.162 11078.859 14328.762
## [15] 13081.620 15534.202 12542.228          NA 12416.358 10831.799 13611.084
## [22] 13010.368 12643.136 13521.287 10214.750 12814.944  8851.667 10707.909
## [29] 13824.018 16852.468 12652.336 16457.884  9400.375 12123.478 15352.271
## [36]  9810.526 11001.013 12168.689 12377.643 12682.923 11613.391 12663.903
## [43]          NA 14421.420 12600.596 11436.139 11094.623 14017.647 12553.060
## [50]  9354.003 12282.646 13475.872 12610.000 16954.374 14388.423 15193.948
## [57]  9717.569          NA 13234.662 10692.766 15111.928 12426.567 13795.302
## [64] 11081.250 13620.439 14443.436 14328.414 12134.441 16499.278 13040.587
## [71] 12202.891 12586.020 10329.697 10147.188 14357.338 14355.728 14189.027
## [78] 13354.991 10783.404 12744.547 12777.843 13781.669 12754.590 10732.962
## [85] 12598.400 11656.190 19181.332          NA 11735.782 10993.667 13117.170
## [92] 18240.182 13654.257 15991.868 13099.044 10830.636  9755.707  9077.455
## [99] 10212.566
##
## $hero_damage_avg_r

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## [1] 16241.17 16241.17 18990.02 17911.27 15314.71 17031.04 17183.68 9898.50
## [9] 19074.78 19647.92 16208.45 16035.74 14207.74 17224.89 16841.33 19334.43
## [17] 18223.86      NA 16091.03 14762.78 18488.24 15947.49 16807.31 16160.07
## [25] 14000.74 16812.29 12385.42 15822.25 15936.80 19591.03 19219.66 19981.07
## [33] 13983.50 15691.31 19050.64 15503.75 18689.87 15702.20 15982.98 16855.41
## [41] 14577.80 18066.07      NA 16356.37 16859.77 17085.22 13326.99 15610.14
## [49] 15566.63 14821.73 16611.37 17648.58 21680.00 25939.79 18048.47 18871.57
## [57] 14287.68      NA 17083.59 15144.66 18267.29 15619.02 18385.15 15224.60
## [65] 17691.05 19243.15 18042.65 16331.15 26004.74 18097.02 16350.82 16902.89
## [73] 14046.09 19426.33 16855.53 19411.02 16564.53 15224.89 15118.07 19294.37
## [81] 16864.06 16317.55 17174.82 17519.67 15917.47 15809.98 31995.28      NA
## [89] 15754.98 15070.60 18545.15 23825.75 17264.51 17134.89 17641.92 15003.80
## [97] 15044.31 15054.09 14213.22
##
## $hero_healing_avg_r
## [1] 1593.9560 1593.9560 530.8056 308.5455 733.5144 779.8330 901.5848
## [8] 200.0000 1249.9510 1234.8912 998.9974 910.8228 1428.1513 1123.3245
## [15] 1210.8069 1123.2719 323.4545      NA 775.3407 674.4580 561.2931
## [22] 887.0524 1046.7079 902.1901 536.3279 1314.0239 268.4167 927.7343
## [29] 940.8772 1124.0332 846.4000 844.8126 500.6000 750.9585 1677.8267
## [36] 342.5168 823.3236 777.0462 1572.4810 958.6250 1113.6222 802.4899
## [43]      NA 1114.6276 783.6677 1861.6124 637.5864 930.9312 1141.2163
## [50] 523.6417 1150.6876 1190.3431 200.0000 1252.6274 932.6884 1035.0474
## [57] 1379.4583      NA 1397.2984 702.5446 742.8161 759.1717 959.1142
## [64] 948.9000 898.4615 1203.7867 1292.3196 910.5925 586.7500 712.6506
## [71] 1100.8320 661.8366 483.8185 737.4583 943.5258 978.4958 1008.2316
## [78] 737.6219 845.7343 606.7979 862.6804 868.2011 1210.8549 680.0828
## [85] 911.2173 463.7105 901.0576      NA 1144.3062 777.7333 1008.3074
## [92] 544.4847 1260.0623 1458.2781 866.4152 1574.9934 427.0143 606.1465
## [99] 571.6321
##
## $hero_kills_avg_r
## [1] 5.283281 5.283281 4.627778 5.781818      NaN 5.675387 5.648934 3.500000
## [9] 5.891800 5.528579      NaN 4.387813 3.672167      NaN 5.042040 5.167810
## [17]      NaN      NA      NaN      NaN 6.459097      NaN 5.161955 4.757202
## [25]      NaN      NaN 5.416667      NaN 4.837244      NaN      NaN 5.915651
## [33] 4.450000 4.279910      NaN 6.530657 6.450699      NaN 6.357143 4.444848
## [41] 4.144631 5.197132      NA      NaN 5.520382 6.482609 4.377143 4.628063
## [49]      NaN      NaN      NaN      NaN 9.000000 9.106503 5.135491 5.081123
## [57] 4.805556      NA 5.514407 4.440337      NaN      NaN 4.950967 5.900000
## [65]      NaN 5.888303 6.104524      NaN 7.411111      NaN 4.296816      NaN
## [73]      NaN 5.500000      NaN 5.739360 4.719688      NaN      NaN      NaN
## [81] 4.952054      NaN 5.008575      NaN      NaN 5.536327      NaN      NA
## [89] 5.506301 6.200000 5.858468 7.040876 4.935961 5.063132 5.199240 4.179825
## [97]      NaN 6.164356      NaN
```

```
str(listdata)
```

```
## List of 19
## $ match_id      : num [1:99] 5.80e+09 5.80e+09 4.63e+09 5.08e+09 5.18e+09 ...
## $ radiant_win   : logi [1:99] FALSE TRUE FALSE FALSE TRUE FALSE ...
## $ freq_r        : num [1:99] 29.8 29.8 12.2 11 42.2 ...
## $ win_pct_r     : num [1:99] 0.653 0.653 0.14 0.182 0.457 ...
## $ duration_avg_win_r : num [1:99] 32.1 32.1 30.1 26.6 34.1 ...
```

```
## $ duration_avg_lose_r      : num [1:99] 40.6 40.6 41.7 27.5 31.9 ...
## $ actions_per_min_avg_r    : num [1:99] 317 317 211 210 NaN ...
## $ ancient_kills_avg_r      : num [1:99] 6.74 6.74 5.58 2.84 NaN ...
## $ buyback_count_avg_r      : num [1:99] 0.467 0.467 0.787 0.545 NaN ...
## $ courier_kills_avg_r      : num [1:99] 0.1942 0.1942 0.0111 0.0545 NaN ...
## $ deaths_avg_r             : num [1:99] 4.56 4.56 6.11 7.93 4.71 ...
## $ denies_avg_r             : num [1:99] 7.2 7.2 9.16 7.24 8.86 ...
## $ firstblood_claimed_avg_r : num [1:99] 0.1156 0.1156 0.0563 0.1273 0.1074 ...
## $ gold_avg_r               : num [1:99] 2090 2090 1536 929 1801 ...
## $ gold_per_min_avg_r       : num [1:99] 436 436 422 414 416 ...
## $ gold_spent_avg_r         : num [1:99] 13094 13094 15254 10127 12429 ...
## $ hero_damage_avg_r        : num [1:99] 16241 16241 18990 17911 15315 ...
## $ hero_healing_avg_r       : num [1:99] 1594 1594 531 309 734 ...
## $ hero_kills_avg_r         : num [1:99] 5.28 5.28 4.63 5.78 NaN ...
```

```
class(listdata)
```

```
## [1] "list"
```

```
listdata[1:4]
```

```
## $match_id
## [1] 5796599901 5796710768 4632569639 5080525118 5176256941 5989112142
## [7] 5730717243 5113821481 5628319228 5640928004 4897617647 5480282409
## [13] 5114714358 4466830103 5640703973 6019971220 5300030235 5971206893
## [19] 5994879529 5224099864 5901414781 5987368876 5677418290 4891379575
## [25] 5600467667 5440791356 5600992860 5340453463 4360290555 5139217248
## [31] 6014646140 5060190446 4608178386 5874061480 5238975147 5729519479
## [37] 5369299134 5950073972 4347235141 5823758731 4593309564 6010520558
## [43] 5777777395 4678695743 4919856642 5574110489 4623556133 4870534464
## [49] 5418395979 5628456643 5581274533 5441823282 4401994907 4683207830
## [55] 5092234458 5117977273 5405369398 4946806477 5877655195 5512371848
## [61] 5141912737 4807632060 5278143666 5222672937 5138848511 4977309728
## [67] 5723024440 6002473863 5161775909 6008406786 5481915530 5877781605
## [73] 5596140059 5134130510 5254796003 5693264439 5683280528 5037916346
## [79] 5328802719 5364053585 5714460100 5453918445 5826469616 5485483795
## [85] 5413776697 5449813596 4823117410 5045191517 4955630841 5242654333
## [91] 4944287268 5229367193 5495184096 4872317348 5591952698 5919966201
## [97] 5683389718 5466643854 5556432379
##
## $radiant_win
## [1] FALSE TRUE FALSE FALSE TRUE FALSE FALSE FALSE TRUE TRUE TRUE TRUE
## [13] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
## [25] TRUE FALSE FALSE TRUE TRUE TRUE FALSE TRUE FALSE FALSE TRUE TRUE
## [37] TRUE TRUE FALSE TRUE TRUE FALSE TRUE TRUE FALSE TRUE TRUE FALSE
## [49] TRUE FALSE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE FALSE
## [61] TRUE FALSE FALSE TRUE FALSE TRUE FALSE FALSE TRUE FALSE TRUE TRUE
## [73] TRUE TRUE TRUE TRUE TRUE TRUE FALSE TRUE TRUE TRUE TRUE TRUE
## [85] TRUE FALSE FALSE FALSE FALSE FALSE TRUE FALSE FALSE TRUE TRUE TRUE
## [97] TRUE FALSE FALSE
##
## $freq_r
## [1] 29.8 29.8 12.2 11.0 42.2 45.4 170.6 2.0 287.8 65.4 57.2 159.2
```



```
## [13] 42.5 106.6 132.8 56.2 13.8 NA 222.0 28.0 29.2 98.8 178.4 109.2
## [25] 140.6 186.6 2.5 16.2 46.8 57.2 88.6 90.0 7.2 36.0 85.6 274.0
## [37] 131.6 198.0 6.2 134.0 75.2 163.4 NA 135.6 26.6 23.6 8.2 176.0
## [49] 106.0 288.0 158.6 120.8 1.0 18.2 41.0 76.0 18.0 NA 81.6 95.0
## [61] 197.2 38.0 40.4 4.0 43.0 37.0 45.4 95.8 36.0 85.8 13.8 70.8
## [73] 195.0 7.0 142.6 133.6 186.6 87.8 10.0 27.5 239.2 136.2 71.6 261.0
## [85] 101.0 74.2 50.4 NA 23.6 3.0 32.2 137.0 132.6 106.6 131.2 34.5
## [97] 256.4 101.0 183.6
##
## $win_pct_r
## [1] 0.6534193 0.6534193 0.1404762 0.1818182 0.4574555 0.4193409 0.5264108
## [8] 0.0000000 0.6203929 0.6267639 0.5237555 0.4788596 0.4687889 0.5526349
## [15] 0.5097318 0.5309129 0.5118581 NA 0.4477352 0.2258407 0.5420033
## [22] 0.4508924 0.5515661 0.5641900 0.4905469 0.6526769 0.2500000 0.2719114
## [29] 0.5963535 0.6140452 0.5471228 0.5321404 0.1416667 0.2851800 0.5934145
## [36] 0.4525547 0.5091375 0.3959385 0.8380952 0.5120051 0.4830962 0.4757318
## [43] NA 0.5456963 0.5338041 0.7799331 0.3707143 0.6000000 0.6295876
## [50] 0.5208333 0.6353311 0.5778040 1.0000000 0.6323300 0.3534523 0.5832234
## [57] 0.6111111 NA 0.6241557 0.3568355 0.5597142 0.5266667 0.4460009
## [64] 0.7500000 0.4375337 0.5138544 0.7371429 0.2948403 0.5000000 0.5062445
## [71] 0.1965640 0.4508239 0.4666667 0.1666667 0.5643052 0.5238949 0.5777078
## [78] 0.4582993 0.2772031 0.7245372 0.4113908 0.5022336 0.4478010 0.4674330
## [85] 0.5407047 0.4445639 0.5157519 NA 0.5948992 1.0000000 0.5383834
## [92] 0.5328467 0.4985569 0.6271506 0.5557551 0.6228070 0.5045965 0.5049505
## [99] 0.5228538
```

