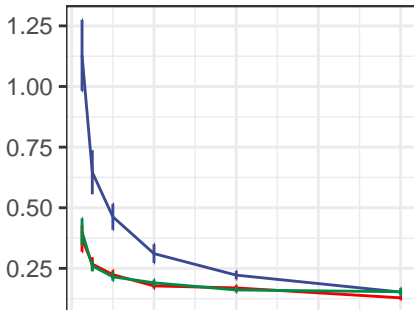
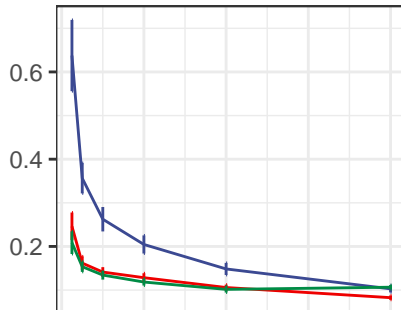
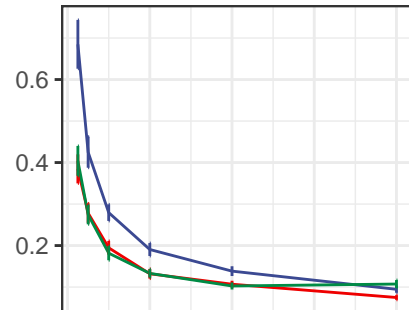
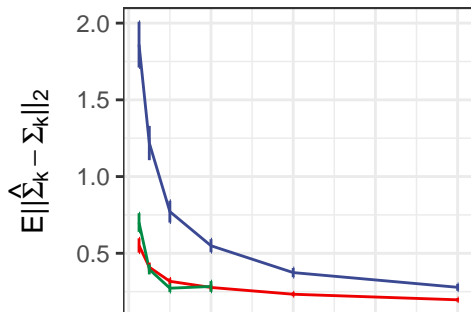
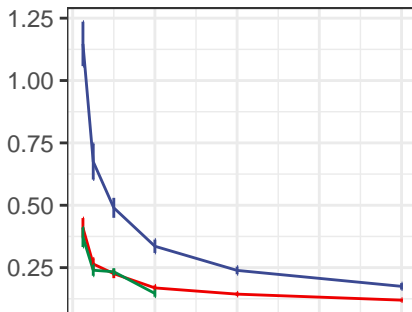
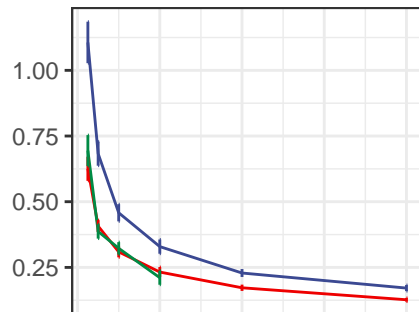
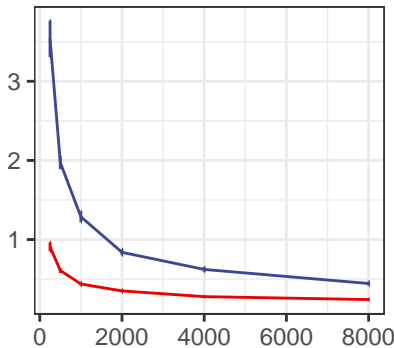
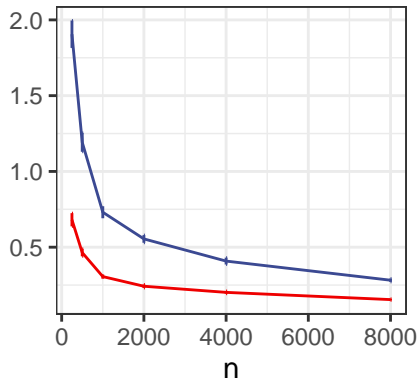
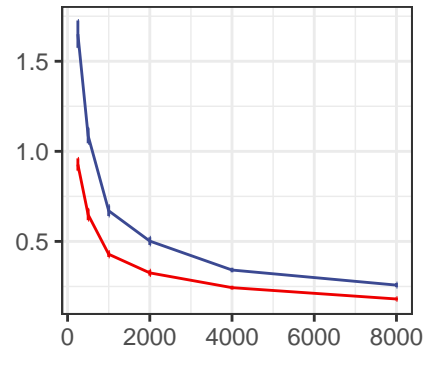
