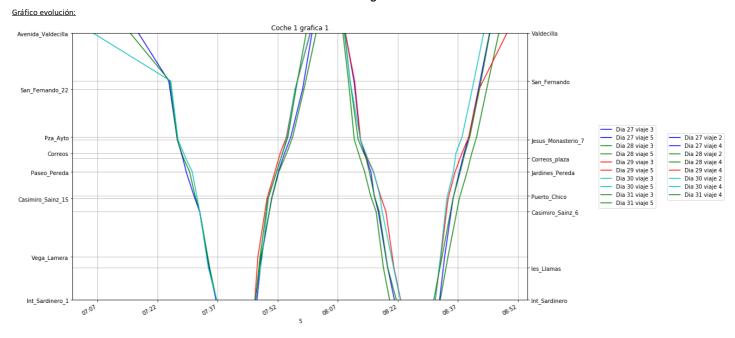
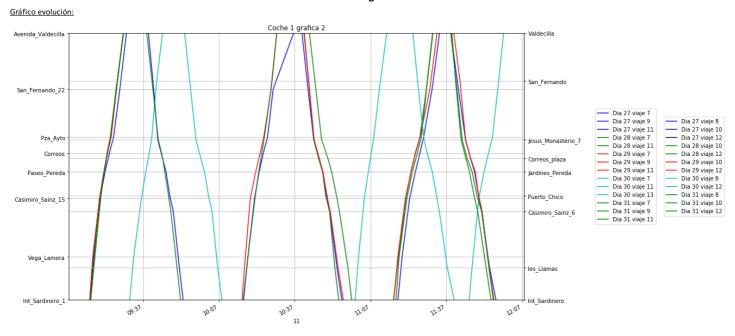
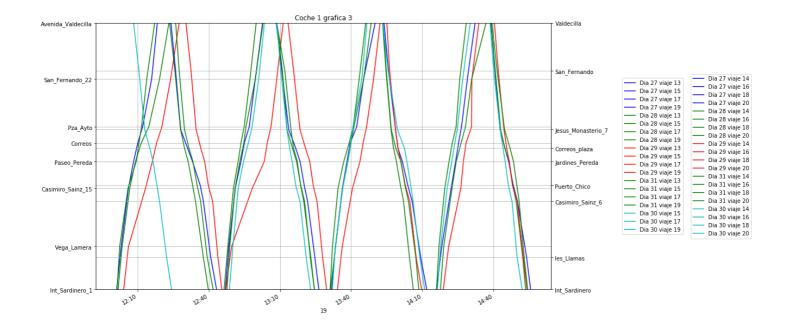
Coche 1 grafica 1



