```
                                (((.((((.....((((.........)))).(((((.....)))))).........
chr-6.trna126-Tyr-ATA     AGG-UCCU----UAUCUUAG-UGG-UAGAUCAUUUGACUAUAAGUCAAGAG--------- 44
chr-12.trna84-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAAGACUGUAGAUCUUUAG--------- 45
chr-12.trna85-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna47-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-10.trna10-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-8.trna116-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-7.trna69-Tyr-GTA      CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna86-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna88-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-3.trna132-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-3.trna48-Tyr-GTA      CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-4.trna76-Tyr-GTA      CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna87-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna82-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAAGACUGUAGAUCUUUAG--------- 45
chr-9.trna6-Tyr-GTA       CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAAGACUGUAGAUCUUUAG--------- 45
chr-6.trna70-Tyr-GTA      CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAAGACUGUAGAUCUUUAG--------- 45
chr-12.trna83-Tyr-GTA     CCG-ACCU----UAGCUCAGUUGG-UAGAGCGGAGGACUGUAGAUCCUUAG--------- 45
chr-12.trna89-Tyr-GTA     CCGACCU----UAGCUCAGUUGG-UGGAGCGGAGGACUGUAGAUCCUUAG--------- 46
chr-2.trna147-Tyr-GTA     GGC-GACA----UGGCCGAG-UGG-UAAGGCAGAGGACUGUAAAUCCUUUU--------- 44
chr-11.trna57-Tyr-GTA     GGC-GACA----UGGACGAG-UGG-UAAGGCAGAGGACUGUAAAUUCUUUU--------- 44
chr-3.trna109-Tyr-GTA     GGU-GACA----UGGCCUAG-UGG-UAAGGCAAAGGACUGUAGAUCCUUUU--------- 44
chr-6.trna127-Tyr-GTA     GGGUCCCU-----AGCUCAG-CGG-UAGAGAAUUAGACUGUAGAUCAAGAG--------- 44
chr-4.trna74-Tyr-ATA      GGUUCAUUAGCGUGGUU--GGUUA--AAGCAUCGUGCCUAUAAAGUAAAGA--------- 47
chr-3.trna33-Tyr-ATA      GGGUGGGGCCUAUAGCUCAGAGGAUUAGAGCACGUGGCUAUAAACCAUGGU--------- 51
chr-7.trna5-Tyr-GTA       UUG-UCCA----UAGCUCAGUGG--UAGAGUGUUUGACUGUAGAUCAAGAG--------- 44
chr-7.trna6-Tyr-GTA       UUG-UCCA----UAGCUCAGUGG--UAGAGUGUUUGACUGUAGAUCAAGAG--------- 44
chr-4.trna89-Tyr-GTA      GGA-AGAG----UGGUCGAGUGGUCAAAAGUGGCAGACUGUAAAUCUGUUG-AA-GUUUU 53
chr-9.trna56-Tyr-GTA      GGG-AGAG----UGGCCGAGUGGUCAAAAGCGGCAGACUGUAAAUCUGUUG-AA-GUUUU 53
chr-10.trna6-Tyr-GTA      GGG-AGAG----CGGCCGAGUGGUCAAAAGCGGCAGACUGUAAAUCUGUUG-AA-GUUUU 53