```
listdata$match_id
```

```
## [1] 5796599901 5796710768 4632569639 5080525118 5176256941 5989112142
## [7] 5730717243 5113821481 5628319228 5640928004 4897617647 5480282409
## [13] 5114714358 4466830103 5640703973 6019971220 5300030235 5971206893
## [19] 5994879529 5224099864 5901414781 5987368876 5677418290 4891379575
## [25] 5600467667 5440791356 5600992860 5340453463 4360290555 5139217248
## [31] 6014646140 5060190446 4608178386 5874061480 5238975147 5729519479
## [37] 5369299134 5950073972 4347235141 5823758731 4593309564 6010520558
## [43] 5777777395 4678695743 4919856642 5574110489 4623556133 4870534464
## [49] 5418395979 5628456643 5581274533 5441823282 4401994907 4683207830
## [55] 5092234458 5117977273 5405369398 4946806477 5877655195 5512371848
## [61] 5141912737 4807632060 5278143666 5222672937 5138848511 4977309728
## [67] 5723024440 6002473863 5161775909 6008406786 5481915530 5877781605
## [73] 5596140059 5134130510 5254796003 5693264439 5683280528 5037916346
## [79] 5328802719 5364053585 5714460100 5453918445 5826469616 5485483795
## [85] 5413776697 5449813596 4823117410 5045191517 4955630841 5242654333
## [91] 4944287268 5229367193 5495184096 4872317348 5591952698 5919966201
## [97] 5683389718 5466643854 5556432379
```

```
listdata$match_id[1:4]
```

```
## [1] 5796599901 5796710768 4632569639 5080525118
```

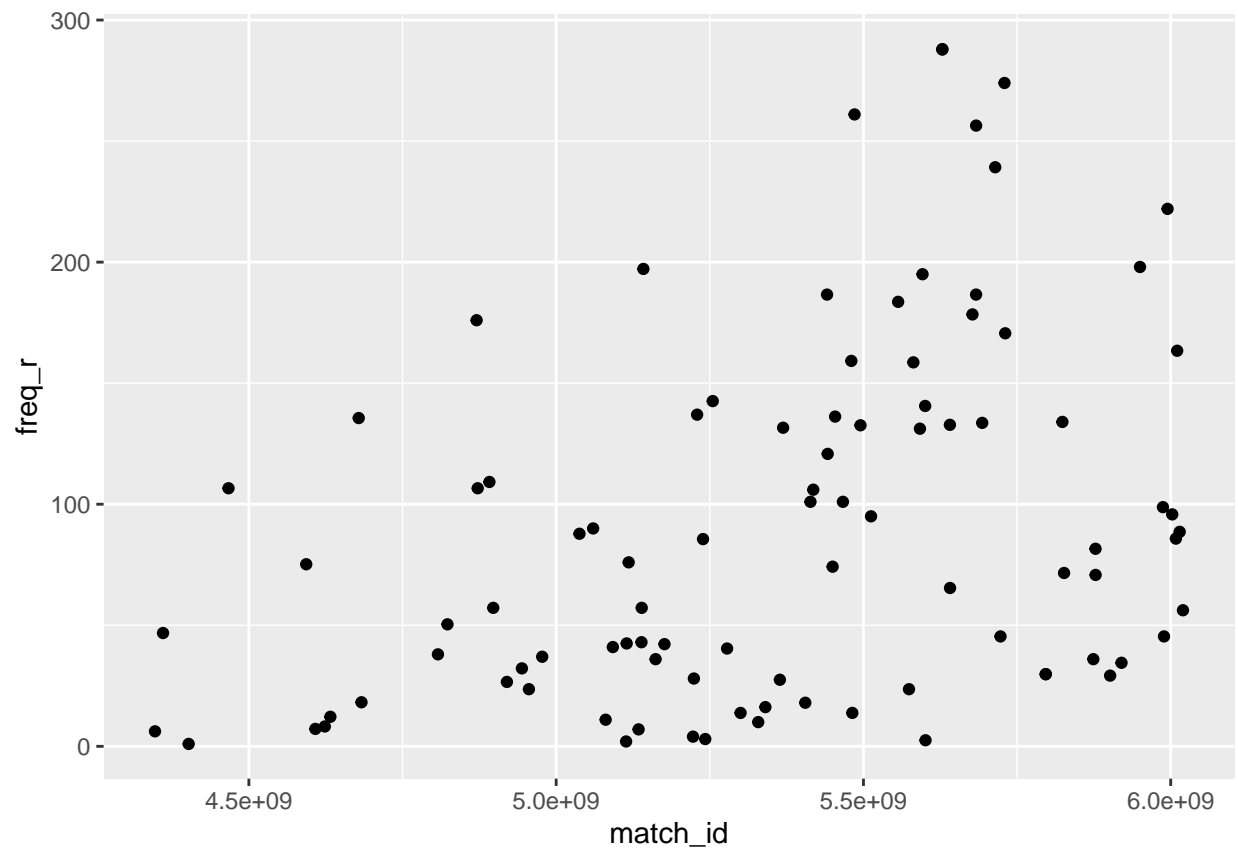
```
class(data)
```

```
## [1] "data.frame"
```

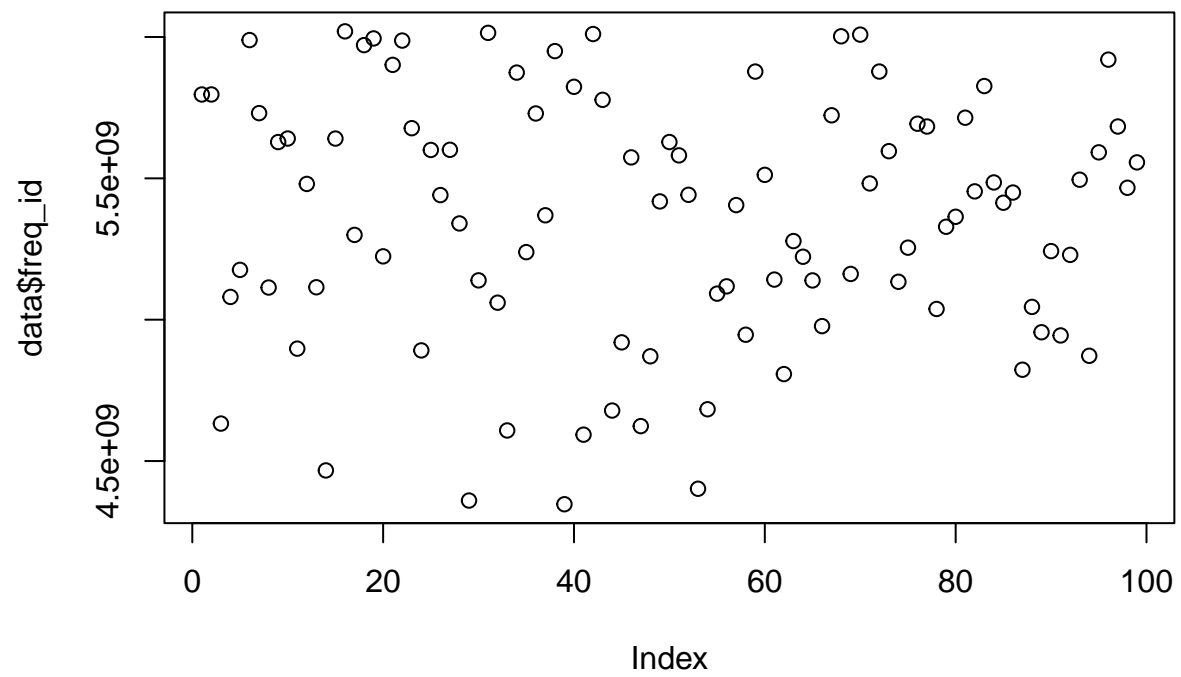
```
library(gcookbook)
library(ggplot2)
```

```
ggplot(data,aes(x=match_id,y=freq_r))+geom_point()
```

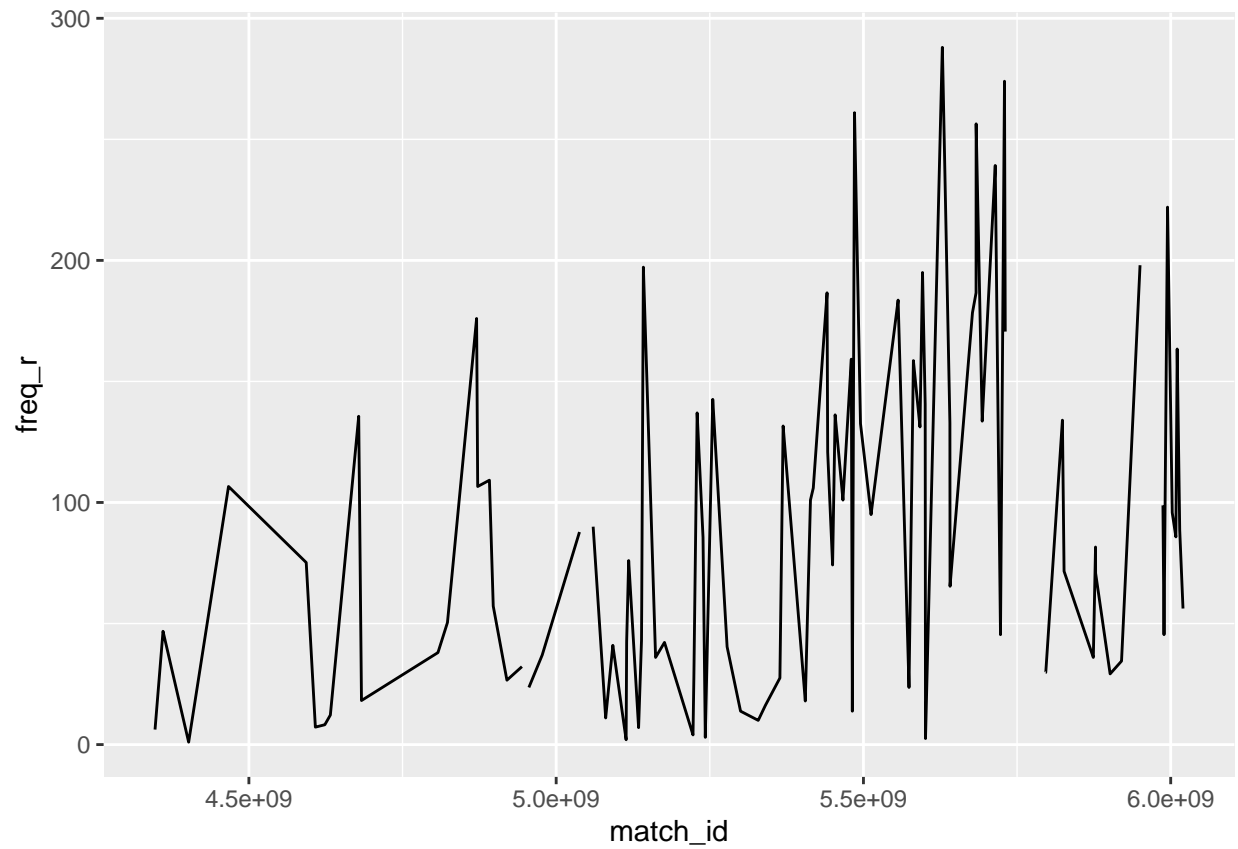
```
## Warning: Removed 4 rows containing missing values (geom_point).
```



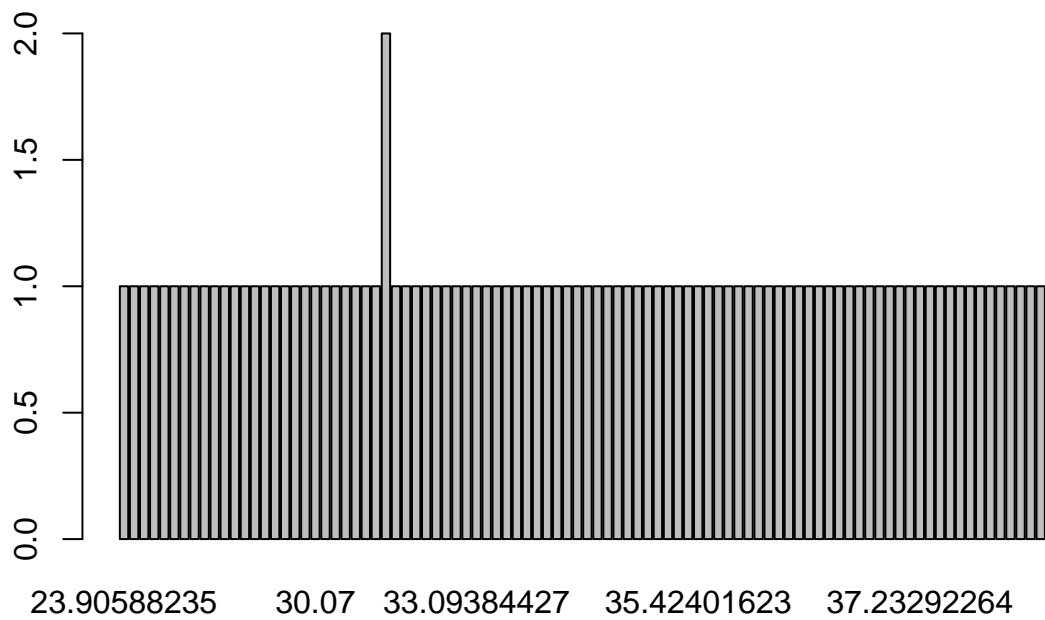
```
plot(data$match_id,data$freq_id)
```