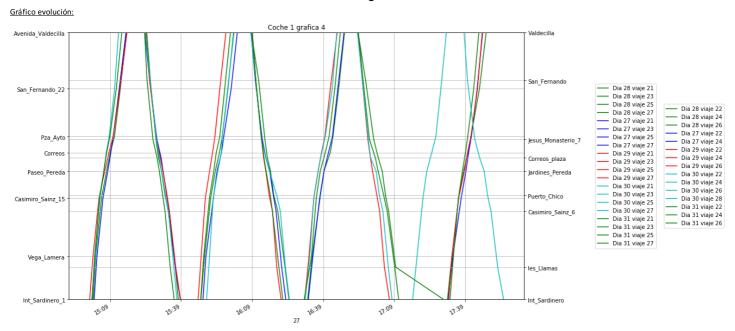
Coche 1 grafica 2



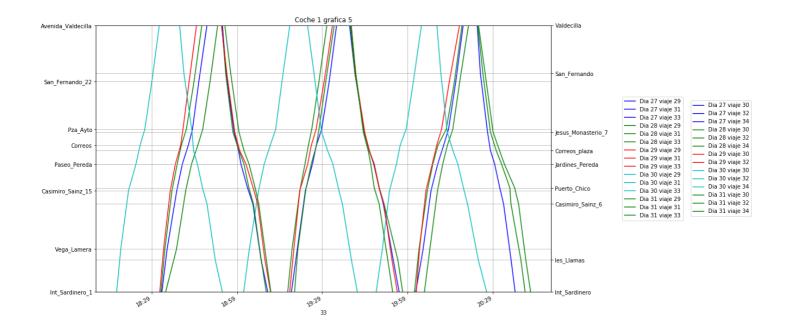
Coche 1 grafica 3



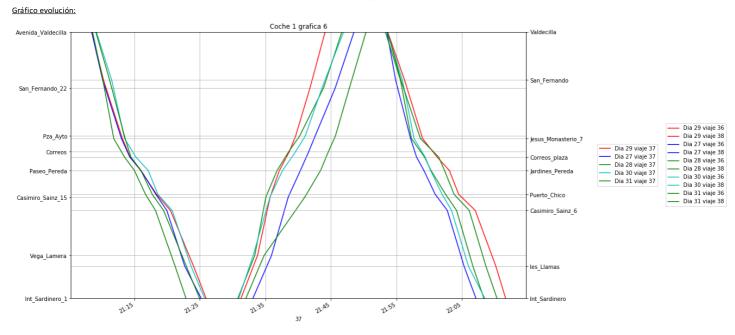
Coche 1 grafica 4



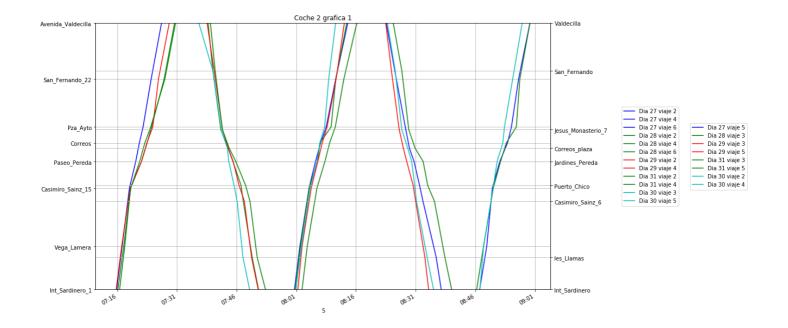
Coche 1 grafica 5



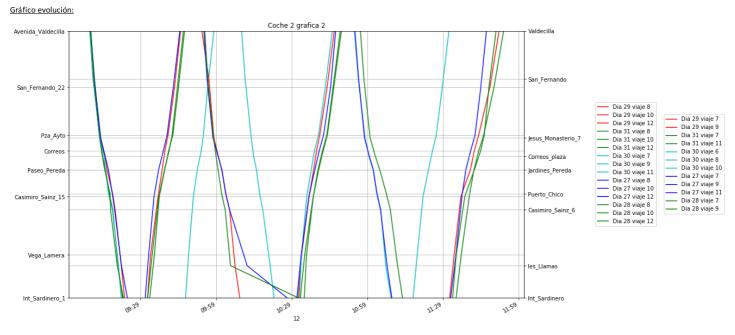
Coche 1 grafica 6



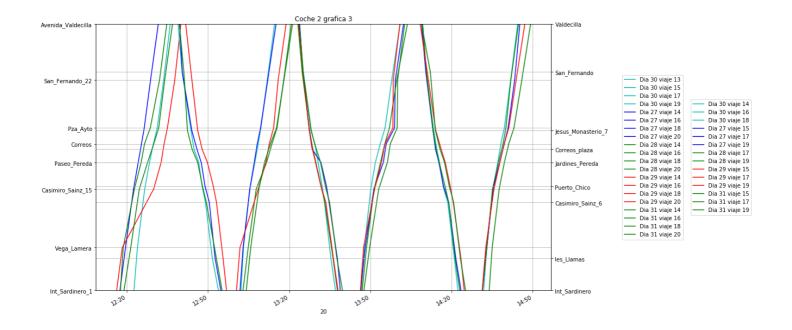
Coche 2 grafica 1



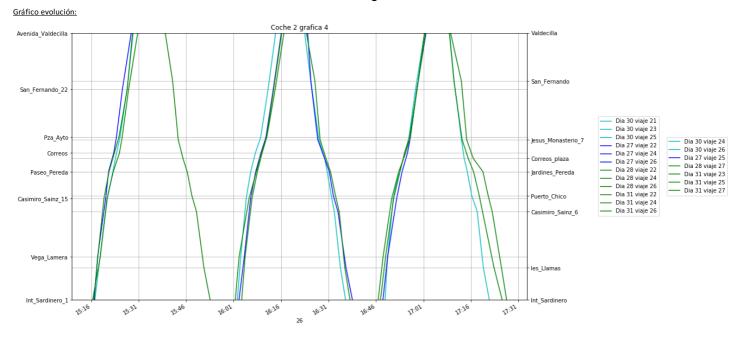
Coche 2 grafica 2



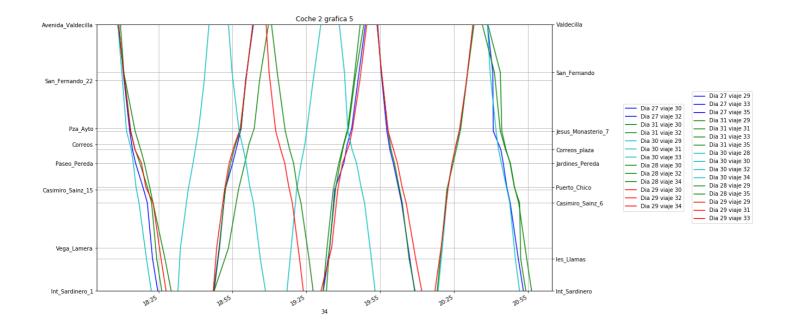
Coche 2 grafica 3



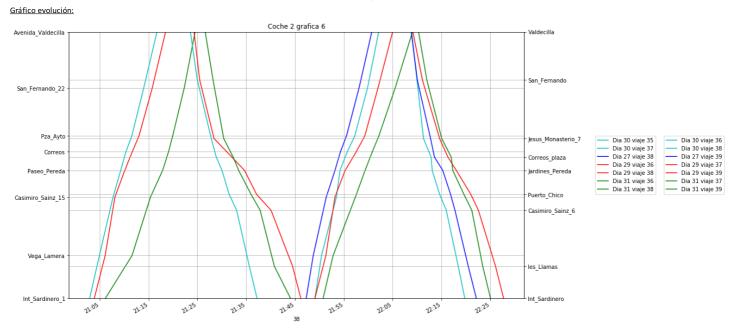
Coche 2 grafica 4



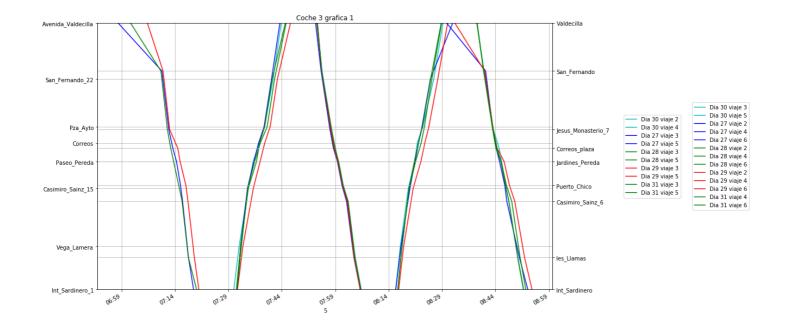
Coche 2 grafica 5



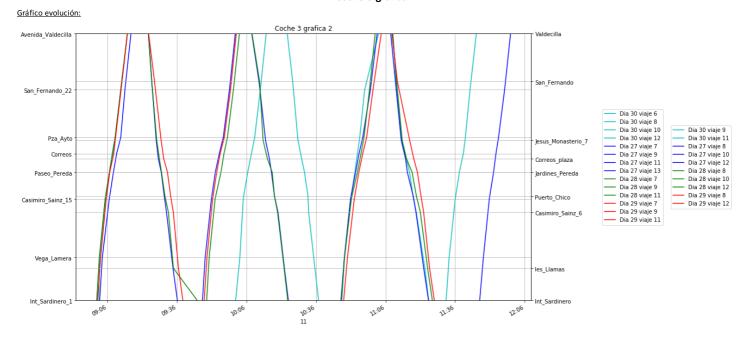
Coche 2 grafica 6



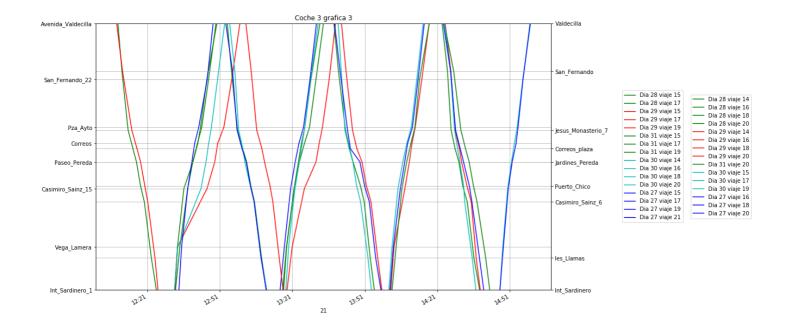
Coche 3 grafica 1



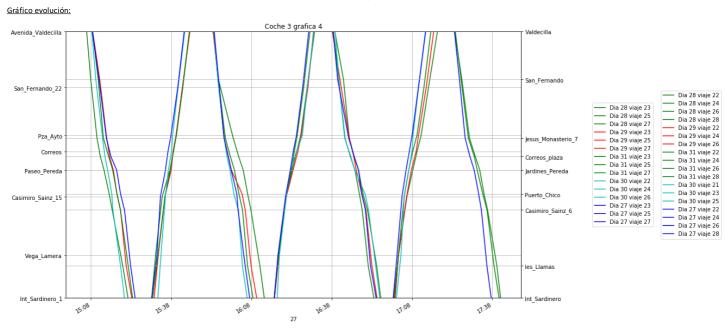
Coche 3 grafica 2



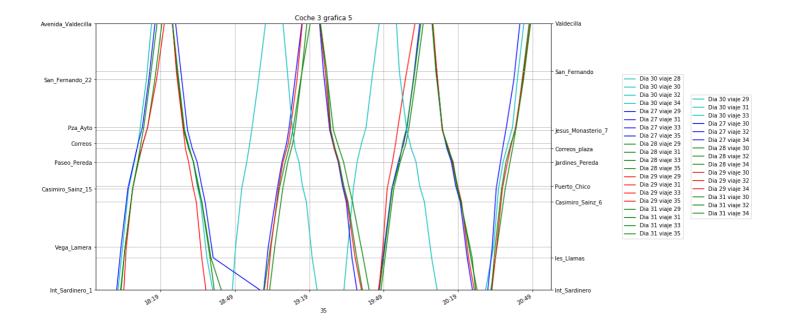
Coche 3 grafica 3



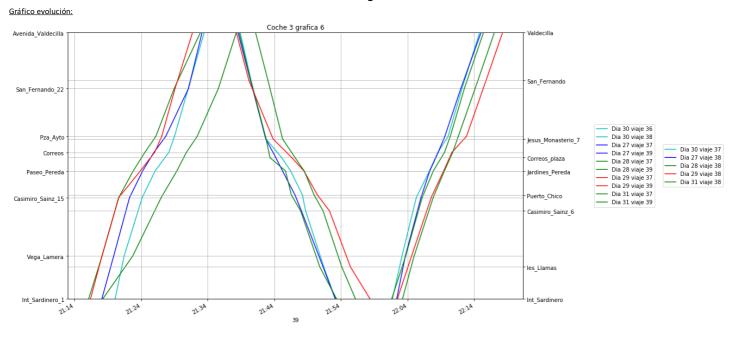
Coche 3 grafica 4



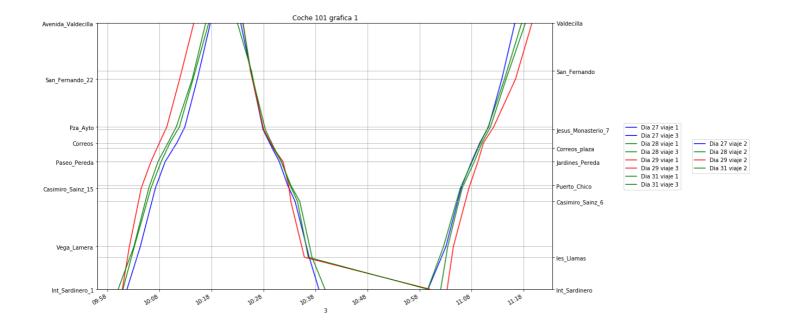
Coche 3 grafica 5



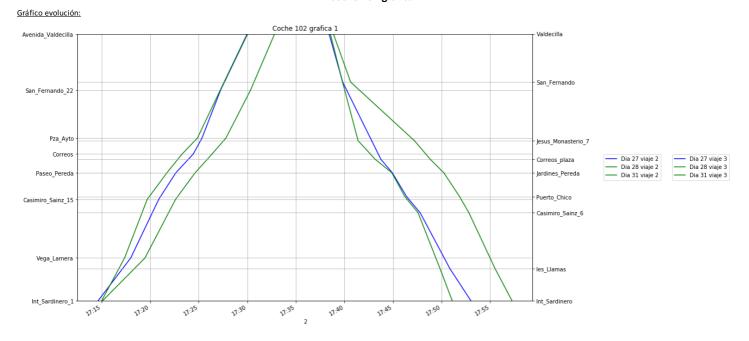
Coche 3 grafica 6



Coche 101 grafica 1



Coche 102 grafica 1



Coche 102 grafica 1

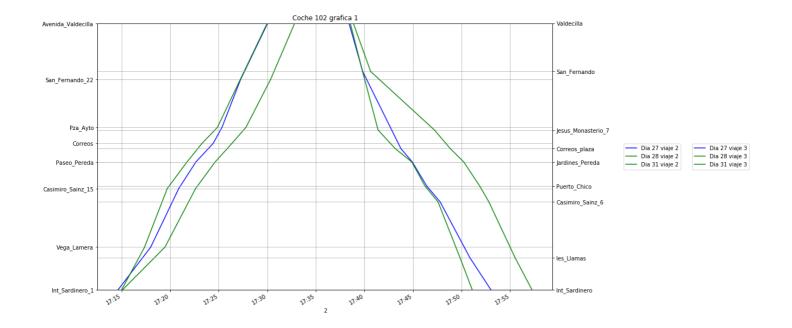


Tabla resumen velocidades y tiempos

| oche | sentido | viaje | media tiempo viaje (minutos) | media velocidad comercial (km/h) | desviación tiempo viaje | desviación velocidad comercial | |