chr-4.trna48-Tyr-GTA      GGG-AGAG----UGGCUGAGUGGUCAAAAGUGGCAGACUGUAAAUAUGUUG-AA-GUUUU 53
chr-3.trna23-Tyr-ATA      UGG-AGAG----UGGCCGAGUGGUCAAAAGCGGUAGAAUAUAAAUCUAUUG-AA-GUUUU 53
chr-4.trna82-Tyr-GTA      GGG-AGAG----UGGCCGAUUGGUCAAAAGUAGCGAAUUGUAAAUUUGUUG-AA-GUUUU 53
chr-11.trna11-Tyr-ATA     GGG-AGAG----UGGUCGAGUGGUCAAAAGUGGCAGACUAUAAAUCUGUUG-AA-GUUUU 53
chr-1.trna81-Tyr-GTA      GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACAGACUGUAAAUUCGUUG-GCAAUAUG 54
chr-1.trna67-Tyr-GTA      GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACGGACUGUAAAUUCAUUG-GCAAUAUG 54
chr-1.trna17-Tyr-GTA      GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACGGACUGUAAAUUCGUUG-GCAAUAUG 54
chr-2.trna32-Tyr-ATA      GGG-UCGA----UGCCCAAGCGGUUAAUGGGGACGGACUAUAAAUUCGUUG-ACAAUAUG 54
chr-2.trna124-Tyr-GTA     GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACGGAUUGUAAAUUCGUUG-AUAAUAUG 54
chr-6.trna21-Tyr-GTA      GGG-UCGA----UGCCCGAUCAGUUAAUGGGGACGGACUGUAAAUUCGUUG-GCAAUAUG 54
chr-6.trna165-Tyr-ATA     GGG-UCGA----UGCCCGAGCAGUUAAUGGGGAUGGACUAUAAAUUCGUUG-GCAAUAUG 54
chr-1.trna119-Tyr-ATA     GGG-UCGA----UGCCUGAGCGGUUAAUGGGGACGGACUAUAAAUUCGUUU-GCAAUAUG 54
chr-5.trna30-Tyr-GTA      GGG-UCGA----UGCCCAAGCGGUUAAUGGCGACGGACUGUAAAUUCGUUG-GAAAUAUG 54
chr-11.trna73-Tyr-GTA     GGG-UCGA----UGACCAAGCGGUUAAUGGGGAUGGACUGUAAAUUCGUUG-GCAAUAUA 54
chr-2.trna11-Tyr-GTA      GGG-UCGA----UGCCCGAGUGGUUAAUGGGGACGGACUGUAAAUUCAUUG-GCAAUAUG 54
chr-8.trna132-Tyr-GTA     GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACGGACUGUAAAUUCAUUA-GCAAUAUG 54
chr-10.trna19-Tyr-ATA     GGG-UUGA----UGCCUGAGUGGUUAAUGGAGACGGACAAUAAAUUCGUUG-GCAAUAUG 54
chr-1.trna44-Tyr-GTA      GGG-UCGA----UGCCCGAGCGGUUAAUGGAGAUGUACUGUAAAUUCGUUG-ACAAUAUG 54
chr-8.trna34-Tyr-GTA      GGG-UCGA----UGCCCGAGCGGUUAAUGGGGACGGACUGUAAAUUCGUUG-GCAAUAUG 54
chr-10.trna95-Tyr-ATA     GGG-UCGA----UGCCUAAGCGGUUAAUGGGGAUGAACUAUAAAUUCAUUG-GCAAUAUG 54
chr-11.trna118-Tyr-GTA    GGA-UUGA----UGCCCGAGCGGUUAAUGGGAACGGACUGUAAAUUCGUUG-GCAAUAUG 54
chr-11.trna156-Tyr-ATA    AGG-UCGA----UGCCUGAGAGGUUAAUAGGGAUGGACUAUAAAUUUGUUG-GCAAUAUG 54
chr-7.trna28-Tyr-ATA      AGG-UCGA----UGCCCGAGCGGUUAAUGGGGAUGGACUAUAAAUUCGUUG-GCAAUAUG 54
chr-10.trna71-Tyr-ATA     GGG-UUGA----UGCCCGAGCGGUUAAUGGGGAUGGACUAUAAAUUCAUUG-GUAAUAUA 54
chr-3.trna29-Tyr-GTA      GGA-GAGA----UGACUAAAUGGACUAAAGCGACAGAUUGUAAAUCUGUUGUACGAGUUA 55
                          .........10........20........30........40........50.........
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                          .....((((...(.......)))))))))........))).