```
ggplot(data,aes(x=match_id,y=freq_r))+geom_line()
```

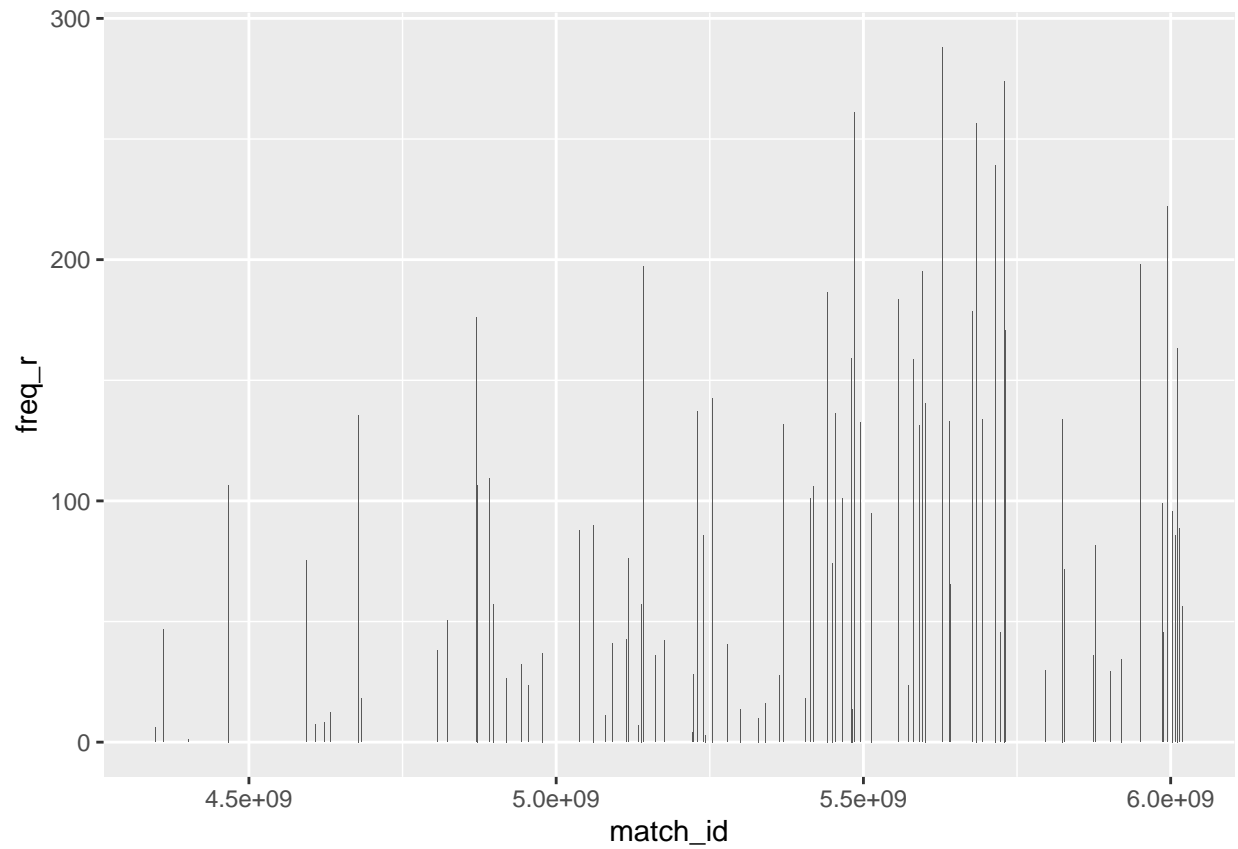


```
barplot(table(data$duration_avg_win_r))
```

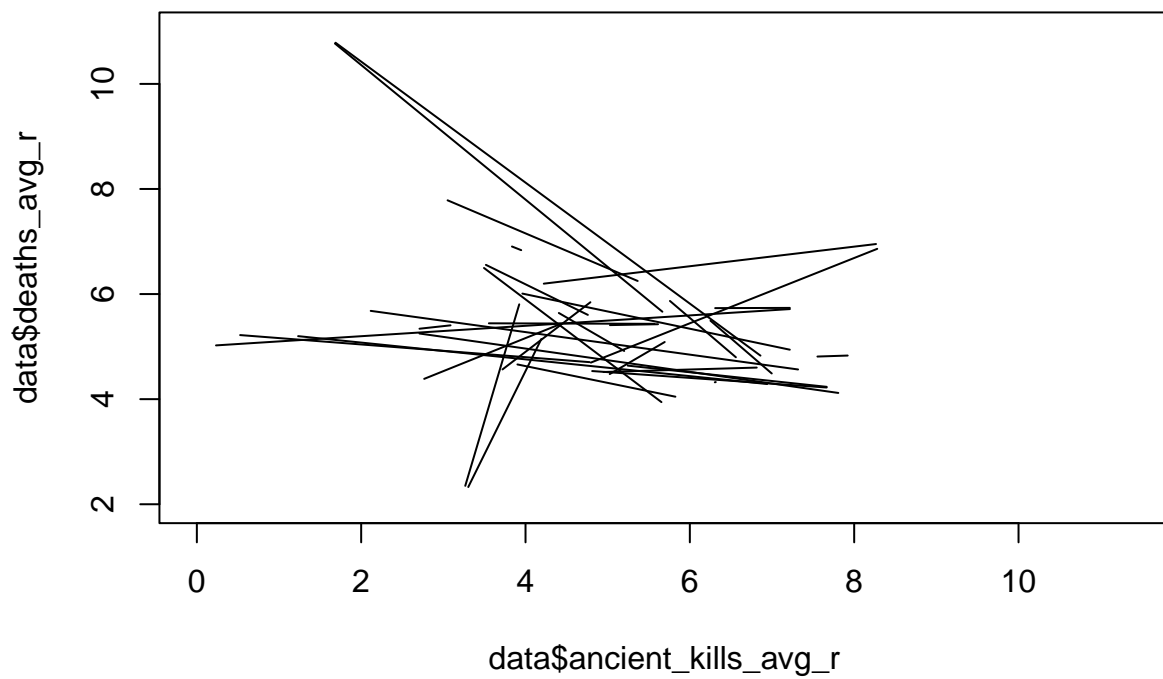


```
ggplot(data,aes(x=match_id,y=freq_r))+geom_col()
```

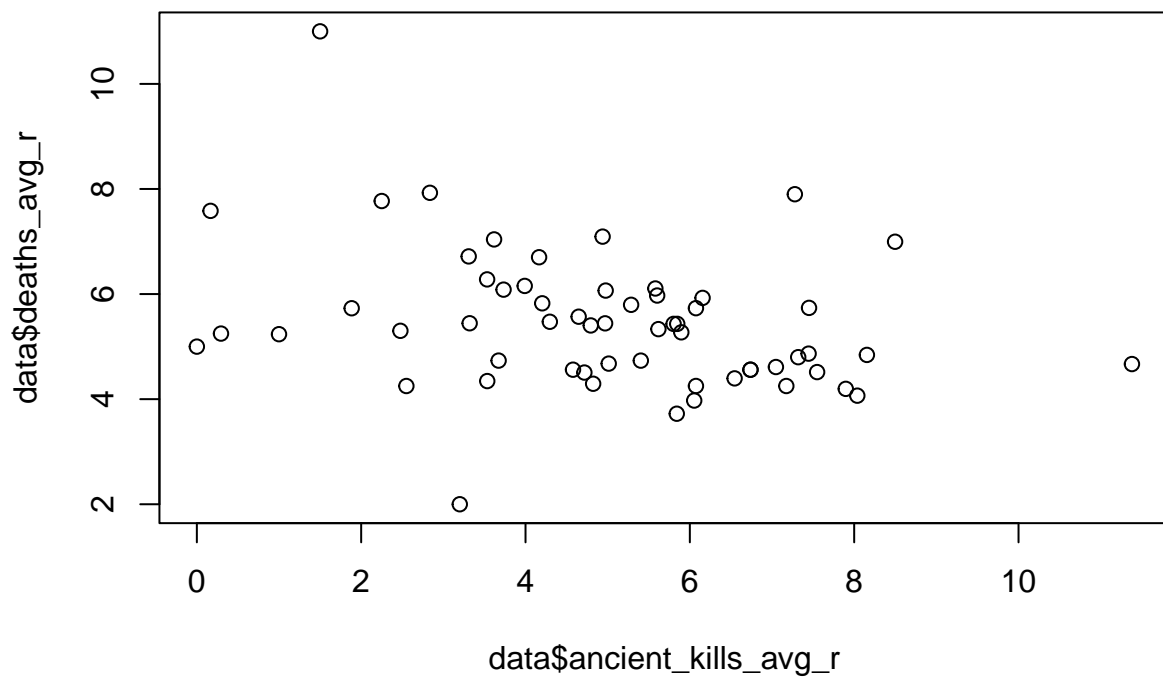
```
## Warning: Removed 4 rows containing missing values (position_stack).
```



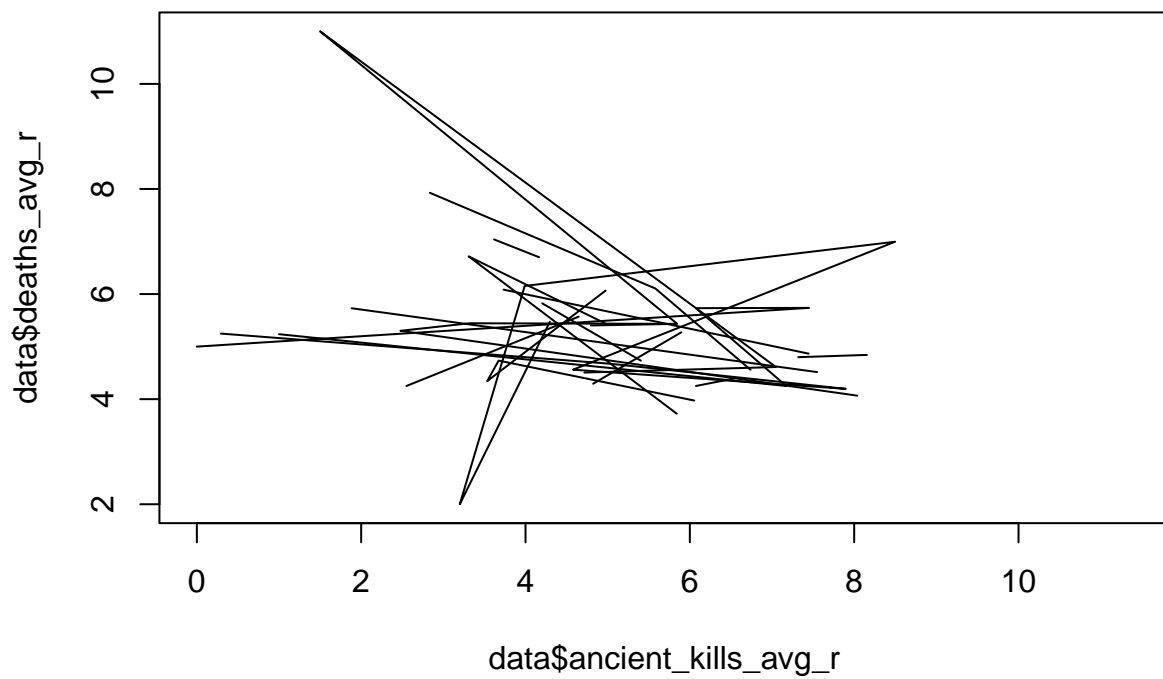
```
plot(data$ancient_kills_avg_r, data$deaths_avg_r, type = "c")
```



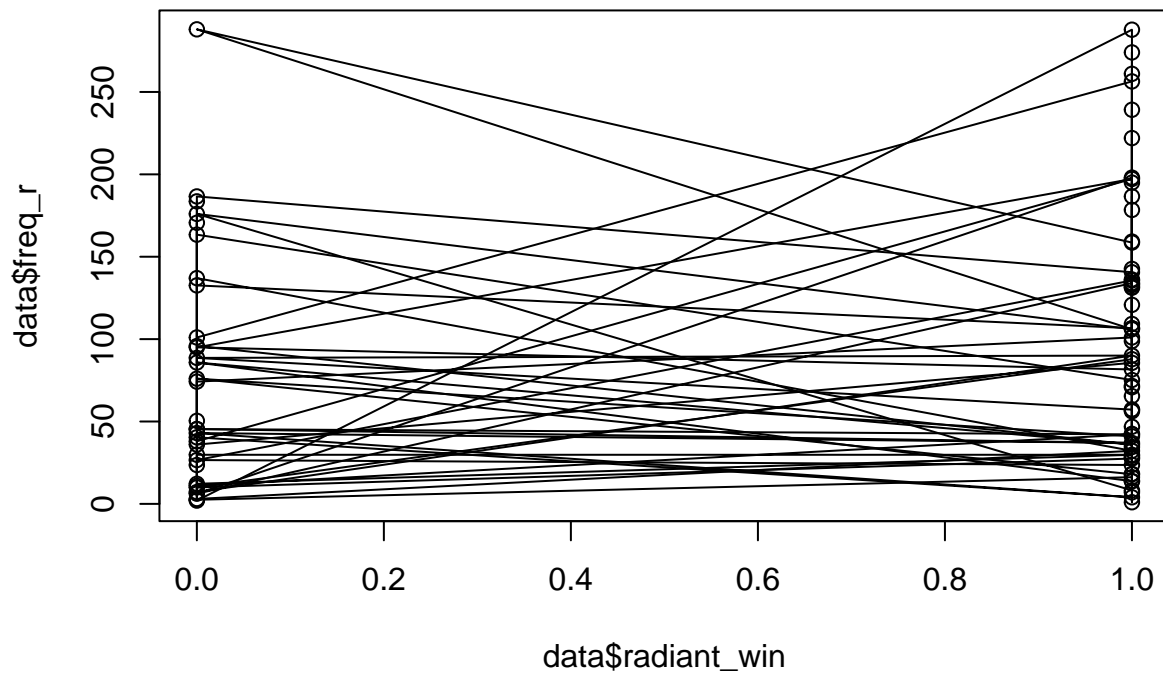
```
plot(data$ancient_kills_avg_r, data$deaths_avg_r, type = "p")
```