|------|--------------------------|-------|---------------------------------|-------------------------------------|----------------------------|--------------------------------------|--|
| 1 | Valdecilla Sardinero | 2 | 23.911111 | 12.790542 | 6.094905 | 2,923993 | |
| 1 | Sardinero Valdecilla | 3 | 13.816667 | 21,349369 | 0.892484 | 1.371896 | |
| 1 | Valdecilla Sardinero | 4 | 12.886667 | 22.917447 | 0.959340 | 1.734054 | |
| 1 | Sardinero Valdecilla | 5 | 14.213333 | 21.085343 | 2.295539 | 3.122883 | |
| 1 | Sardinero Valdecilla | 7 | 13.276667 | 22.174003 | 0.557350 | 0.890222 | |
| 1 | Valdecilla Sardinero | 8 | 13.950000 | 21.111661 | 0.716667 | 1.062805 | |
| 1 | Sardinero Valdecilla | 9 | 15.561111 | 19.570124 | 3.773089 | 4.191323 | |
| 1 | Valdecilla Sardinero | 10 | 15.408333 | 19.173879 | 1.217808 | 1.576591 | |
| 1 | Sardinero Valdecilla | 11 | 15.206667 | 19,569581 | 1.798634 | 2.504547 | |
| 1 | Valdecilla Sardinero | 12 | 16.446667 | 17.919759 | 0.920251 | 0.979396 | |
| 1 | Sardinero Valdecilla | 13 | 18.263333 | 16.731271 | 4.010583 | 3.645412 | |
| 1 | Valdecilla Sardinero | 14 | 16.483333 | 17.955773 | 1.577973 | 1.564090 | |
| 1 | Sardinero Valdecilla | 15 | 16.660000 | 18 393911 | 4 280667 | 3.660993 | |
| 1 | Valdecilla Sardinero | 16 | 16.003333 | 18.470460 | 1.313467 | 1.517954 | |
| 1 | Sardinero Valdecilla | 17 | 16.590000 | 17.876554 | 1.706304 | 1.885978 | |
