```
                                (((..((..((.(((........)))).(((((.......)))))).....(((....
chr-4.trna595-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-6.trna428-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-7.trna594-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-9.trna281-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-10.trna186-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-3.trna570-Ala-AGC     GGG--GG-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-10.trna172-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGCACGGGGAUCG 57
chr-8.trna148-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGACCG 57
chr-10.trna163-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUUG 57
chr-9.trna544-Ala-AGC     GGG--GA-UGUAGCUCAGAUGAUAGAGCGCUCGCUUAGCAUGCGAGAGGCACGGGGAUCG 57
chr-14.trna428-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUUG 57
chr-14.trna352-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-3.trna603-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna646-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-1.trna111-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna643-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna642-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna641-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-4.trna634-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-4.trna648-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna638-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna637-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna635-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna634-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-14.trna545-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna230-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna246-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna625-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna616-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna302-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna614-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna311-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna448-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna18-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna17-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna480-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna485-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-12.trna65-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-12.trna60-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna487-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-12.trna58-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-12.trna57-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna488-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna489-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-11.trna37-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-11.trna34-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-11.trna31-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna491-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna502-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna593-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-14.trna544-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-10.trna144-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna649-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-9.trna446-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-14.trna543-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-9.trna168-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna632-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCACGCGAGAGGUAUGGGGAUCG 57
chr-3.trna592-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUUG 57
chr-12.trna55-Ala-AGC     GGG--GA-UGUAGCUUAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUUG 57
chr-14.trna344-Ala-AGC    GGG--GA-UGUAGCUCAGAUGAUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna613-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUGUGGGGAUCG 57
chr-13.trna645-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUAG 57
chr-7.trna449-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUAG 57
chr-7.trna479-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUAU 57
chr-13.trna640-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGUGCUUGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna639-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGUGCUUGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-12.trna59-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGGUAUGGGGAUCU 57
chr-13.trna629-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCAAGAGGUAUGGGGAUCU 57
chr-7.trna285-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCAAGAGGUAUGGGGAUCG 57
chr-7.trna493-Ala-AGC     GGG--GA-UGCAGCUCAGAUGGUAGACCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-2.trna472-Ala-AGC     GGG--GA-UGUAGCUCAGACGGUAGAGCGCUUGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-10.trna365-Ala-AGC    GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAU-GGGAUCG 56
chr-7.trna486-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAACGCUCGCAUAGCAUGCGAGAGGUAUGGAGAUCG 57
chr-7.trna482-Ala-AGC     GGG--GA-UGUAGCCCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-13.trna615-Ala-AGC    GGG--GC-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 57
chr-7.trna265-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGUGAGAGGUAUGGGGAUCG 57
chr-13.trna508-Ala-AGC    GGG--GA-UGUAGCUUGGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUACGGGGAUCG 57
chr-8.trna147-Ala-AGC     GGG--GA-UGUAGUUCCGAUGGUAGAGCGCUUGCUUAGCAUGGGAGAGGUAUGGGGAUCG 57
chr-13.trna631-Ala-AGC    GGG--GA-UGUAGCACAGAUGGUAGAGCGCUCGCUUAGCAUGCGAUAGGUAUGGGGAUCA 57
chr-7.trna501-Ala-AGC     UGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGAAUCG 57
chr-7.trna294-Ala-AGC     GGG--GA-UGUAGCUUAGAUGGUAGAGCGCUCGCUUAGCAUGCG-GAGGUAUGGGGAUCG 56
chr-12.trna418-Ala-AGC    GGG--GA-UGUAGCUCAAAUGGUAGAGCAUUUAAUCAGCUAUUAAAAGGCAGGGGGAUCG 57
chr-11.trna295-Ala-AGC    GGG--GA-UGUAGCUCAAAUGGUAGAGCAUUUAUACAGCUUAUAAAAGGCAGGGGGAUCG 57
chr-3.trna602-Ala-AGC     GGG--GA-UGUAGCUCAGAUGGUAGAGCGCUCGCUUAGCAUGCGAGA-----GGGGAUCG 52
chr-12.trna527-Ala-AGC    AUG-GGGAUGUAGCUCACAUGGUAGAGCGCUCGCUUAGCAUGUGAGAGGCAUGGGGAUUG 59
chr-7.trna481-Ala-AGC     AUCAGGGAUGUAGCUCAGAUG-UAGAGCGCUCGCUUAGCAUGCGAGAGGUAUGGGGAUCG 59
                          .........10........20........30........40........50.........
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chr-4.trna595-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-6.trna428-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-7.trna594-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-9.trna281-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-10.trna186-Ala-AGC    AUACCCCGCAUC-UCCA 73
chr-3.trna570-Ala-AGC     AUACCCCGCGUC-UCCA 73
chr-10.trna172-Ala-AGC    AUACCCCGCAUC-UCCA 73
chr-8.trna148-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-10.trna163-Ala-AGC    AUACCCCGCAUC-UCCA 73
chr-9.trna544-Ala-AGC     AUACCCCGCAUC-UCCA 73
chr-14.trna428-Ala-AGC    AUACCCUGCAUC-UCCA 73
chr-14.trna352-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-3.trna603-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna646-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-1.trna111-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna643-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna642-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna641-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-4.trna634-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-4.trna648-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna638-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna637-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna635-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna634-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-14.trna545-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna230-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna246-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna625-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna616-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna302-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna614-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna311-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna448-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna18-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna17-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna480-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna485-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-12.trna65-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-12.trna60-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna487-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-12.trna58-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-12.trna57-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna488-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna489-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-11.trna37-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-11.trna34-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-11.trna31-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna491-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna502-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna593-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-14.trna544-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-10.trna144-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna649-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-9.trna446-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-14.trna543-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-9.trna168-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna632-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-3.trna592-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-12.trna55-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-14.trna344-Ala-AGC    AUACCCCGCUUC-UCCA 73
chr-13.trna613-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna645-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna449-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna479-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna640-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-13.trna639-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-12.trna59-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna629-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna285-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna493-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-2.trna472-Ala-AGC     AUACCCUACUUU-UCCA 73
chr-10.trna365-Ala-AGC    AUACCCCACUUC-UCCA 72
chr-7.trna486-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-7.trna482-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna615-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna265-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna508-Ala-AGC    AUACCCCGCAUC-UCCA 73
chr-8.trna147-Ala-AGC     AUACCCCACUUC-UCCA 73
chr-13.trna631-Ala-AGC    AUACCCCACUUC-UCCA 73
chr-7.trna501-Ala-AGC     AUACCCCACUUCUCCAG 74
chr-7.trna294-Ala-AGC     AUACCCCACUUC-UCCA 72
chr-12.trna418-Ala-AGC    AUACCUCCCAUC-UCCA 73
chr-11.trna295-Ala-AGC    AUACCUCCCAUC-UCCA 73
chr-3.trna602-Ala-AGC     AUACCCCACUUC-UCCA 68
chr-12.trna527-Ala-AGC    AUACCCAAUUCUCCAUA 76
chr-7.trna481-Ala-AGC     AUACCCCACUAGGGAUG 76
                          .........70......
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