```
plot(data$ancient_kills_avg_r, data$deaths_avg_r, type = "l")
```

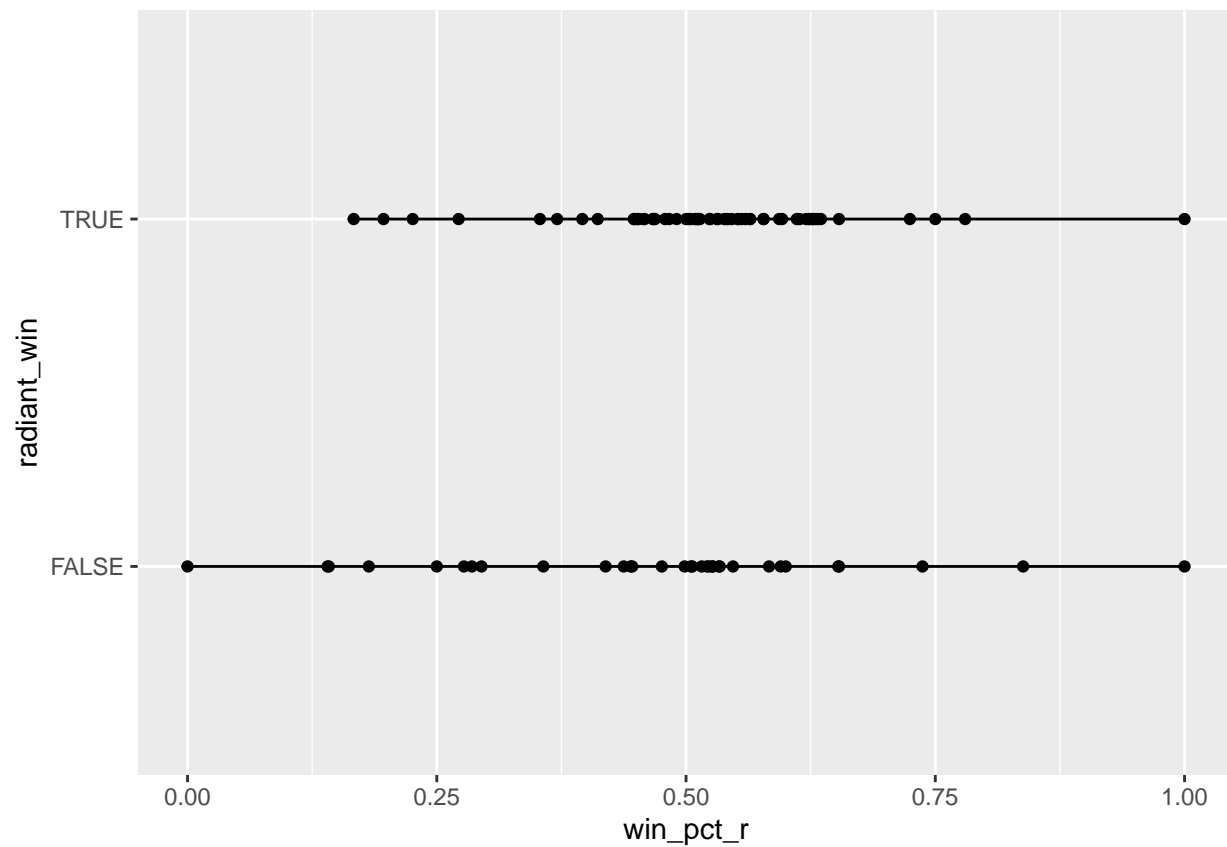
```
plot(data$radiant_win, data$freq_r, type = "l")  
points(data$radiant_win, data$freq_r)
```



```
ggplot(data, aes(x = win_pct_r, y = radiant_win)) +  
  geom_line() +  
  geom_point()
```

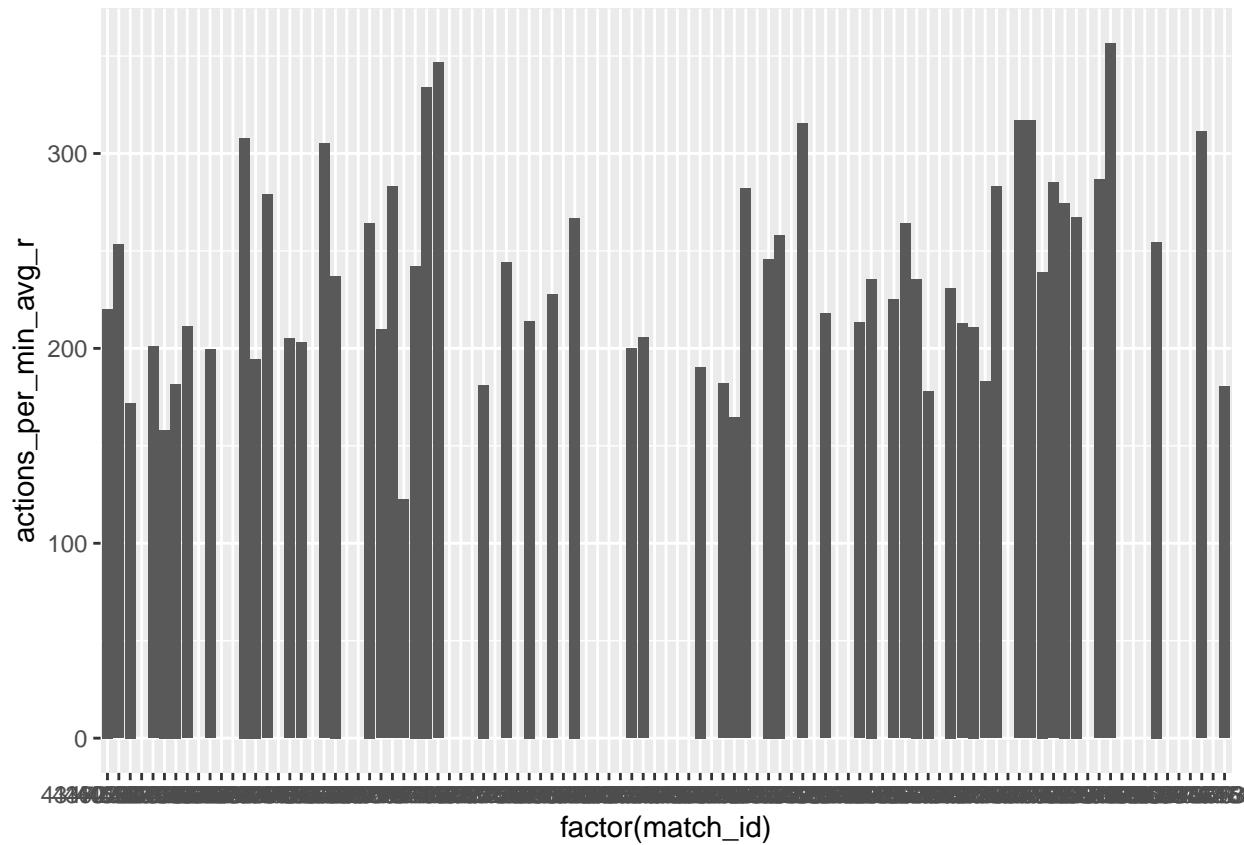
```
## Warning: Removed 4 row(s) containing missing values (geom_path).
```

```
## Warning: Removed 4 rows containing missing values (geom_point).
```



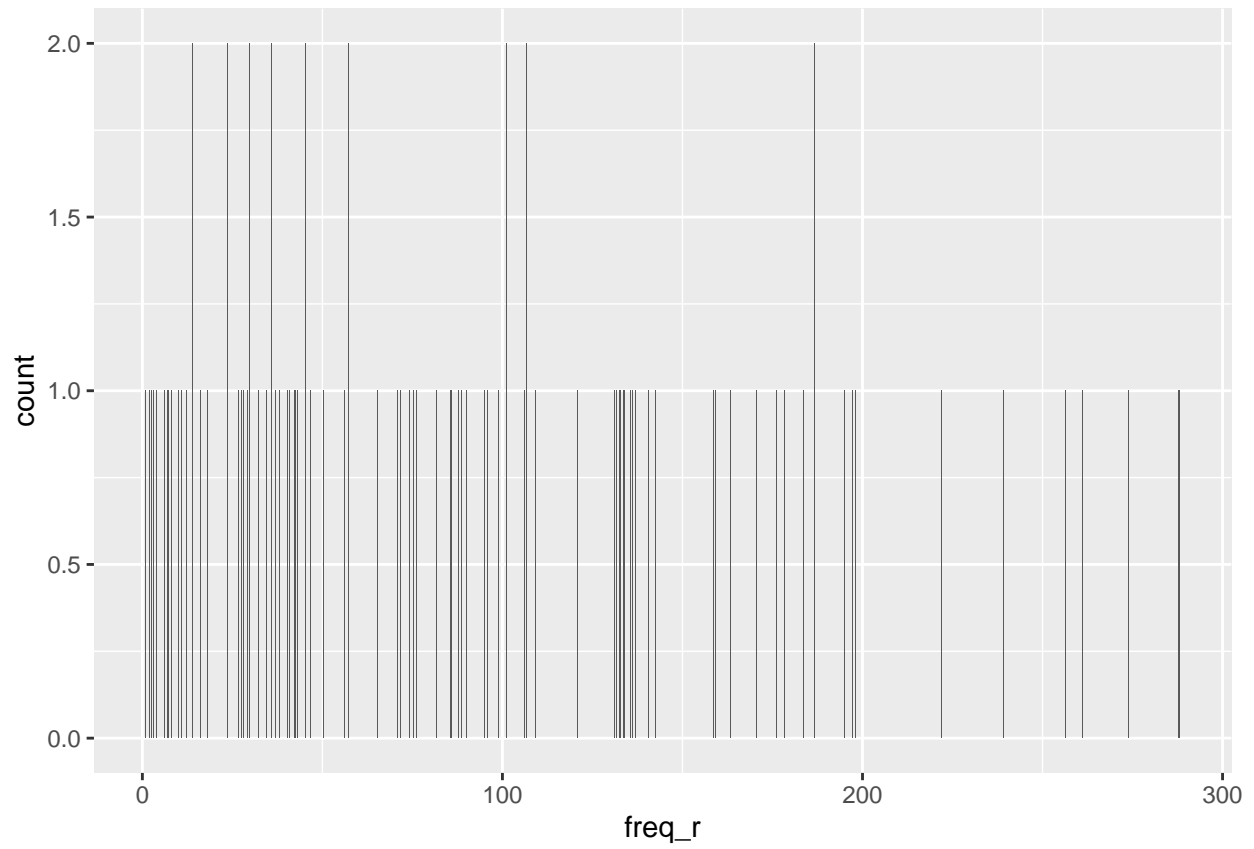
```
ggplot(data, aes(x = factor(match_id), y = actions_per_min_avg_r)) +  
  geom_col()
```

Warning: Removed 40 rows containing missing values (position_stack).

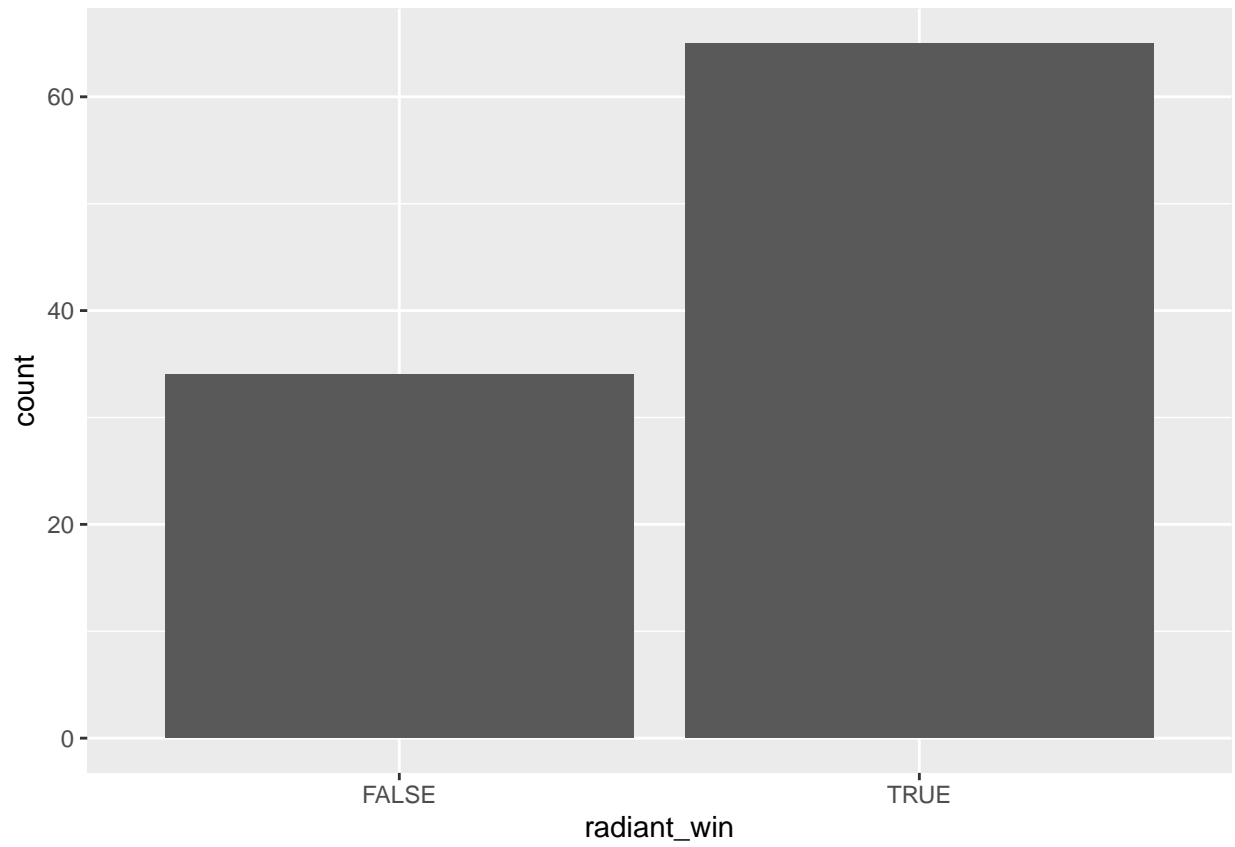