| 1 | Valdecilla Sardinero | 18 | 15.636667 | 17.876554 | 2.135071 | 2.643494 | |
| 1 | _ | 19 | | 19.089436 | 2.550234 | | |
| 1 | Sardinero_Valdecilla | | 15.356667 | | | 3.096756 | |
| • | Valdecilla_Sardinero | 20 | 14.710000 | 20.101082 | 1.271406 | 1.662107 | |
| 1 | Sardinero_Valdecilla | 21 | 13.423333 | 22.176113 | 1.671144 | 2.767272 | |
| 1 | Valdecilla_Sardinero | 22 | 13.750000 | 21.479101 | 1.034945 | 1.617837 | |
| 1 | Sardinero_Valdecilla | 23 | 12.820000 | 23.111035 | 1.273032 | 2.245348 | |
| 1 | Valdecilla_Sardinero | 24 | 14.360000 | 20.745607 | 1.813246 | 2.700190 | |
| 1 | Sardinero_Valdecilla | 25 | 14.566667 | 20.258283 | 0.980717 | 1.396980 | |
| 1 | Valdecilla_Sardinero | 26 | 20.179167 | 16.967112 | 10.604964 | 6.187087 | |
| 1 | Sardinero_Valdecilla | 27 | 14.263333 | 20.793707 | 1.474383 | 2.207237 | |
| 1 | Valdecilla_Sardinero | 28 | 16.666667 | 17.640000 | NaN | NaN | |
| 1 | Sardinero_Valdecilla | 29 | 15.276667 | 19.499154 | 1.989577 | 2.456774 | |
| 1 | Valdecilla_Sardinero | 30 | 15.986667 | 18.428961 | 0.827177 | 0.934441 | |
| 1 | Sardinero_Valdecilla | 31 | 14.960000 | 19.739549 | 1.109592 | 1.469640 | |
| 1 | Valdecilla_Sardinero | 32 | 16.810000 | 17.601751 | 1.459052 | 1.618668 | |
| 1 | Sardinero_Valdecilla | 33 | 15.993333 | 18.409041 | 0.677167 | 0.779045 | |
| 1 | Valdecilla_Sardinero | 34 | 16.433333 | 18.158634 | 2.186363 | 2.694152 | |
