```
                                 ((((((((((((.....))))))((.(.(((((.......))))).).....).)))(.
chr-07.trna9-Ile-TAT     GGGGUGGUGGCG-CAGUUGGCUAGCGCGUAGGUCUUAUAAUCUU--GA-----GGUUGA- 51
chr-05.trna68-Ile-TAT    GGUCUCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCUC- 51
chr-01.trna40-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUUGC- 51
chr-04.trna31-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGUGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-01.trna53-Ile-TAT    GGUCUUGUAACU-CAGUUGGUUAGAGUGUUGGUCUUAUGAGCCG--AA-----AGUCGU- 51
chr-01.trna54-Ile-TAT    GGUCUUGUAACU-CAGUUGGUUAGAGUGUUGGUCUUAUGAGCCG--AA-----AGUCGU- 51
chr-06.trna22-Ile-TAT    GGUCUUGUAACU-CAGUUGGUUAGAGUGUUGGUCUUAUGAGCCG--AA-----AGUCGU- 51
chr-01.trna35-Ile-TAT    GGUCUCGUAGCU-CAGUUGGUUAGAGUGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-13.trna120-Ile-TAT   GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-15.trna4-Ile-TAT     GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-01.trna91-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-11.trna33-Ile-TAT    GGUCUUGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-13.trna248-Ile-TAT   GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-04.trna32-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-04.trna21-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-15.trna5-Ile-TAT     GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-15.trna27-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-04.trna33-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-05.trna158-Ile-TAT   GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-05.trna159-Ile-TAT   GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-02.trna23-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-14.trna7-Ile-TAT     GGUCUUGUAGCU-CAGUUGGUUAGAGCGCUGGUCUUAUGAGCCG--GA-----GGUCGC- 51
chr-11.trna34-Ile-TAT    GGUCUUGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-06.trna171-Ile-TAT   GGUCUUGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-15.trna34-Ile-TAT    GGUCUUGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-05.trna85-Ile-TAT    GGUCUCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGU- 51
chr-13.trna63-Ile-TAT    GGUCUCGUAGCU-CAGUUGGUUAGAGCAUUGGUCUUAUGAGCCG--AA-----GGUCGC- 51
chr-13.trna64-Ile-TAT    GGUCCCGUAGCU-CAGUUGGUUAGAGCGUUGGUCUUAUGAGCCG--AA-----GGUCGU- 51
chr-10.trna83-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-10.trna84-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-10.trna99-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-15.trna61-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-08.trna76-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna121-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-01.trna131-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna111-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-02.trna89-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna108-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna46-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna45-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-03.trna85-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-06.trna212-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna12-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna137-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-06.trna124-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna200-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna204-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna205-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-04.trna206-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-05.trna1-Ile-AAT     GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna117-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-01.trna12-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-01.trna13-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-05.trna143-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-05.trna142-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-12.trna66-Ile-AAT    GGCUUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-12.trna64-Ile-AAT    GGCUUGUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-04.trna203-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-06.trna248-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCAC- 51
chr-02.trna61-Ile-AAT    GGCCUAUUAGCU-CAGCUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-02.trna88-Ile-AAT    GGCCUAUUAGUU-CAGUUGGUUAGAGUGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-12.trna65-Ile-AAT    GGCUUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUGAUGCG--AA-----GGUCAC- 51
chr-12.trna28-Ile-AAT    GGCUUAUUGGCU-CAAUUGGUUAGAGCGUCGUGCUAAUAAUGCG--AA-----GGUCAC- 51
chr-14.trna2-Ile-AAT     GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-15.trna60-Ile-AAT    GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--AA-----GGUCGC- 51
chr-07.trna109-Ile-AAT   GGCCUAUUAGCUGCAGUUGGUUAGAGCGUCGUGCUAAUAACGCG--GA----UAGGUGA- 53
chr-08.trna141-Ile-TAT   AUUAGAGUGGCA-CAGUGGA--AGCGUGGUGGGCCUAUAACCCA--CA-----GGUCCC- 49
chr-06.trna185-Ile-TAT   AUCAAAGUGGCA-CAGCGGA--AGCGUGGUGGGCCUAUAACUCA--CA-----GGUCCC- 49
chr-05.trna28-Ile-TAT    GUUGGUGUGGUG-UAGU-GGCUAUCACGUUAGUCUUAUACACUAAUAA----AGGUCCC- 53
chr-05.trna31-Ile-TAT    GUUGGUGUGGUG-UAGU-GGUUAUCACGUUAGUCUUAUACACUA---A----AGGUCCC- 50
chr-04.trna201-Ile-AAT   GAUUUUCU-----UAGUUGGUUAGAGCGUUGUGCUAAUAACGC---AA----AGGUCAU- 47
chr-04.trna213-Ile-AAT   GGCCUAUUAGCU-CAGUUGGUUAGAGCGUCGUGCUAAUAACGCGAAGGUCGCAGGUUGGG 59
                                 .........10........20........30........40........50.........