```
ggplot(data, aes(x = freq_r)) +  
  geom_bar()
```

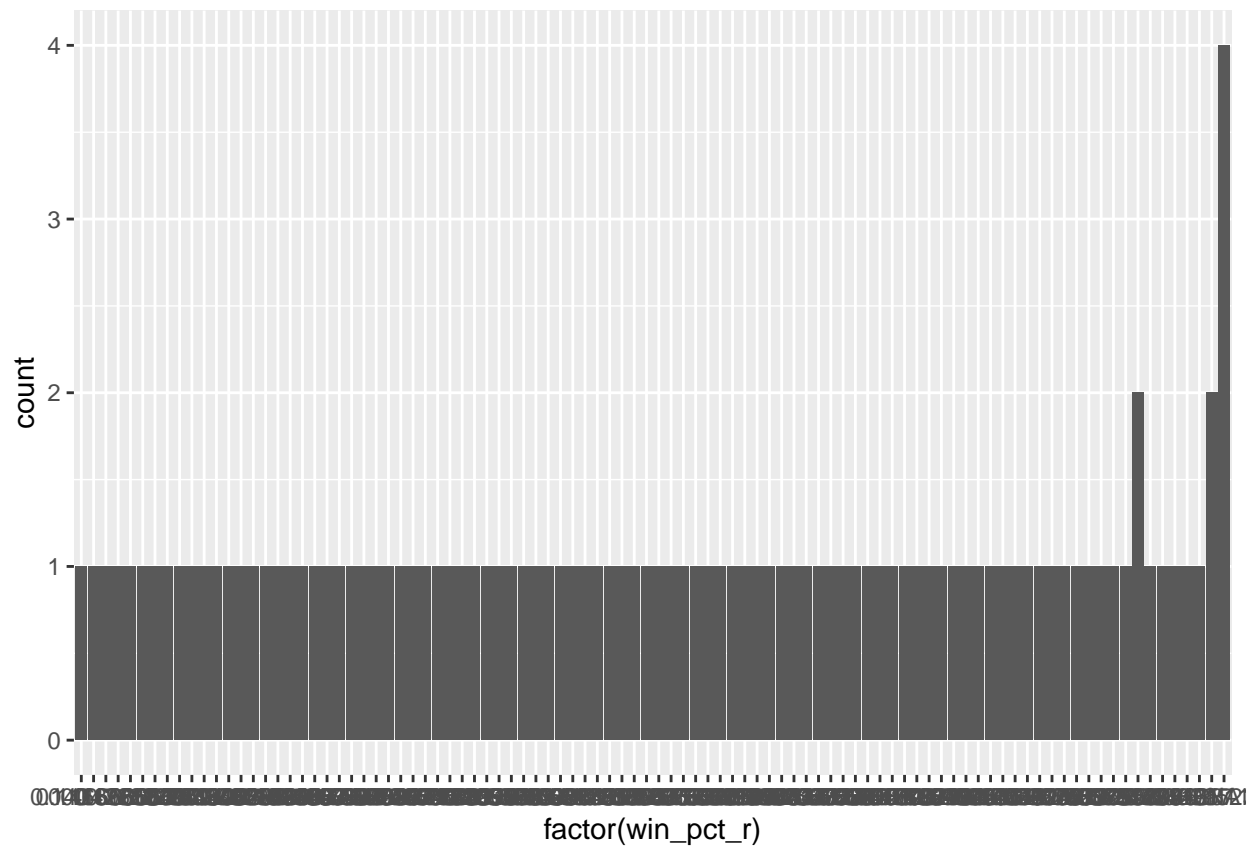
```
## Warning: Removed 4 rows containing non-finite values (stat_count).
```



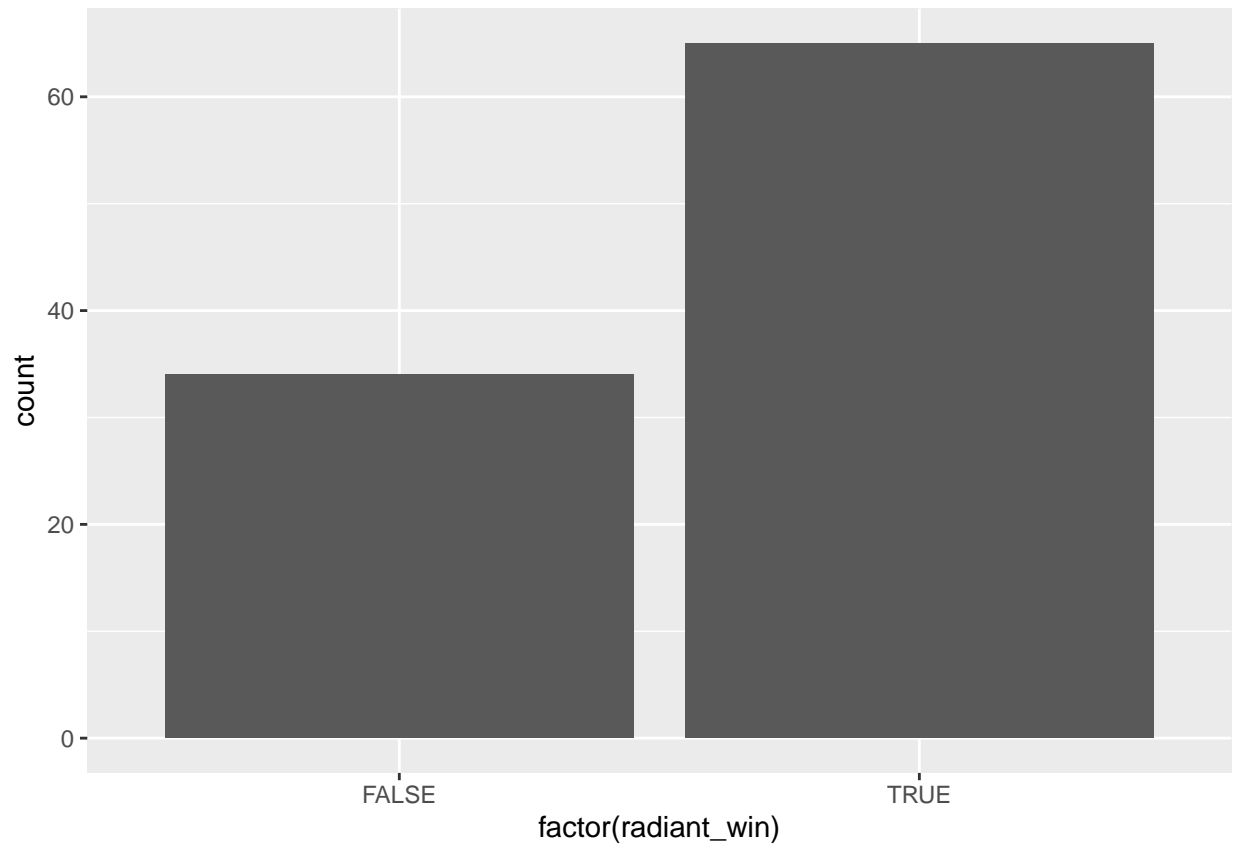
```
ggplot(data, aes(x = radiant_win)) +  
  geom_bar()
```



```
ggplot(data, aes(x = factor(win_pct_r))) +  
  geom_bar()
```

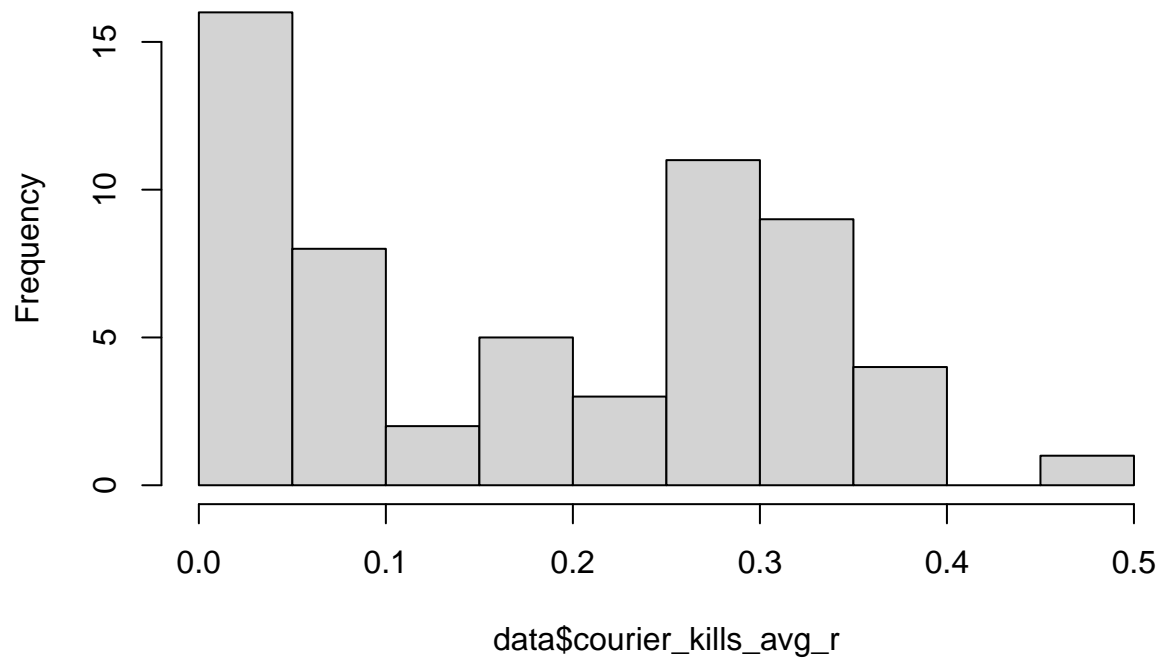


```
ggplot(data, aes(x = factor(radiant_win))) +  
  geom_bar()
```



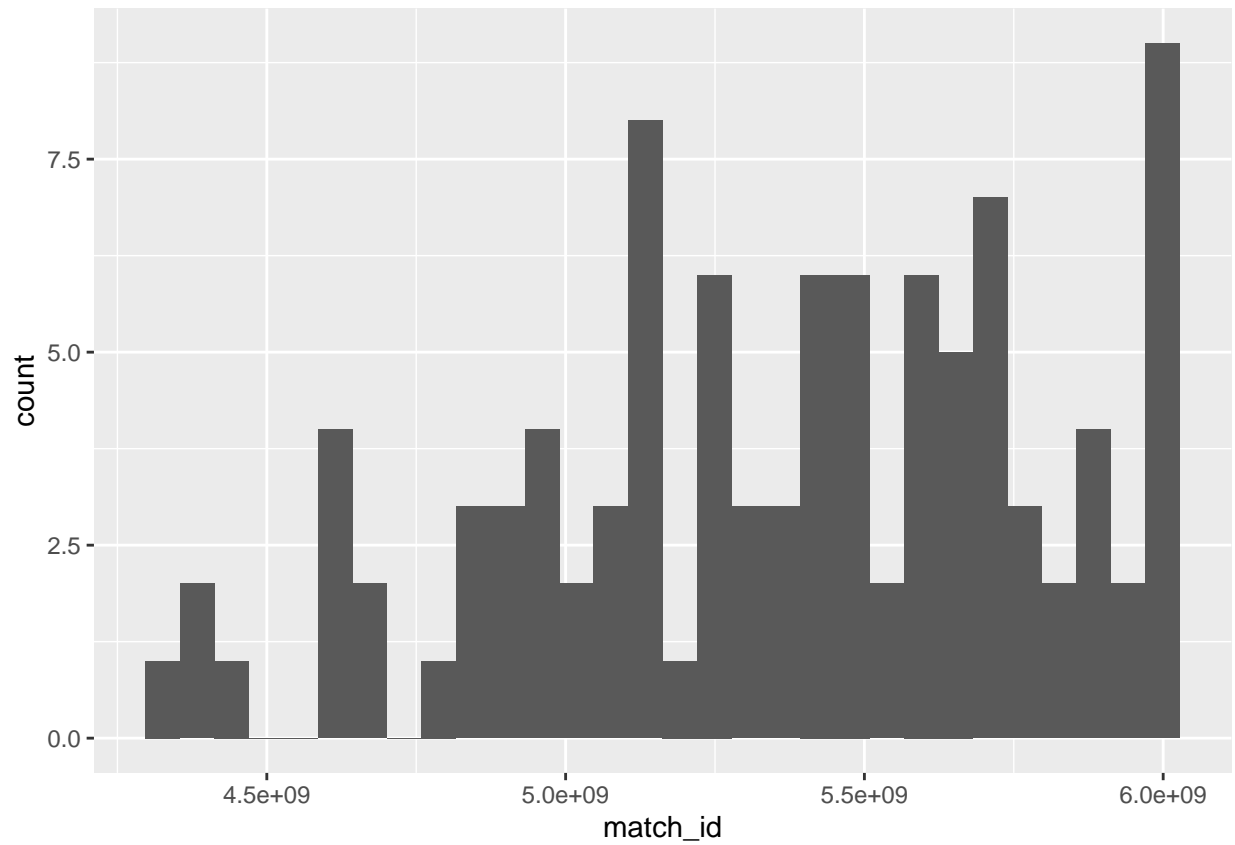
```
hist(data$courier_kills_avg_r)
```


Histogram of data\$courier_kills_avg_r