chr-6.trna126-Tyr-ATA     --GUCACCA---GUUCGAAACCUGGUAGGG--------CUUU 72
chr-12.trna84-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGAU--------CGGA 73
chr-12.trna85-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-12.trna47-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-10.trna10-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-8.trna116-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-7.trna69-Tyr-GTA      --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-12.trna86-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-12.trna88-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-3.trna132-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-3.trna48-Tyr-GTA      --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-4.trna76-Tyr-GTA      --GUCACUG---GUUCGAAUCCGGUAGGU--------CGGA 73
chr-12.trna87-Tyr-GTA     --GUCGCUG---GUUUGAAUCCGGCAGGU--------CGGA 73
chr-12.trna82-Tyr-GTA     --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-9.trna6-Tyr-GTA       --GUCGCUG---GUUCGAAUCCGGCAGGU--------CGGA 73
chr-6.trna70-Tyr-GTA      --GUCGCUG---GUUUGAAUCCGGCAGGU--------CGGA 73
chr-12.trna83-Tyr-GTA     --GUUGCUG---GUUCGAACCCGGCAGGU--------CGGA 73
chr-12.trna89-Tyr-GTA     --GUCGCUG---GUUCGAAUCUGGCAGGU--------GGGA 74
chr-2.trna147-Tyr-GTA     --UUACCCA---GUUCAAAUCCGAGUGUC--------UCCU 72
chr-11.trna57-Tyr-GTA     --UUCCCCA---UUUCAAAUCCAGGUGUC--------GUCU 72
chr-3.trna109-Tyr-GTA     --UUUGCUA---GUUCAAAUGUGGGUGUC--------ACCA 72
chr-6.trna127-Tyr-GTA     --GUUACUA---GUUUGAACUUGGUAGGG--------CCCU 72
chr-4.trna74-Tyr-ATA      --UCGCAGG---UUCUGAAGACCUGCAUG--------GGCCA 76
chr-3.trna33-Tyr-ATA      --GCCGGGG---AU-UAAAAUCCCUCCUC-------GCCUA 79
chr-7.trna5-Tyr-GTA       --GUCACCG---GUUCAAACCCAGUUGGGCCCUUCUAUAAA 80
chr-7.trna6-Tyr-GTA       --GUCACCG---GUUCGAACCCAGUUGGGCCCUUCUAUAAA 80
chr-4.trna89-Tyr-GTA      UCUAUGUAG---GUUCGAAUCCUGCCUCU--------CCCA 83
chr-9.trna56-Tyr-GTA      UCUAUGUAG---GUUCGAAUCCUGCCUCU--------CCCA 83
chr-10.trna6-Tyr-GTA      UCUACGUAG---GUUCGAAUCCUGCCUCU--------CCCA 83
chr-4.trna48-Tyr-GTA      UCUACGUAG---GUUCGAAUCCUGCCUCU--------CCCA 83
chr-3.trna23-Tyr-ATA      UCUAUGCAG---GUCCGAAUCCUGCCUUU--------CCUA 83
chr-4.trna82-Tyr-GTA      UUUACAUAG---GUUCAAAUCCUGCCUCU--------CCCA 83
chr-11.trna11-Tyr-ATA     UCUAUGUAG---GUUCGAAUGCUGCC-CU--------CCCA 82
chr-1.trna81-Tyr-GTA      UCUACGCUG---GUUCUAAUCCAGCUCAU--------CCCA 84
chr-1.trna67-Tyr-GTA      UCUACGCUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-1.trna17-Tyr-GTA      UCUACGCUG---GUUCAAAUCCAGCUUGG--------CCCA 84
chr-2.trna32-Tyr-ATA      UCUACGCUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-2.trna124-Tyr-GTA     UCUACGCUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-6.trna21-Tyr-GTA      UCUACGCUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-6.trna165-Tyr-ATA     UCUACUCUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-1.trna119-Tyr-ATA     UCUAUGCUG---GUUCAAAUUCAGCUCGG--------CCCA 84
chr-5.trna30-Tyr-GTA      UCUAUGCUG---GUUCAAAUCCAGCUCAG--------CCCA 84
chr-11.trna73-Tyr-GTA     UCUAUGCUG---GAUCAAAUCCAGCUCGG--------CCCA 84
chr-2.trna11-Tyr-GTA      UCUACGCUG---GUUCAAAUCCAGCUCGG--------ACCA 84
chr-8.trna132-Tyr-GTA     UGUACACUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-10.trna19-Tyr-ATA     UCUACGCUA---GUUCAAAUCCAGCUCAG--------CCCA 84
chr-1.trna44-Tyr-GTA      UCUACGCUG---UUUCAAAUCCAGCUCGG--------CCCA 84
chr-8.trna34-Tyr-GTA      UCUACGUUG---GUCCAAAUCUAGCUCGG--------CCCA 84
chr-10.trna95-Tyr-ATA     UCCAUACUG---GUUCAAAUUCAGCUCGA--------CCCA 84
chr-11.trna118-Tyr-GTA    UCUACACUG---GUUCAAAUCCAGCUCGG--------CCCA 84
chr-11.trna156-Tyr-ATA    UCUACGCUG---GUUCAAAUCCAGCUCAG--------CCCA 84
chr-7.trna28-Tyr-ATA      UUUUCGUUG---GUUCAAAUCCAUCUCAG--------CCCA 84
chr-10.trna71-Tyr-ATA     UCUACACUG---GUUCAAAUCUAGUUCGU--------CCCA 84
chr-3.trna29-Tyr-GTA      AUUAUAUUGAGUGUUUGAAUCCCACUCUU--------UCCA 88
                          .........70........80........90..........
                          ▂▃▂▃▃▃▄▄▄▅▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄
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