```
                                 (((((((((.(.........).........))))).(((((((.......)))))))).(((
chr-11.trna13-Lys-CTT    GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-11.trna50-Lys-CTT    GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-12.trna106-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna185-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-06.trna247-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-01.trna67-Lys-CTT    GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna115-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-05.trna113-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna216-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-12.trna114-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-13.trna198-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-13.trna250-Lys-CTT   GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-12.trna113-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna96-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna114-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna116-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna117-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna119-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna124-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-09.trna27-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-08.trna142-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCACAAGGCUCUUAACUUUGUGGUCC 49
chr-12.trna61-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-12.trna62-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-10.trna27-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna119-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-15.trna143-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-01.trna17-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-07.trna97-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-07.trna96-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna118-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-06.trna95-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-06.trna7-Lys-CTT     GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-06.trna6-Lys-CTT     GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna116-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna102-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-05.trna114-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-09.trna33-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-02.trna37-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-02.trna62-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna184-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-02.trna177-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna153-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna149-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna145-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna147-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-04.trna146-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-02.trna176-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-01.trna98-Lys-CTT    GCCUGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-12.trna13-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-10.trna56-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna70-Lys-CTT    GCCCGUCUAGC----UCAGUCG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-08.trna140-Lys-CTT   GCCCGUCUAGC----UCAGAUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-12.trna82-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-09.trna117-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-12.trna80-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna122-Lys-CTT   GCCCGUCUAGC----UUAGUAG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-04.trna148-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCG 49
chr-13.trna195-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUCUGGUCC 49
chr-13.trna197-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUCUGGUCC 49
chr-08.trna149-Lys-CTT   GCCCGUCUAGC----UCAGAUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUUC 49
chr-08.trna147-Lys-CTT   GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGACC 49
chr-10.trna95-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUUG 49
chr-12.trna77-Lys-CTT    GCCCGUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-01.trna120-Lys-CTT   UCCUAUCUAGC----UCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCU 49
chr-08.trna145-Lys-CTT   GCUCGUCUAGC----UUAGUUG-------GUAUAGCGCUAGGCUCUUAACCUUGUGGUCC 49
chr-08.trna144-Lys-CTT   GCCUAUCUAGCUCGAUCAGUUG-------GUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 53
chr-12.trna83-Lys-CTT    GCUCAUCUAGC----UCAGUUG-------UUAGAGCGCAAGGCUCUUAACCUUGUGGUCC 49
chr-12.trna107-Lys-CTT   GCCCGUCUAGCUCAGUUGGUAGAGCGCAAGGCGAGCGCAAGGCUCUUAACCUUGUGGUCG 60
chr-04.trna155-Lys-CTT   GCGCCUGUAGC----UCAGUGG-------AUAGAUUGUUUGUUUCUUAAGUAGAAAGUCA 49
chr-05.trna157-Lys-CTT   GCUAGAAUAGCUCAGUUGGUUA--GA--------GCAUGUGGCUCUUCACCAUAAGGUCG 50
chr-03.trna160-Lys-CTT   GCUGGAAUAGUUCAGUUGGUUA--GA--------GCGUGUGGCCCUUAAUUACAAGGUUG 50
chr-05.trna156-Lys-CTT   GCUAGAAUAGCUCAGUUGGUUA--GAGCAUGUGGGCAUGUGGCUCUUCACCAUAAGGUCG 58
                                 .........10........20........30........40........50.........
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                                 ((((........)))))))))))).
chr-11.trna13-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-11.trna50-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-12.trna106-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna185-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-06.trna247-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-01.trna67-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna115-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-05.trna113-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna216-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-12.trna114-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-13.trna198-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-13.trna250-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-12.trna113-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna96-Lys-CTT    UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna114-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna116-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna117-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna119-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-01.trna124-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-09.trna27-Lys-CTT    UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-08.trna142-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-12.trna61-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-12.trna62-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-10.trna27-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna119-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-15.trna143-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-01.trna17-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-07.trna97-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-07.trna96-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna118-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-06.trna95-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-06.trna7-Lys-CTT     UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-06.trna6-Lys-CTT     UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna116-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna102-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-05.trna114-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-09.trna33-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-02.trna37-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-02.trna62-Lys-CTT    UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna184-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-02.trna177-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna153-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna149-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna145-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna147-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-04.trna146-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 73
chr-02.trna176-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGUG 73
chr-01.trna98-Lys-CTT    UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-12.trna13-Lys-CTT    UGGGUUUGAG-CCCCAGGGUGGGCG 73
chr-10.trna56-Lys-CTT    UGGGUUCGUG-CCCCAGGGUGGGCG 73
chr-01.trna70-Lys-CTT    UGGGUUCGAG-UCCCACGGUGGGCG 73
chr-08.trna140-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-12.trna82-Lys-CTT    UGGGUUCAAG-CCCCAGGGUGGGCG 73
chr-09.trna117-Lys-CTT   UGGGUUCAAG-CCCCACGGUGGGCG 73
chr-12.trna80-Lys-CTT    UGGGUUCAAG-ACCCAGGGUGGGCG 73
chr-01.trna122-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-04.trna148-Lys-CTT   UGGGUUCGAG-CCCCACAGUGGGCG 73
chr-13.trna195-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-13.trna197-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-08.trna149-Lys-CTT   UGGGUUCGAG-CCCCAGGGUGGGCG 73
chr-08.trna147-Lys-CTT   UGGGAUUGAG-CCCUAGGGUGGGCG 73
chr-10.trna95-Lys-CTT    UGGGUUCGAG-UUCCACGGUGGACG 73
chr-12.trna77-Lys-CTT    UGGGUUUAAGCCCCCAGGGUGGGCA 74
chr-01.trna120-Lys-CTT   UGGGUUCGAG-CCUCAUGGUGGGCG 73
chr-08.trna145-Lys-CTT   UAGGUAUGAG-CCCUAGGGUGGGCG 73
chr-08.trna144-Lys-CTT   UGGGUUCAAG-UCCCAGGGUGGGCG 77
chr-12.trna83-Lys-CTT    UAUGUUCGAG---CCAGGGUGGGCG 71
chr-12.trna107-Lys-CTT   UGGGUUCGAG-CCCCACGGUGGGCG 84
chr-04.trna155-Lys-CTT   UAAGUUCAAC-CCUUAUUUGGUGUG 73
chr-05.trna157-Lys-CTT   GGGGUUCAAG-CCCUCUUUCUAGCG 74
chr-03.trna160-Lys-CTT   GAGGUUCAAG-CCGUCUUUUAGCA 74
chr-05.trna156-Lys-CTT   GGGGUUCAAG-CCCUCUUCUAGCG 82
                                 .........70........80....
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