```
ggplot(data, aes(x = match_id)) +  
  geom_histogram()
```

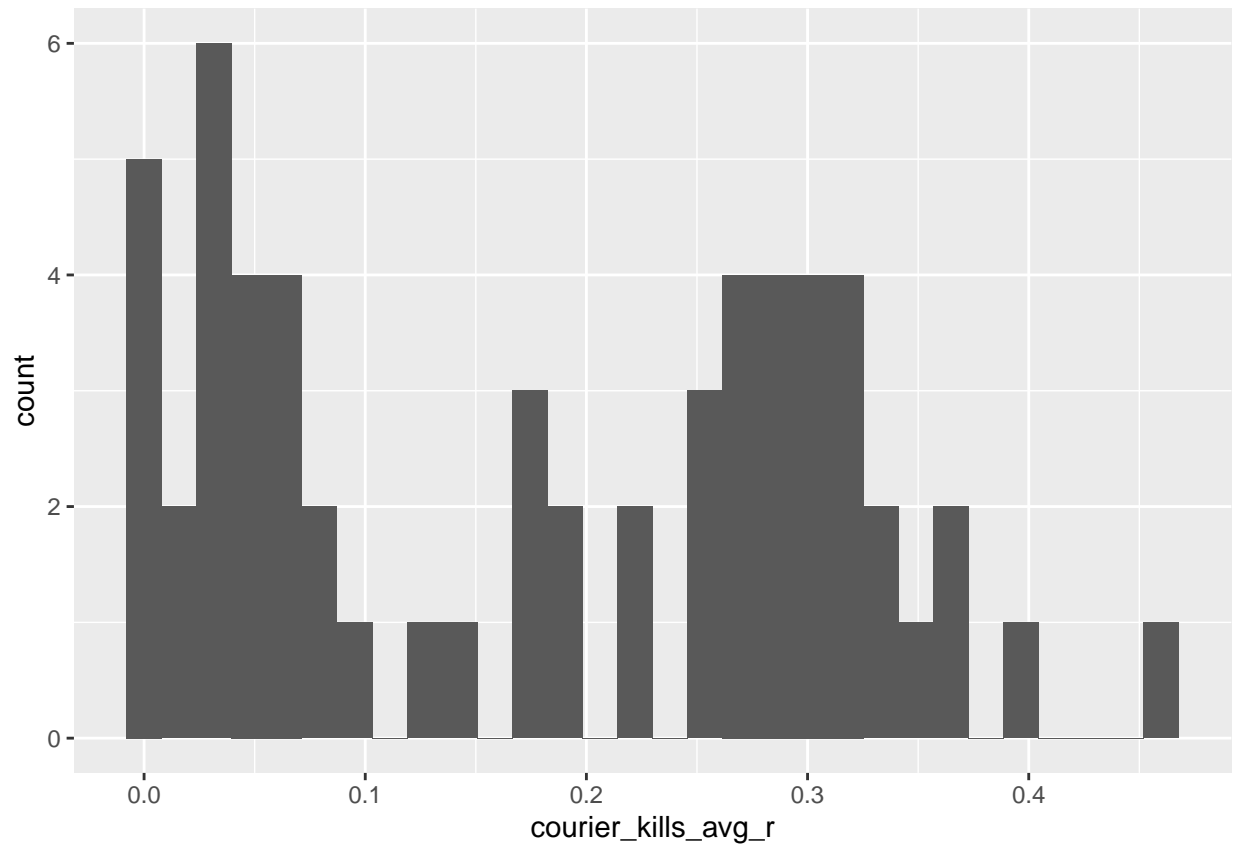
```
## 'stat_bin()' using 'bins = 30'. Pick better value with 'binwidth'.
```



```
ggplot(data, aes(x = courier_kills_avg_r)) +  
  geom_histogram()
```

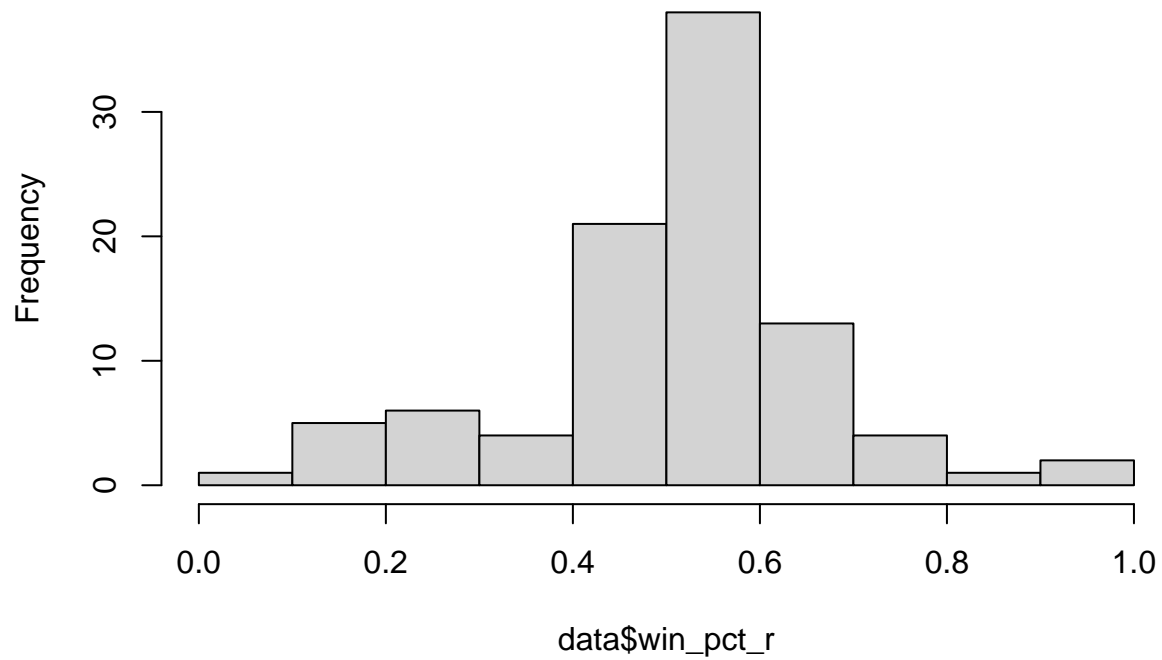
```
## 'stat_bin()' using 'bins = 30'. Pick better value with 'binwidth'.
```

```
## Warning: Removed 40 rows containing non-finite values (stat_bin).
```



```
hist(data$win_pct_r)
```

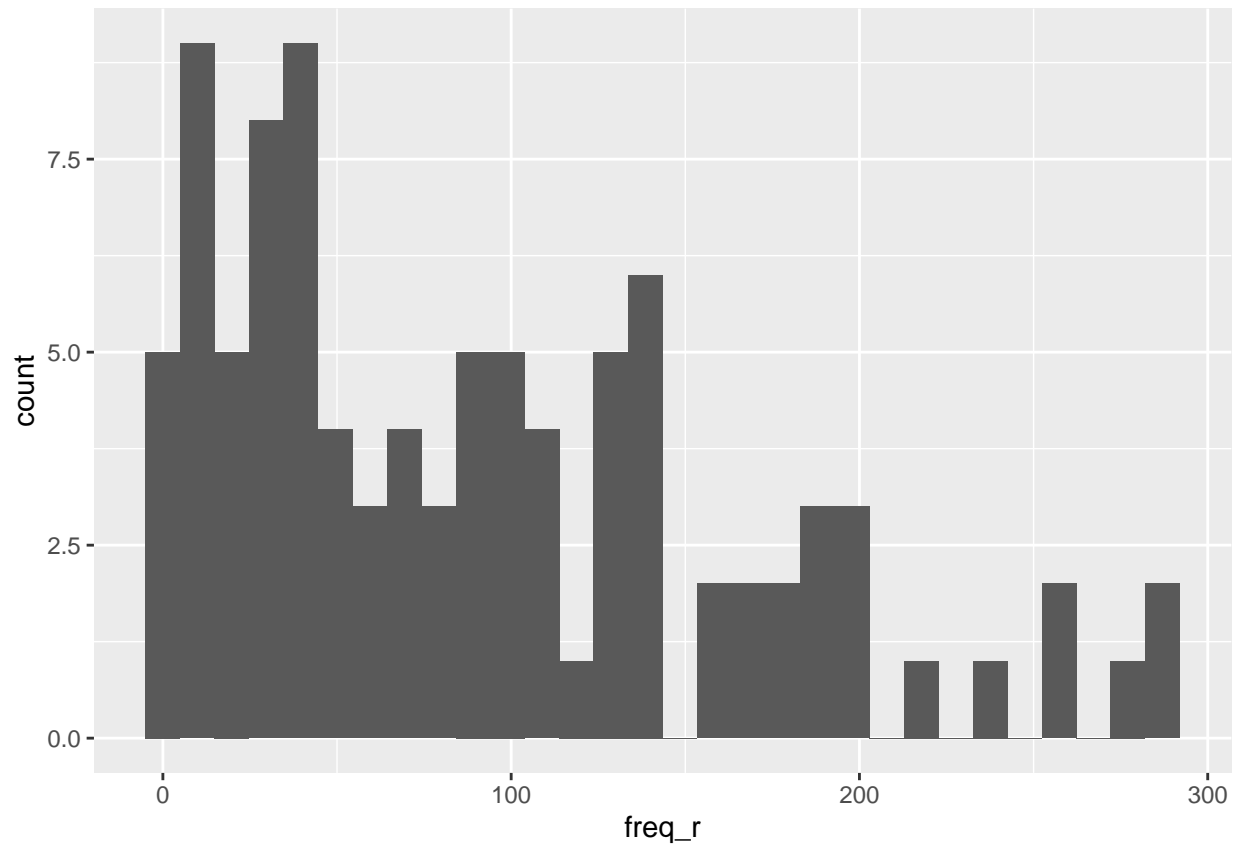
Histogram of data\$win_pct_r