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                                 .....(((((....)))))).............)))))))).
chr-07.trna9-Ile-TAT     ------GAGUUUGA-GCCUCUC-----------UCACCCCA 74
chr-05.trna68-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-01.trna40-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-04.trna31-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-01.trna53-Ile-TAT    ------GGGUUCGA-GCCCAC-----------CAAGACCA 74
chr-01.trna54-Ile-TAT    ------GGGUUCGA-GCCCAC-----------CAAGACCA 74
chr-06.trna22-Ile-TAT    ------GGGUUCGA-GCCCAC-----------CAAGACCA 74
chr-01.trna35-Ile-TAT    ------GGGUUCGA-GCCUCGC----------CGGGACCA 74
chr-13.trna120-Ile-TAT   ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-15.trna4-Ile-TAT     ------GGGUUCGA-GCCCGC-----------UGGGACCA 74
chr-01.trna91-Ile-TAT    ------GGGUUCGA-GCCCGC-----------UGGGACCA 74
chr-11.trna33-Ile-TAT    ------GGGUUCGA-GCCCGC-----------UAGGACCA 74
chr-13.trna248-Ile-TAT   ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-04.trna32-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-04.trna21-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-15.trna5-Ile-TAT     ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-15.trna27-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-04.trna33-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-05.trna158-Ile-TAT   ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-05.trna159-Ile-TAT   ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-02.trna23-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-14.trna7-Ile-TAT     ------GAGUUCGA-GCCUCGC----------CAGGACCA 74
chr-11.trna34-Ile-TAT    ------GGGUUCGA-GCCUCGC----------UAGGACCA 74
chr-06.trna171-Ile-TAT   ------GGGUUCGA-GCCUCGC----------UAGGACCA 74
chr-15.trna34-Ile-TAT    ------GGGUUCGA-GCCUCGC----------UAGGACCA 74
chr-05.trna85-Ile-TAT    ------GGGUUCGA-GCCCGC-----------CGGGACCA 74
chr-13.trna63-Ile-TAT    ------GGGUUCAA-GCCCGC-----------CGGGACCA 74
chr-13.trna64-Ile-TAT    ------GGGUUCGA-ACCUCGC----------CGGGACCA 74
chr-10.trna83-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-10.trna84-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-10.trna99-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-15.trna61-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-08.trna76-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna121-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-01.trna131-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna111-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-02.trna89-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna108-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna46-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna45-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-03.trna85-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-06.trna212-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna12-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna137-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-06.trna124-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna200-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna204-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna205-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-04.trna206-Ile-AAT   ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-05.trna1-Ile-AAT     ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna117-Ile-AAT   ------AGGUUCGA-GACCUGU----------AUGGGCCA 74
chr-01.trna12-Ile-AAT    ------AGGUUCGA-GACCUGU----------AUGGGCCA 74
chr-01.trna13-Ile-AAT    ------AGGUUCGA-GACCUGU----------AUGGGCCA 74
chr-05.trna143-Ile-AAT   ------AGGUUCGA-GACCUGU----------AUGGGCCA 74
chr-05.trna142-Ile-AAT   ------AGGUUCGA-GACCUGU----------AUGGGCCA 74
chr-12.trna66-Ile-AAT    ------AGGUUCGA-GACCUGU----------AUGAGCCA 74
chr-12.trna64-Ile-AAT    ------AGGUUCGA-GACCUGU----------AUGAGCCA 74
chr-04.trna203-Ile-AAT   ------AGGUUUGA-GACCUGC----------AUGGGCCA 74
chr-06.trna248-Ile-AAT   ------AGGUUCAA-GACCUGU----------AUGGGCCA 74
chr-02.trna61-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-02.trna88-Ile-AAT    ------AGGUUCGA-GACCUGC----------AUGGGCCA 74
chr-12.trna65-Ile-AAT    ------AGGUUCGA-GACUUGU----------AUGAGCCA 74
chr-12.trna28-Ile-AAT    ------AGGUUCGA-GACCUGU----------GUAGGCCA 74
chr-14.trna2-Ile-AAT     ------AAGUUCGA-GACCUGC----------AUGGGCCA 74
chr-15.trna60-Ile-AAT    ------AUGUUCGA-GACCUGC----------AUGGGCCA 74
chr-07.trna109-Ile-AAT   ------GGUUUCGAUAGACCUGC----------AAUGGGCCA 79
chr-08.trna141-Ile-TAT   ------AAGAUCGA-AACUUGG----------UUCUUAUU 72
chr-06.trna185-Ile-TAT   ------AGGAUCAA-AACCUAG----------CUUUGAUA 72
chr-05.trna28-Ile-TAT    ------CAGCUCAA-UCUUGGG----------CAUCAACA 76
chr-05.trna31-Ile-TAT    ------CAGCUCAA-UCUUGGG----------CAUCAACA 73
chr-04.trna201-Ile-AAT   ------AGGUUUAA-GACCUGU----------AUGGGCCA 70
chr-04.trna213-Ile-AAT   CCAAUUUUGUUAUUUUGCAACCCCUGGCUCCUUCAUGAGCCA 101
                                 .........70........80........90........100
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