```
                                 ((((((((((((........))))))).(((((.......))))).)).........(((((
chr-5.trna77-Val-TAC             GGUGCUGUGGUGUAGUCGGUUAUCACGUUAGUCUUACACACUU-AAA-----GGUCCCCAG 54
chr-6.trna39-Val-TAC             GGUGCUGUGGUGUAGUCGGUUAUCACGUUAGUCUUACACACUU-AAA-----GGUCCCCAG 54
chr-1.trna54-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-1.trna67-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-3.trna39-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-18.trna19-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-18.trna11-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-17.trna13-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-16.trna54-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-5.trna93-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-16.trna25-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-15.trna43-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-6.trna68-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-7.trna69-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-8.trna15-Val-CAC             GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-13.trna27-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-14.trna35-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-13.trna40-Val-CAC            GUCUGGGUGGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-7.trna53-Val-CAC             GUCUGGGUAGUGUAGUUGGUUAUCACGUUAGUCUCACACACUU-AAA-----GGUCCCCAG 54
chr-3.trna59-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-4.trna3-Val-AAC              GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-14.trna25-Val-AAC            GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-7.trna50-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GGA-----GGUCUCCGG 54
chr-1.trna42-Val-AAC             GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-1.trna72-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-2.trna8-Val-AAC              GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-2.trna35-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-13.trna23-Val-AAC            GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-13.trna8-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-12.trna3-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-11.trna16-Val-AAC            GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-10.trna8-Val-AAC             GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-9.trna8-Val-AAC              GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-2.trna37-Val-AAC             GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-3.trna56-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-14.trna54-Val-AAC            GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-5.trna56-Val-AAC             GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-15.trna29-Val-AAC            GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-7.trna42-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-6.trna80-Val-AAC             GGUGUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-4.trna24-Val-AAC             GGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGU 54
chr-1.trna30-Val-AAC             GGUGUCAUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-6.trna46-Val-AAC             GGUGUCAUGGUGUAGUUGGUUAUCACGUCAGUCUAACACACUU-GAA-----GGUCUCCGG 54
chr-14.trna44-Val-AAC            GGUUUCG-GGUGUAGUUGGUCAUCACGUCAGUCCAACACACUU-GAA-----GGUCUCCGG 53
chr-16.trna29-Val-TAC            GUUGCUGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-6.trna85-Val-TAC             GUUGCUGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-5.trna43-Val-TAC             GUUGCUGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-5.trna63-Val-TAC             GUUGCUGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-7.trna16-Val-TAC             GUUGCCGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-8.trna35-Val-TAC             GUUGCCGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACACUU-GAA-----GGUCUCCAG 53
chr-6.trna6-Val-TAC              GUUGCUGUGGUGUAGU-GGUUAUCACGUCAGUCUUACACUCU-GAA-----GGUCUCCAG 53
chr-13.trna37-Val-AAC            AGUUUCGUGGUGUAGUUGGUUAUCACGUCAGUCUAACUCACUUGAA-----GGUCUCCGG 55
chr-18.trna40-Val-GAC            AGGGAUAUAACUCAGC--GGUAGAGUGUCACCUUGACAUGGU-GGA-----AGUCAUCAG 52
chr-15.trna36-Val-GAC            AGGGAUAUAACUUAGC--GGUAGAGUGUCACCUUGACAUGGU-GGA-----AGUCAUCAG 52
chr-4.trna5-Val-GAC              AGGGAUAUAAUUCAGC--GGUAGAGUGUCACCUUGACGUGGU-GGA-----AGUCAUCAG 52
chr-4.trna78-Val-CAC             GGGGUGGUGGCGCAGUUGCGUAGGUCGCAAUCC-UGA-----GGUCUU--G 52
chr-3.trna6-Val-TAC              GCUGCCAUGGUGAAAUUGGUAGACACCCUGCUCGUACAAAGCAGUGCUCAUGCGUCUCGG 60
chr-3.trna8-Val-GAC              GAUAUAACUCAGC-----GGUAGAGUGUCACCUUGACGUGGUGGAA------GUCAUCAG 49
                                 .........10........20........30........40........50.........