| 1 | Valdecilla_Sardinero | 36 | 16.143333 | 18.297761 | 1.204655 | 1.441673 | |
| 1 | Sardinero_Valdecilla | 37 | 15.676667 | 19.000633 | 1.958372 | 2.489333 | |
| 1 | Valdecilla_Sardinero | 38 | 15.623333 | 18.999128 | 1.722184 | 2.061409 | |
| 2 | Sardinero_Valdecilla | 2 | 13.220833 | 22.436019 | 1.381181 | 2.536670 | |
| 2 | $Val decilla_Sardinero$ | 2 | 12.750000 | 23.058824 | NaN | NaN | |
| 2 | Sardinero_Valdecilla | 3 | 10.000000 | 29.400000 | NaN | NaN | |
| 2 | Valdecilla_Sardinero | 3 | 13.100000 | 22.476019 | 0.625167 | 1.045810 | |
| 2 | Sardinero_Valdecilla | 4 | 12.954167 | 22.784375 | 0.911386 | 1.687546 | |
| 2 | Valdecilla_Sardinero | 4 | 11.583333 | 25.381295 | NaN | NaN | |
| 2 | Sardinero_Valdecilla | 5 | 10.616667 | 27.692308 | NaN | NaN | |
| 2 | Valdecilla_Sardinero | 5 | 13.077778 | 22.885435 | 2.047853 | 3.880152 | |
| 2 | Sardinero_Valdecilla | 6 | 13.008333 | 22.619695 | 0.530330 | 0.922171 | |
| 2 | Valdecilla_Sardinero | 6 | 12.500000 | 23.520000 | NaN | NaN | |
| 2 | Sardinero_Valdecilla | 7 | 11.250000 | 26.133333 | NaN | NaN | |
| 2 | Valdecilla_Sardinero | 7 | 13.458333 | 21.915703 | 0.888246 | 1.425414 | |
| 2 | Sardinero_Valdecilla | 8 | 13.695833 | 21.483798 | 0.447498 | 0.710891 | |
| | _ | | | | 27.27 | 27.27 | |
| 2 | Valdecilla_Sardinero | 8 | 12.833333 | 22.909091 | NaN | NaN | |

