Table 1: Performance Results for Griewank_10D Problem

QQN- 6.06e0 1.00e1 9.86e-3 2.60e1 2281.2 0.8 StrongWolfe QQN- 2.35e1 6.71e0 2.19e0 2.58e1 4343.6 0.8 GoldenSection QQN-Bisection- 2.33e1 7.17e0 1.67e0 2.58e1 3260.0 0.8 QQN-Bisection- 2.19e1 9.08e0 5.93e-10 2.58e1 2381.1 5.8 1 Adam- 2.54e1 2.09e-2 2.53e1 2.54e1 2502.0 0.8 AMSGrad Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.8 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.8 Limited GD- 2.48e1 3.83e-2 2.48e1 2.49e1 1668.0 0.8	0 0.085 0 0.083 0 0.065 0 0.064 0 0.063 0 0.061
QQN- 2.35e1 6.71e0 2.19e0 2.58e1 4343.6 0.0 GoldenSection 2.33e1 7.17e0 1.67e0 2.58e1 3260.0 0.0 QQN-Bisection- 2.19e1 9.08e0 5.93e-10 2.58e1 2381.1 5.0 1 Adam- 2.54e1 2.09e-2 2.53e1 2.54e1 2502.0 0.0 AMSGrad Adam-Robust 2.55e1 2.00e-2 2.55e1 2.55e1 2502.0 0.0 Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.0 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.0 Limited 2.38e1 2256.7 0.0	0 0.083 0 0.065 0 0.064 0 0.063 0 0.061
GoldenSection QQN-Bisection- 2.33e1 7.17e0 1.67e0 2.58e1 3260.0 0.4 2 QQN-Bisection- 1 Adam- Adam- Adam- Adam-Robust 2.55e1 2.00e-2 2.55e1 2.55e1 2502.0 0.4 Adam- Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.4 WeightDecay L-BFGS- Limited	0 0.083 0 0.065 0 0.064 0 0.063 0 0.061
QQN-Bisection- 2 QQN-Bisection- 2 QQN-Bisection- 1 Adam- Adam- Adam-Robust Adam- Adam- 2.55e1 2.55e1 2.00e-2 2.55e1 2.55e1 2.55e1 2.502.0 0.00e-2 2.55e1 2.55e1 2.55e1 2.55e1 2.55e1 2.55e2.0 0.00e-2 2.55e3 2.	0 0.065 0 0.064 0 0.063 0 0.061
QQN-Bisection- 2.19e1 9.08e0 5.93e-10 2.58e1 2381.1 5.1 Adam- 2.54e1 2.09e-2 2.53e1 2.54e1 2502.0 0.4 AMSGrad	0 0.065 0 0.064 0 0.063 0 0.061
QQN-Bisection- 1 Adam- Adam- Adam-Robust 2.55e1 2.55e1 2.00e-2 2.55e1 2.55e1 2.55e1 2.502.0 0.4 Adam- Robust 2.42e1 1.44e-2 2.41e1 2.42e1 2.502.0 0.4 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2.58e1 2.58e1 2.502.0 0.4 Contact the second of the seco	0 0.064 0 0.063 0 0.061
1 Adam- 2.54e1 2.09e-2 2.53e1 2.54e1 2502.0 0.4 AMSGrad Adam-Robust 2.55e1 2.00e-2 2.55e1 2.55e1 2502.0 0.4 Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.4 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.4 Limited	0 0.064 0 0.063 0 0.061
AMSGrad Adam-Robust 2.55e1 2.00e-2 2.55e1 2.55e1 2502.0 0.4 Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.4 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.4 Limited	0 0.063 0 0.061
Adam-Robust 2.55e1 2.00e-2 2.55e1 2.55e1 2502.0 0.0 Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.0 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.0 Limited 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.061
Adam- 2.42e1 1.44e-2 2.41e1 2.42e1 2502.0 0.42e1 WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.42e1 Limited 2.38e1	0.061
WeightDecay L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.4 Limited	
L-BFGS- 1.95e1 3.46e0 8.48e0 2.38e1 2256.7 0.0 Limited	0.059
Limited	0 0.059
GD- 2.40e1 3.03e-2 2.40e1 2.49e1 1000.0 0.	0.059
WeightDecay	0.009
GD-Nesterov 2.21e1 2.17e-1 2.15e1 2.23e1 1668.0 0.	0.058
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
L-BFGS- 6.09e0 5.66e0 1.01e0 2.16e1 3817.8 0.	0.054
Aggressive	
GD-Momentum 2.20e1 3.14e-1 2.16e1 2.24e1 1668.0 0.0	
L-BFGS- 2.33e1 1.54e0 2.01e1 2.49e1 1668.3 0.	0.049
Conservative	0.040
GD 2.56e1 2.73e-2 2.55e1 2.57e1 1668.0 0.	
GD- 1.90e1 3.00e0 1.39e1 2.12e1 920.4 0.4 AdaptiveMomentum	0.035
AdaptiveWollientum Adam-Fast 1.17e1 3.56e0 2.89e0 1.50e1 950.2 0.	0 0.022
Trust Region- 2.08e1 2.32e0 1.60e1 2.43e1 1557.3 0.	
Conservative	0.022
L-BFGS 1.93e1 3.27e0 1.20e1 2.43e1 483.9 0.	0.012
L-BFGS- 1.42e1 5.29e0 1.93e0 2.12e1 499.3 0.	0.011
MoreThuente	
QQN- 2.45e1 5.40e0 9.67e-1 2.58e1 108.6 0.	0.003
CubicQuadraticInterpolation	0.000
Trust Region- 2.60e1 1.72e-2 2.60e1 2.60e1 5.0 0.	0.000
Precise Trust Region- 2.60e1 1.61e-2 2.60e1 2.60e1 5.0 0.0	0.000
Trust Region- 2.60e1 1.61e-2 2.60e1 2.60e1 5.0 0.4 Aggressive	0.000
Trust Region- 2.60e1 1.74e-2 2.60e1 2.60e1 5.0 0.	0.000
Adaptive 2.50c1 1.74c 2 2.50c1 2.50c1 5.5	0.000
Trust Region- 2.60e1 2.15e-2 2.60e1 2.60e1 5.0 0.	0.000
Standard	