```
ggplot(data, aes(x = freq_r)) +  
  geom_histogram()
```

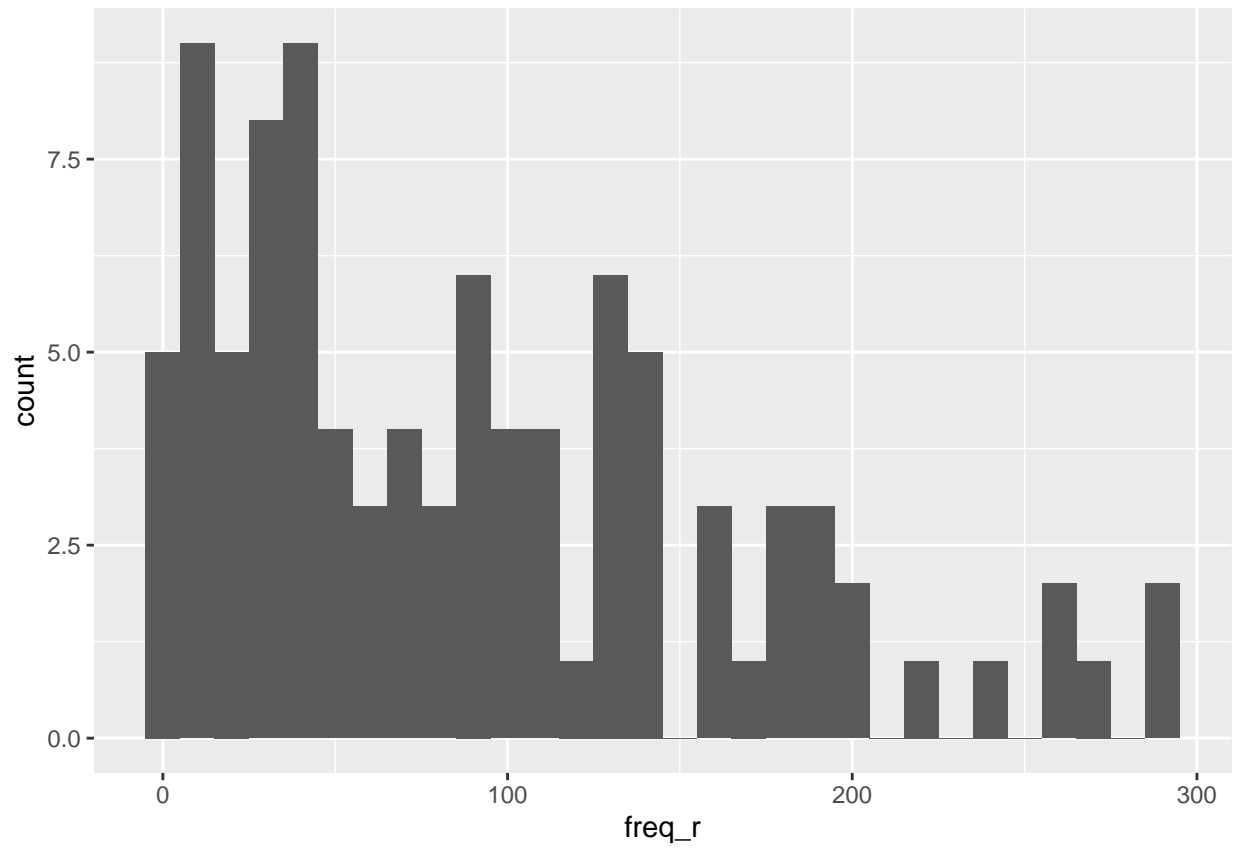
```
## 'stat_bin()' using 'bins = 30'. Pick better value with 'binwidth'.
```

```
## Warning: Removed 4 rows containing non-finite values (stat_bin).
```

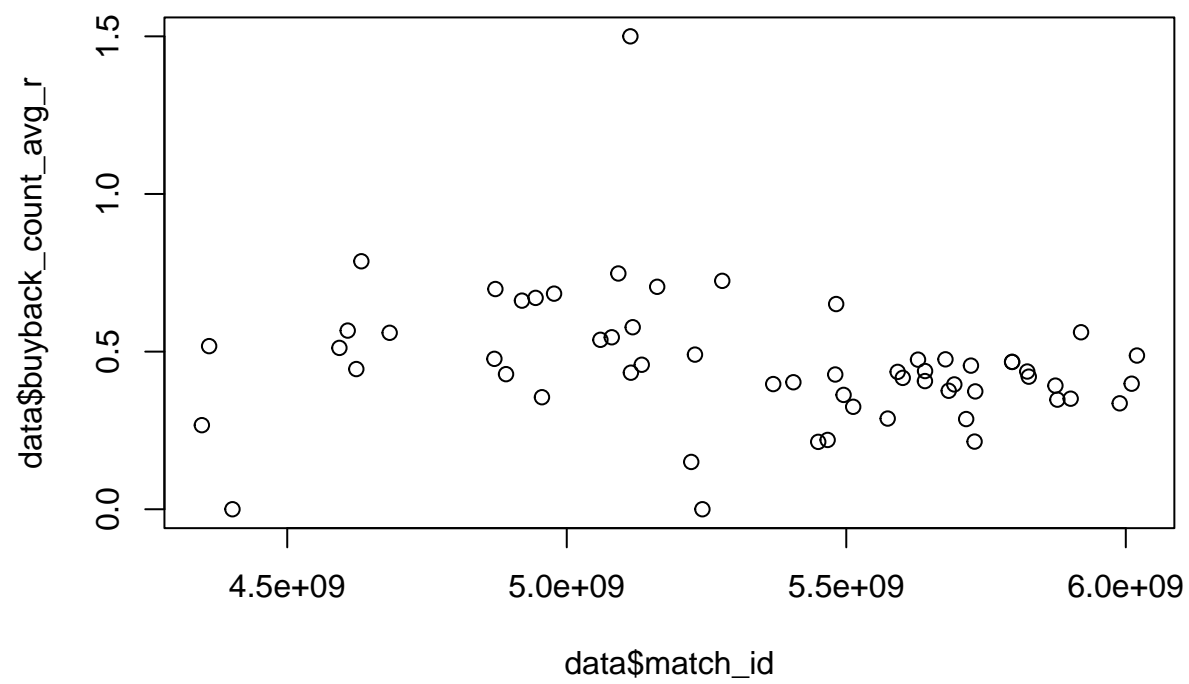


```
ggplot(data, aes(x = freq_r)) +  
  geom_histogram(binwidth = 10)
```

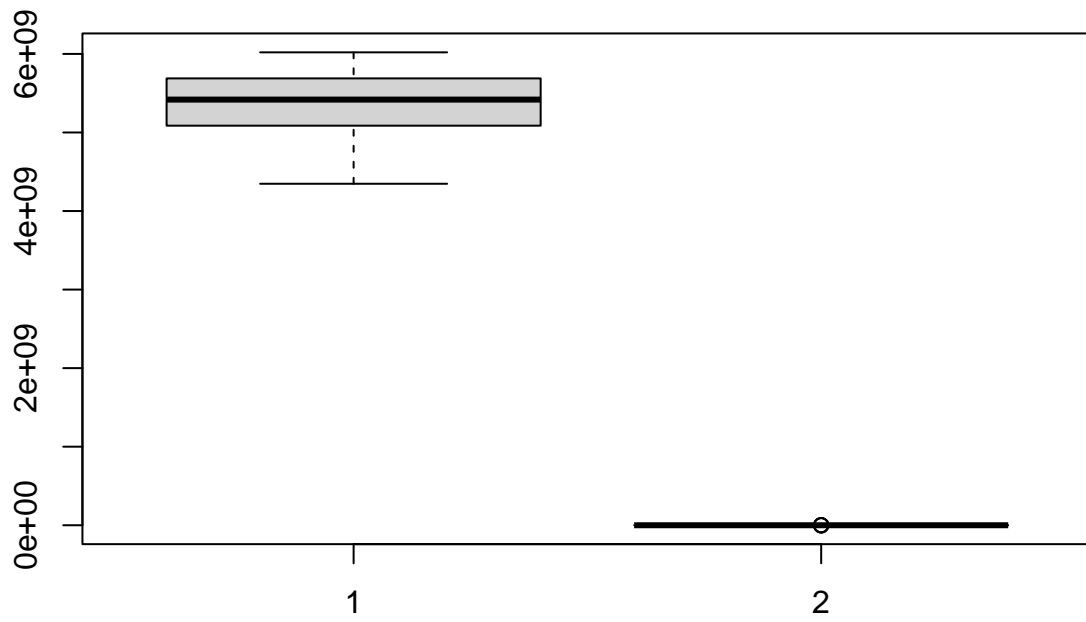
```
## Warning: Removed 4 rows containing non-finite values (stat_bin).
```



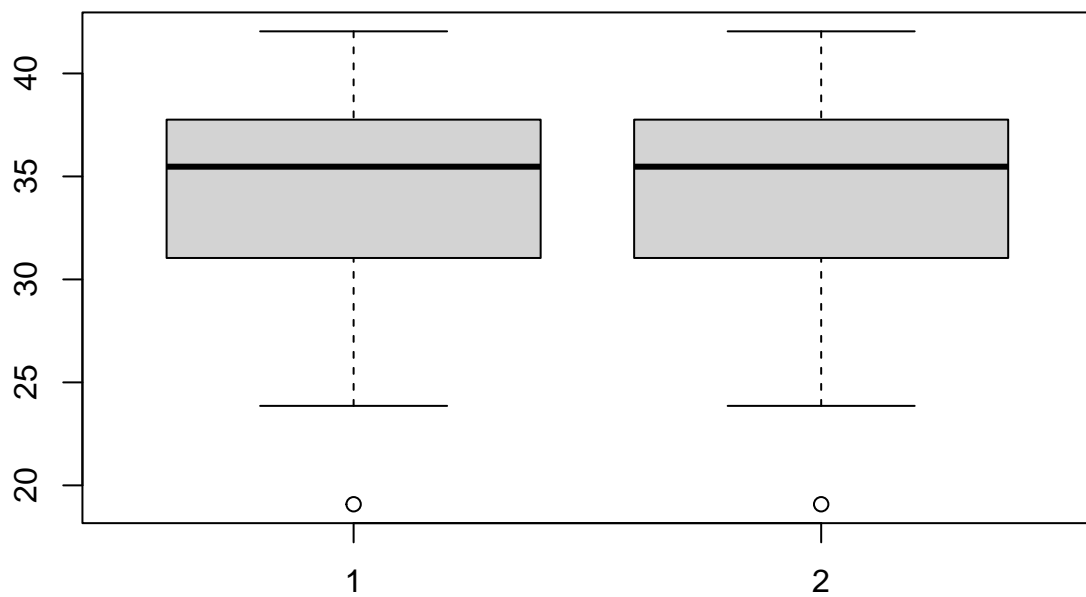
```
plot(data$match_id, data$buyback_count_avg_r)
```



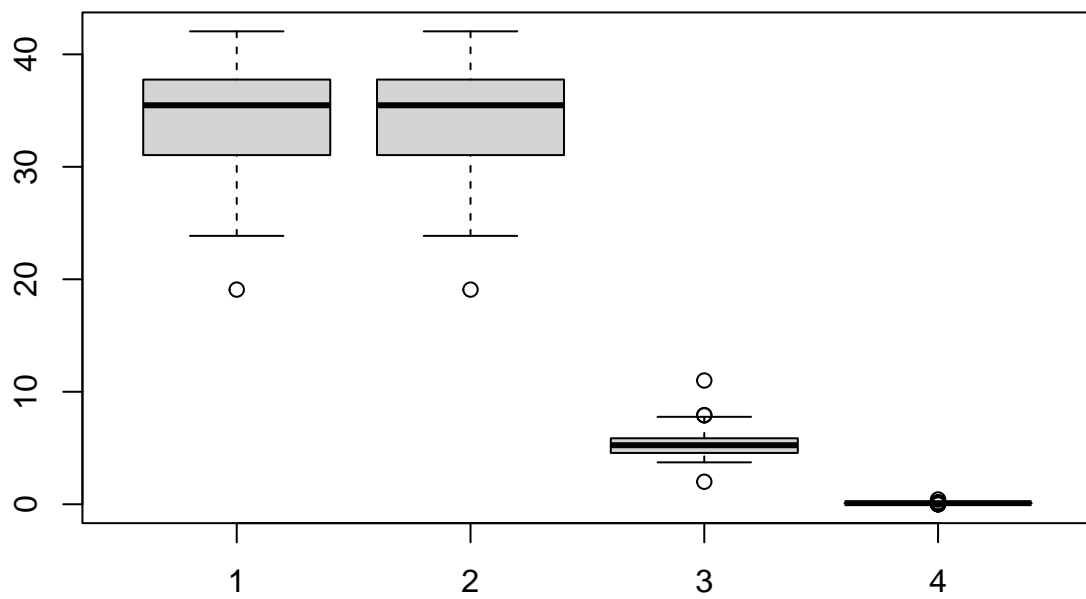
```
boxplot(data$match_id, data$buyback_count_avg_r)
```



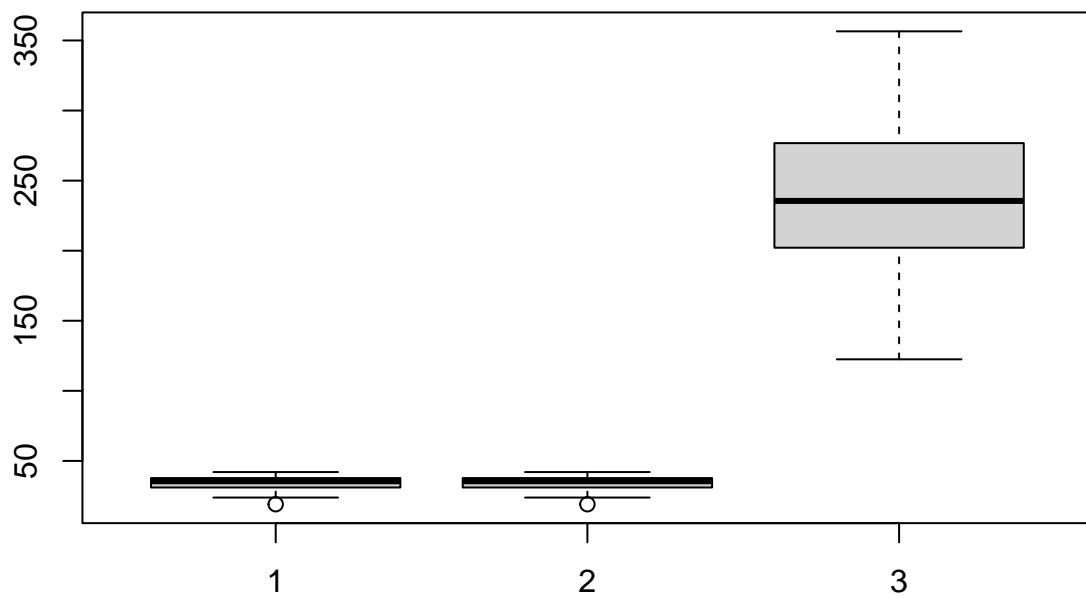
```
boxplot(data$duration_avg_lose_r, data$duration_avg_lose_r)
```

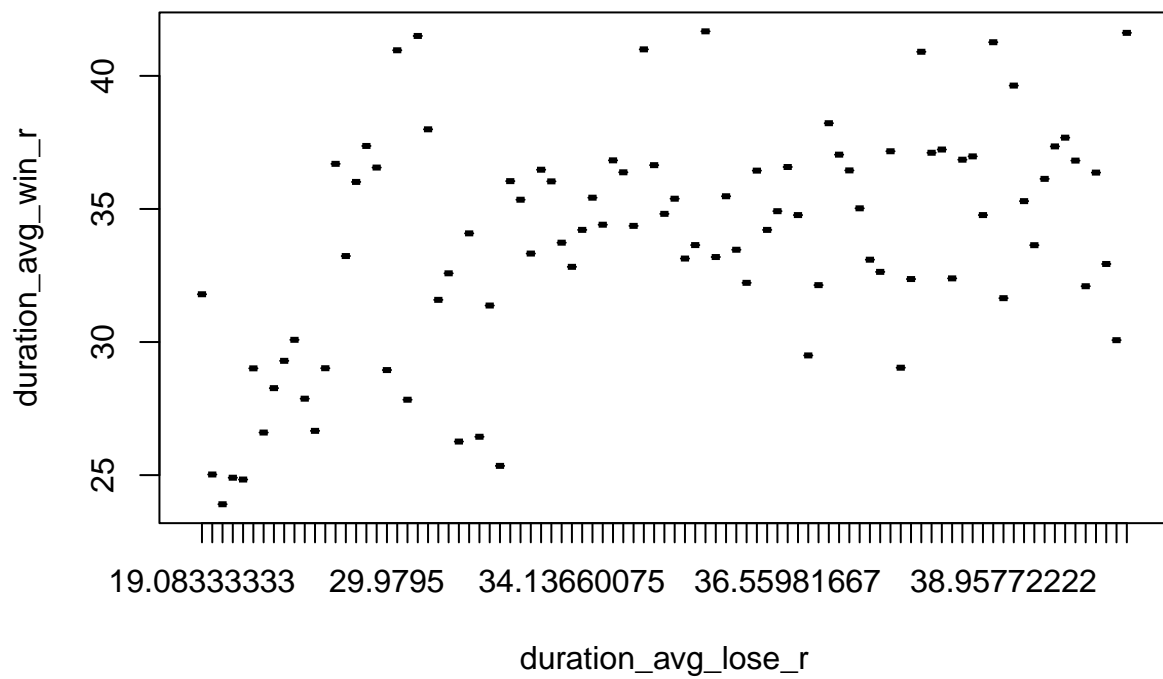
```
boxplot(data$duration_avg_lose_r, data$duration_avg_lose_r,data$deaths_avg_r,data$firstblood_claimed_avg_r)
```



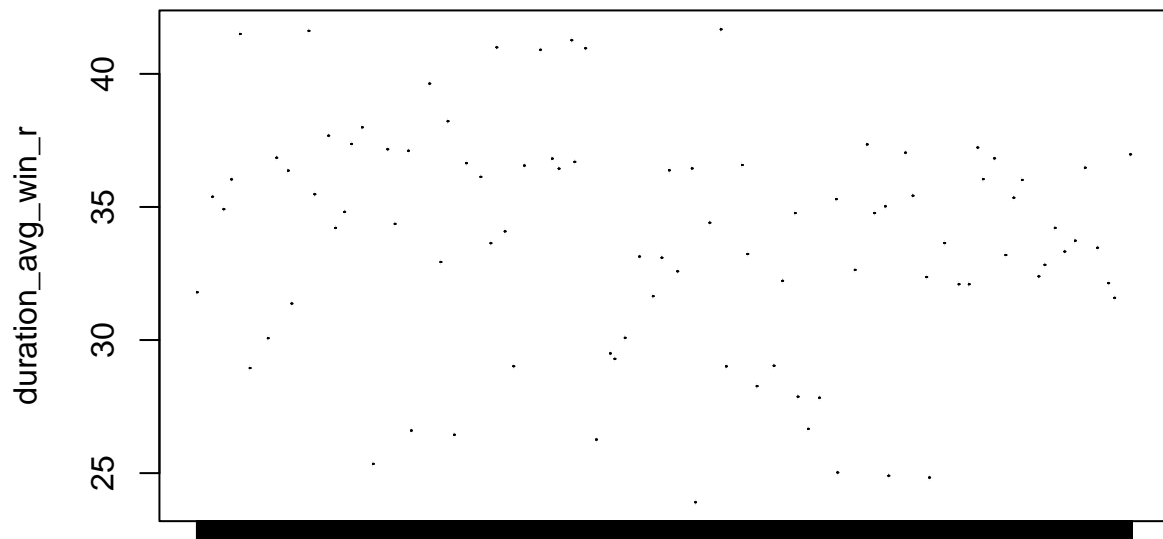
```
boxplot(data$duration_avg_lose_r, data$duration_avg_lose_r,data$actions_per_min_avg_r)
```