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                                 .......))))).)))))).
chr-5.trna77-Val-TAC             UUCGAGCCUGGGCAGCACCA 74
chr-6.trna39-Val-TAC             UUCGAGCCUGGGCAGCACCA 74
chr-1.trna54-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-1.trna67-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-3.trna39-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-18.trna19-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-18.trna11-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-17.trna13-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-16.trna54-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-5.trna93-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-16.trna25-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-15.trna43-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-6.trna68-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-7.trna69-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-8.trna15-Val-CAC             UUCGAACCUGGGCUCAGACA 74
chr-13.trna27-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-14.trna35-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-13.trna40-Val-CAC            UUCGAACCUGGGCUCAGACA 74
chr-7.trna53-Val-CAC             UUGGAACCUGGGCUCAGACA 74
chr-3.trna59-Val-AAC             UUCGAACCCGGGCGAAGCCA 74
chr-4.trna3-Val-AAC              UUCGAACCCGGGCGAAGCCA 74
chr-14.trna25-Val-AAC            UUCGAAUCCGGGCGAAGCCA 74
chr-7.trna50-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-1.trna42-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-1.trna72-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-2.trna8-Val-AAC              UUCGAGUCCGGGCGACGCCA 74
chr-2.trna35-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-13.trna23-Val-AAC            UUCGAGUCCGGGCGAAGCCA 74
chr-13.trna8-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-12.trna3-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-11.trna16-Val-AAC            UUCGAGUCCGGGCGAAGCCA 74
chr-10.trna8-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-9.trna8-Val-AAC              UUCGAGUCCGGGCGACGCCA 74
chr-2.trna37-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-3.trna56-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-14.trna54-Val-AAC            UUCGAGUCCGGGCGAAGCCA 74
chr-5.trna56-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-15.trna29-Val-AAC            UUCGAGUCCGGGCGACGCCA 74
chr-7.trna42-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-6.trna80-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-4.trna24-Val-AAC             UUCGAGUCCGGGCGAAGCCA 74
chr-1.trna30-Val-AAC             UUCGAGUCCGGGCGACGCCA 74
chr-6.trna46-Val-AAC             UUCGAGUUCGGGCGACGCCA 74
chr-14.trna44-Val-AAC            UUCGAGUCCGGGCGAAGCCA 73
chr-16.trna29-Val-TAC            UUCGAUCCUGGGCAGCAACA 73
chr-6.trna85-Val-TAC             UUCGAUCCUGGGCAGUAACA 73
chr-5.trna43-Val-TAC             UUCGAUCCUGGGCAGCAACA 73
chr-5.trna63-Val-TAC             UUCGAUCCUGGGCAGCAACA 73
chr-7.trna16-Val-TAC             UUCGAUCCUGGGCGGCAACA 73
chr-8.trna35-Val-TAC             UUCGAUCCUGGGCGGCAACA 73
chr-6.trna6-Val-TAC              UUCGGUCCUGGGCAGCAACA 73
chr-13.trna37-Val-AAC            UUCGAGUCCGGGCGAAGCAC 75
chr-18.trna40-Val-GAC            UUCGAGCCUGAUUAUCCCUA 72
chr-15.trna36-Val-GAC            UUCGAGCCUGAUUAUCCCUA 72
chr-4.trna5-Val-GAC              UUCGAGCCUGAUUAUCCCUA 72
chr-4.trna78-Val-CAC             UUCGAGCCUCUCUCACCCCA 72
chr-3.trna6-Val-TAC              UUCGAGUCCGAGUGGCAGCA 80
chr-3.trna8-Val-GAC              UUCGAGCCUAGGUUGGUGCU 69
                                 .........70.........
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