| oche | sentido | viaje | media tiempo viaje (minutos) | media velocidad comercial (km/h) | desviación tiempo viaje | desviación velocidad comercial |
|------|--|----------|---------------------------------|-------------------------------------|----------------------------|--------------------------------------|
| 2 | Valdecilla_Sardinero | 9 | 28.261111 | 12.157618 | 11.630304 | 6.426141 |
| 2 | Sardinero_Valdecilla | 10 | 15.045833 | 19.600636 | 0.974430 | 1.242971 |
| 2 | Valdecilla_Sardinero | 10 | 14.533333 | 20.229358 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 11 | 14.183333 | 20.728555 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 11 | 15.666667 | 18.847953 | 1.461354 | 1.758098 |
| 2 | Sardinero_Valdecilla | 12 | 17.454167 | 17.106432 | 2.390040 | 2.562658 |
| 2 | Sardinero_Valdecilla | 13 | 13.383333 | 21.967621 | NaN 4 000co2 | NaN 2.426262 |
| 2 | Sardinero_Valdecilla | 14 | | 16.681473 | 4.000602 | 3.436363 |
| 2 | Valdecilla_Sardinero | 14 15 | 14.916667 12.383333 | 19.709497 | NaN NaN | NaN NaN |
| 2 | Sardinero_Valdecilla Valdecilla Sardinero | 15 | 15.372222 | 23.741588 19.133681 | 0.393818 | 0.484490 |
| 2 | Sardinero Valdecilla | 16 | 16.625000 | 17.970707 | 2.273621 | 2.797185 |
| 2 | Valdecilla Sardinero | 16 | 13.350000 | 22.022472 | 2.273021 NaN | 2.79/163 NaN |
| 2 | Sardinero Valdecilla | 17 | 14.316667 | 20.535506 | NaN | NaN |
| 2 | Valdecilla Sardinero | 17 | 15.037500 | 19.578540 | 0.660440 | 0.832548 |
| 2 | Sardinero Valdecilla | 18 | 15.550000 | 18.958650 | 0.944869 | 1.139628 |
| 2 | Valdecilla Sardinero | 18 | 13.050000 | 22.528736 | NaN | NaN |
| 2 | Sardinero Valdecilla | 19 | 12.550000 | 23.426295 | NaN | NaN |
| 2 | Valdecilla Sardinero | 19 | 15.191667 | 19.453150 | 1.250000 | 1.628565 |
| 2 | Sardinero Valdecilla | 20 | 14.554167 | 20.295186 | 1.147168 | 1.604271 |
| 2 | Sardinero_Valdecilla | 21 | 12.100000 | 24.297521 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 22 | 12.705556 | 23.304217 | 1.338981 | 2.346427 |
| 2 | Sardinero_Valdecilla | 23 | 12.083333 | 24.331034 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 23 | 14.166667 | 20.752941 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 24 | 13.783333 | 21.372642 | 0.765034 | 1.149461 |
| 2 | Valdecilla_Sardinero | 24 | 12.916667 | 22.761290 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 25 | 12.500000 | 23.520000 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 25 | 13.950000 | 21.078278 | 0.235702 | 0.356143 |
| 2 | Sardinero_Valdecilla | 26 | 14.138889 | 20.811529 | 0.504517 | 0.749048 |
| 2 | Valdecilla_Sardinero | 26 | 12.550000 | 23.426295 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 27 | 17.166667 | 17.141741 | 0.730677 | 0.729616 |
| 2 | Valdecilla_Sardinero | 28 | 13.583333 | 21.644172 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 29 | 12.600000 | 23.333333 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 29 | 18.391667 | 16.227779 | 2.639216 | 2.258581 |
| 2 | Sardinero_Valdecilla | 30 | 17.479167 | 17.153075 | 3.047536 | 2.546994 |
| 2 | Valdecilla_Sardinero | 30 | 15.016667 | 19.578246 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 31 | 13.733333 | 21.407767 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 31 | 15.991667 | 18.441911 | 1.261007 | 1.454219 |