```
boxplot(duration_avg_win_r ~ duration_avg_lose_r, data = data)
```



```
boxplot(duration_avg_win_r ~ duration_avg_lose_r+match_id, data = data)
```



19.08333333.4347235141 29.9795.5278143666 29.9795.5693264439

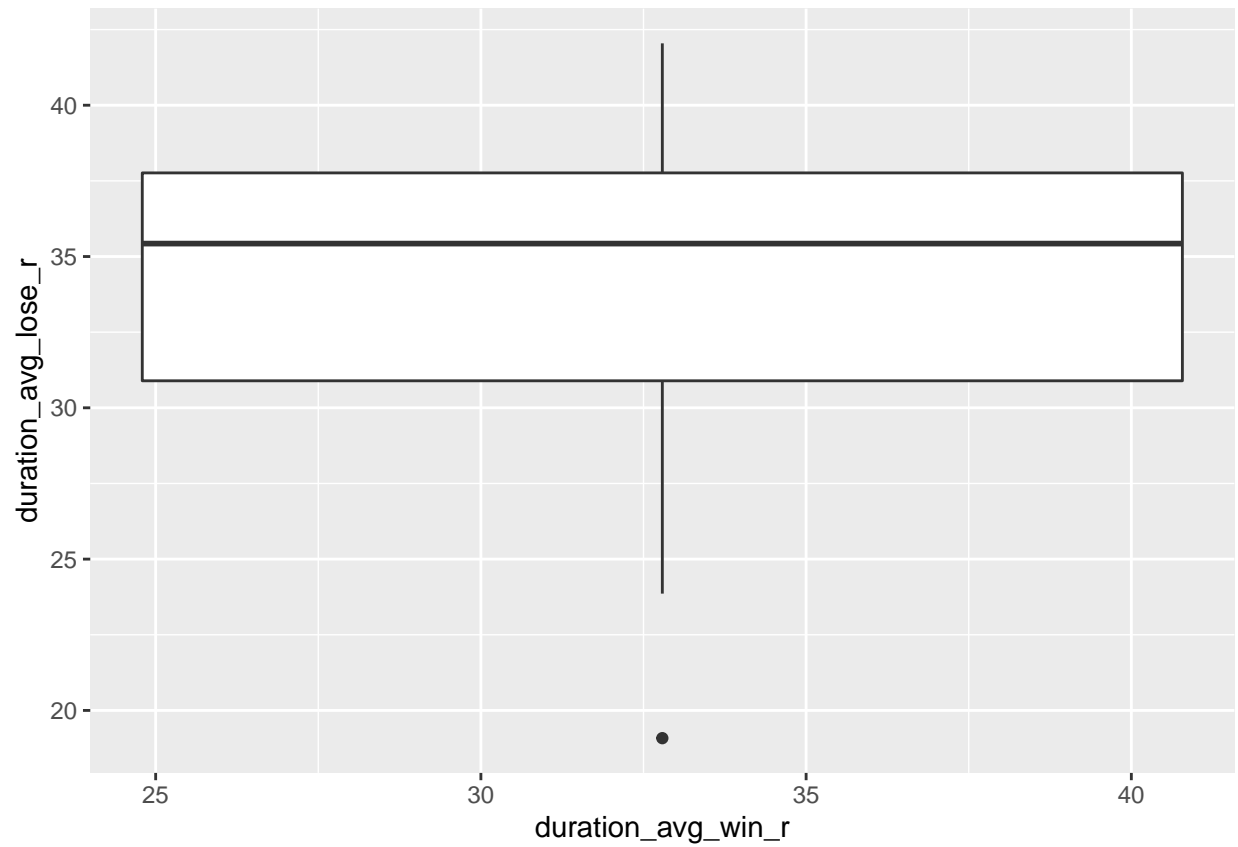
duration_avg_lose_r : match_id

```
ggplot(data, aes(x = duration_avg_win_r, y = duration_avg_lose_r)) +
  geom_boxplot()
```

```
## Warning: Continuous x aesthetic -- did you forget aes(group=...)?
```

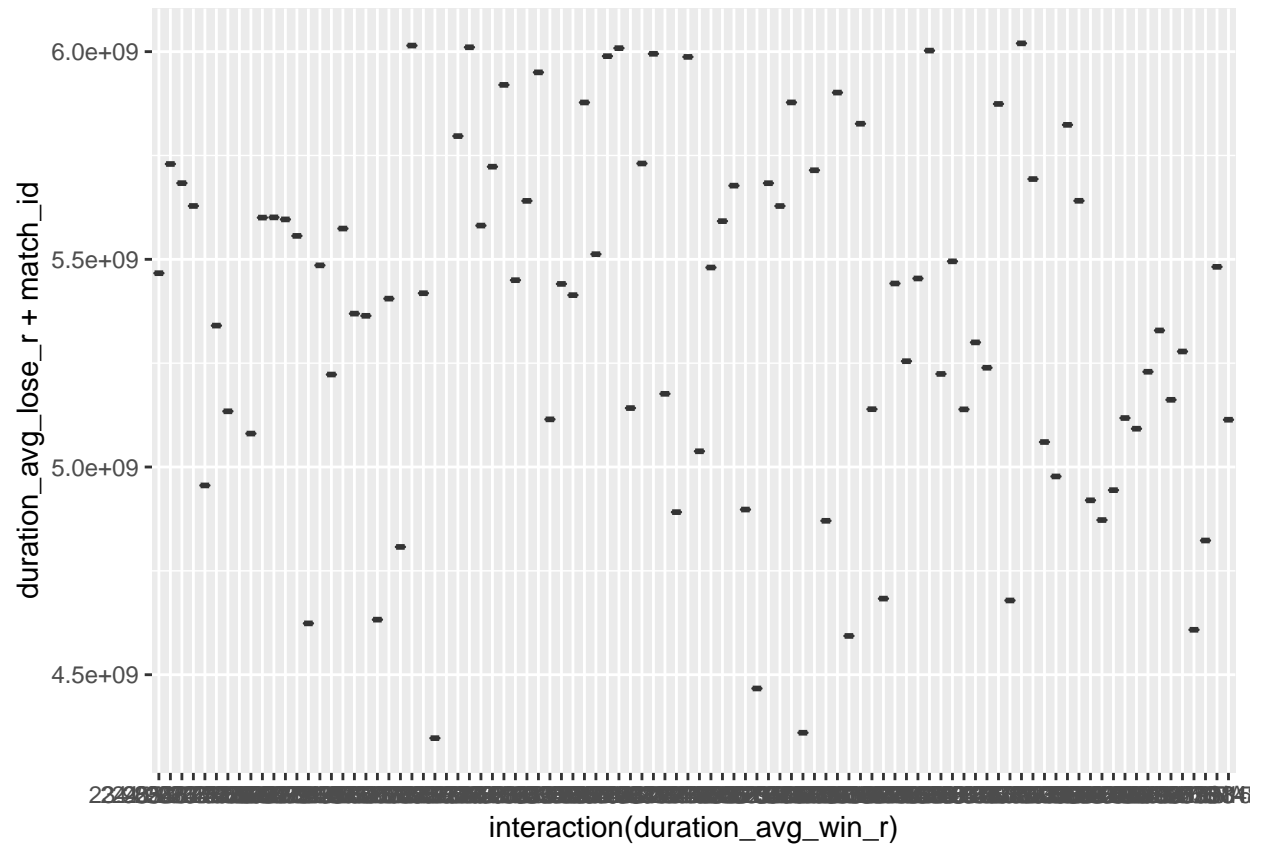
```
## Warning: Removed 5 rows containing missing values (stat_boxplot).
```

```
## Warning: Removed 2 rows containing non-finite values (stat_boxplot).
```



```
ggplot(data, aes(x = interaction(duration_avg_win_r), y = duration_avg_lose_r+match_id)) +  
  geom_boxplot()
```

Warning: Removed 6 rows containing non-finite values (stat_boxplot).



```
curve(x^3 - 5*x, from = -10, to = 10)
```