| 2 | Sardinero_Valdecilla | 32 | 16.466667 | 17.991116 | 1.682425 | 1.788262 |
| 2 | Valdecilla_Sardinero | 32 | 14.500000 | 20.275862 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 33 | 14.233333 | 20.655738 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 33 | 16.172222 | 18.308276 | 1.709153 | 1.830719 |
| 2 | Sardinero_Valdecilla | 34 | 15.191667 | 19.357614 | 0.341768 | 0.435490 |
| 2 | Valdecilla_Sardinero | 34 | 13.016667 | 22.586428 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 35 | 13.766667 | 21.355932 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 35 | 16.661111 | 17.982860 | 2.917968 | 2.888898 |
| 2 | Sardinero_Valdecilla | 36 | 16.677778 | 17.791594 | 1.918502 | 2.133056 |
| 2 | Valdecilla_Sardinero | 36 | 13.633333 | 21.564792 | NaN | NaN |
| 2 | Sardinero_Valdecilla | 37 | 13.050000 | 22.528736 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 37 | 19.650000 | 15.151758 | 3.111270 | 2.399044 |
| 2 | Sardinero_Valdecilla | 38 | 14.920833 | 20.203716 | 2.743422 | 3.646673 |
| 2 | Valdecilla_Sardinero | 38 | 10.883333 | 27.013783 | NaN | NaN |
| 2 | Valdecilla_Sardinero | 39 | 15.533333 | 19.296592 | 2.718609 | 3.176572 |
| 3 | Sardinero_Valdecilla | 2 | 13.283333 | 22.132999 | NaN | NaN 2 201042 |
| 3 | Valdecilla_Sardinero | 2 | 18.038889 | 16.708106 | 3.375456 | 3.301943 |
| 3 | Sardinero_Valdecilla | | 13.579167 | 21.785499 | 1.207030 NaN | 2.024987 NaN |
| 3 | Valdecilla_Sardinero | 3 | 12.483333 13.266667 | 23.551402 | NaN NaN | NaN NaN |
| 3 | Sardinero_Valdecilla Valdecilla Sardinero | 4 | 13.266667 | 22.160804 24.037075 | NaN 0.191968 | NaN 0.371918 |
| 3 | Sardinero_Valdecilla | | 13.533333 | 24.03/0/5 | 1.780657 | 2.701553 |
| 3 | Valdecilla Sardinero | 5 | 13.116667 | 22.414231 | 1.780657 NaN | 2.701555 NaN |
| 3 | Sardinero Valdecilla | 6 | 12.283333 | 23.934871 | NaN | NaN |
| 3 | Valdecilla Sardinero | 6 | 17.770833 | 17.648626 | 5.134603 | 5.104993 |
| 3 | Sardinero_Valdecilla | | 13.558333 | 21.730522 | 0.736546 | 1.140447 |
| 3 | Sardinero Valdecilla | 8 | 13.166667 | 22.329114 | 0.750540 NaN | NaN |
| 3 | Valdecilla Sardinero | | 16.061111 | 19.165596 | 4.366868 | 4.783998 |
| 3 | Sardinero_Valdecilla | 9 | 14.279167 | 20.607817 | 0.498957 | 0.701469 |
| 3 | Valdecilla_Sardinero | 9 | 13.500000 | 21.777778 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 10 | 15.850000 | 18.548896 | NaN | NaN |
| 3 | Valdecilla Sardinero | 10 | 15.583333 | 18.868922 | 0.259272 | 0.313937 |
| 3 | Sardinero Valdecilla | 11 | 15.970833 | 18.491396 | 1.240398 | 1.424782 |
| 3 | Valdecilla Sardinero | 11 | 15.400000 | 19.090909 | NaN | NaN |
| 3 | Sardinero Valdecilla | 12 | 13.016667 | 22.586428 | NaN | NaN |
| 3 | Valdecilla Sardinero | | 17.244444 | 17.086629 | 0.995034 | 0.979507 |
| 3 | Sardinero_Valdecilla | 13 | 13.316667 | 22.077597 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 14 | 20.733333 | 14.180064 | NaN | NaN |
| 3 | Valdecilla_Sardinero | 14 | 16.483333 | 17.859862 | 0.848528 | 0.919389 |
| | Sardinero Valdecilla | 15 | 18.787500 | 16.539819 | 5.531951 | 4.096796 |
| 3 | Saldilleto Valdeellia | | | | | |
| 3 | Valdecilla_Sardinero | 15 | 15.300000 | 19.215686 | NaN | NaN |

| coche | sentido | viaje | media tiempo viaje (minutos) | media velocidad comercial (km/h) | desviación tiempo viaje | desviación velocidad |
|-------|--------------------------|-------|---------------------------------|-------------------------------------|----------------------------|-------------------------|
| | | | viaje (iliiliutos) | comercial (km/n) | trempo vraje | comercial |
| 3 | $Val decilla_Sardinero$ | 16 | 16.077778 | 18.306144 | 0.648146 | 0.745621 |
| 3 | Sardinero_Valdecilla | 17 | 16.716667 | 17.831579 | 2.354782 | 2.318910 |
| 3 | $Val decilla_Sardinero$ | 17 | 13.750000 | 21.381818 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 18 | 14.183333 | 20.728555 | NaN | NaN |
| 3 | Valdecilla_Sardinero | 18 | 17.505556 | 16.868601 | 1.452998 | 1.336102 |
| 3 | Sardinero_Valdecilla | 19 | 15.127778 | 19.477652 | 0.862222 | 1.137335 |
| 3 | Valdecilla_Sardinero | 19 | 12.966667 | 22.673522 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 20 | 12.683333 | 23.180026 | NaN | NaN |
| 3 | Valdecilla_Sardinero | 20 | 16.370833 | 18.123524 | 1.832847 | 1.968030 |
| 3 | Sardinero_Valdecilla | 21 | 12.483333 | 23.551402 | NaN | NaN |
| 3 | Valdecilla_Sardinero | 21 | 12.150000 | 24.197531 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 22 | 10.016667 | 29.351082 | NaN | NaN |
| 3 | Valdecilla_Sardinero | 22 | 15.233333 | 19.321169 | 0.586578 | 0.740837 |
| 3 | Sardinero_Valdecilla | 23 | 13.333333 | 22.125627 | 0.882652 | 1.524669 |
| 3 | Valdecilla_Sardinero | 23 | 12.450000 | 23.614458 | NaN | NaN |
| 3 | Sardinero_Valdecilla | 24 | 13.733333 | 21.407767 | NaN | NaN |
| 3 | Valdecilla Sardinero | 24 | 15.795833 | 18.954989 | 2.511395 | 2.889401 |
| 3 | Sardinero Valdecilla | 25 | 13.950000 | 21.154712 | 0.985356 | 1.500294 |
| 3 | Valdecilla Sardinero | 25 | 16.650000 | 17.657658 | NaN | NaN |
| 3 | Sardinero Valdecilla | 26 | 10.850000 | 27.096774 | NaN | NaN |
| 3 | Valdecilla Sardinero | 26 | 16.237500 | 18.146872 | 0.878591 | 1.002023 |
| 3 | Sardinero Valdecilla | 27 | 14.058333 | 21.110778 | 1.546651 | 2.407243 |
| 3 | Sardinero Valdecilla | 28 | 13.533333 | 21,724138 | NaN | NaN |
| 3 | Valdecilla Sardinero | 28 | 15.733333 | 18.862023 | 1.809543 | 2.291816 |
| 3 | Sardinero Valdecilla | 29 | 15.733333 | 18.741907 | 0.976957 | 1.191809 |
| 3 | Valdecilla Sardinero | 29 | 16.316667 | 18.018386 | NaN | NaN |
| 3 | Sardinero Valdecilla | 30 | 13.366667 | 21.995012 | NaN | NaN |
| 3 | Valdecilla Sardinero | 30 | 20.937500 | 15.756244 | 8.983074 | 5.517848 |
| 3 | Sardinero Valdecilla | 31 | 15.766667 | 18.837143 | 1.911563 | 2.096271 |
| 3 | Valdecilla Sardinero | 31 | 13.750000 | 21.381818 | NaN | NaN |
| 3 | Sardinero Valdecilla | 32 | 14.200000 | 20.704225 | NaN | NaN |
| 3 | Valdecilla Sardinero | 32 | 17.070833 | 17.377928 | 1.895090 | 1.876181 |
| 3 | Sardinero Valdecilla | 33 | 16.208333 | 18.212942 | 1.153858 | 1.388664 |
| 3 | Valdecilla Sardinero | 33 | 16.400000 | 17.926829 | NaN | NaN |
| 3 | Sardinero Valdecilla | 34 | 15.416667 | 19.070270 | NaN | NaN |
| 3 | Valdecilla Sardinero | 34 | 17.091667 | 17.226956 | 0.760787 | 0.766751 |
| 3 | Sardinero Valdecilla | 35 | 14.870833 | 19.897284 | 1.312714 | 1.919301 |
| 3 | Sardinero Valdecilla | 36 | 13.366667 | 21.995012 | NaN | NaN |
| 3 | Sardinero Valdecilla | 37 | 16.779167 | 17.748695 | 2.288918 | 2.223769 |
| 3 | Valdecilla Sardinero | 37 | 14.283333 | 20.583431 | 2.286916 NaN | NaN |
| 3 | Sardinero Valdecilla | 38 | 13.083333 | 22.471338 | NaN | NaN |
| 3 | Valdecilla Sardinero | 38 | 16.054167 | 18.645532 | 2.670288 | 2.666395 |
| 3 | Sardinero Valdecilla | 39 | 13.995833 | 21.138598 | 1.304364 | 1.898364 |
| 101 | Sardinero Valdecilla | 1 | 15.762500 | 18.770625 | 1.391999 | 1.794301 |
| 101 | Valdecilla Sardinero | 2 | 25.808333 | 13.379625 | 11.437434 | 6.000105 |
| 101 | Sardinero Valdecilla | 3 | 16.825000 | 17.504400 | 0.826472 | 0.825401 |
| 102 | Sardinero Valdecilla | 2 | 15.695833 | 18.827740 | 1.347520 | 1.501745 |
| 102 | Valdecilla Sardinero | 3 | 15.161111 | 19.874902 | 2.959276 | 3.733267 |
| 102 | Sardinero Valdecilla | 4 | 19.550000 | 15.080707 | 1.199460 | 0.920604 |
| 102 | Sardinero_valuecilla | 4 | 19.330000 | 13.000/07 | 1.199400 | U.72UUU+ |