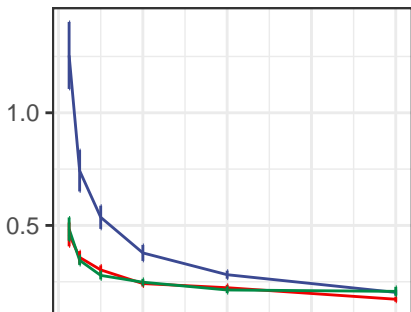
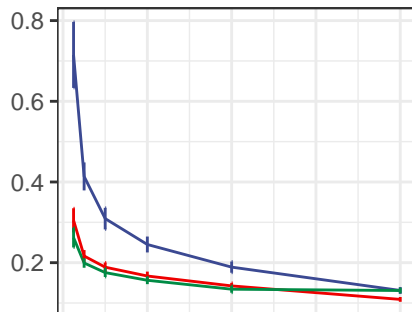
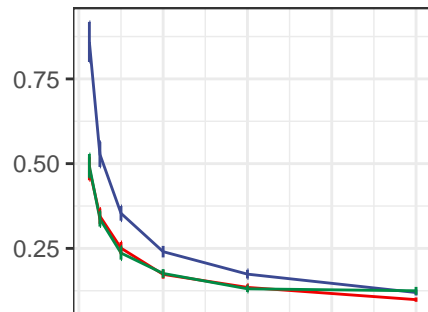
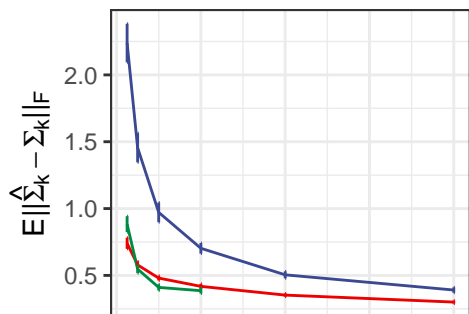
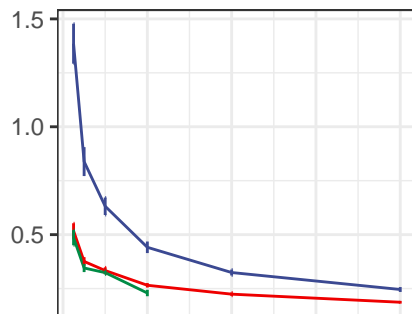
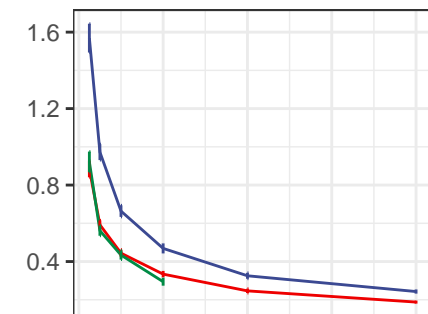
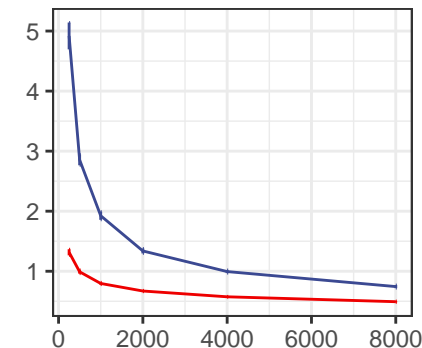
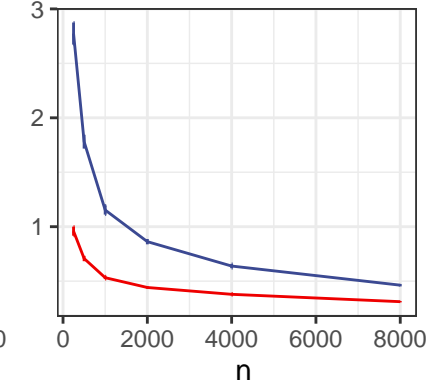
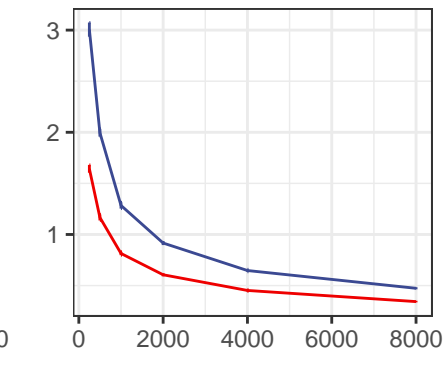
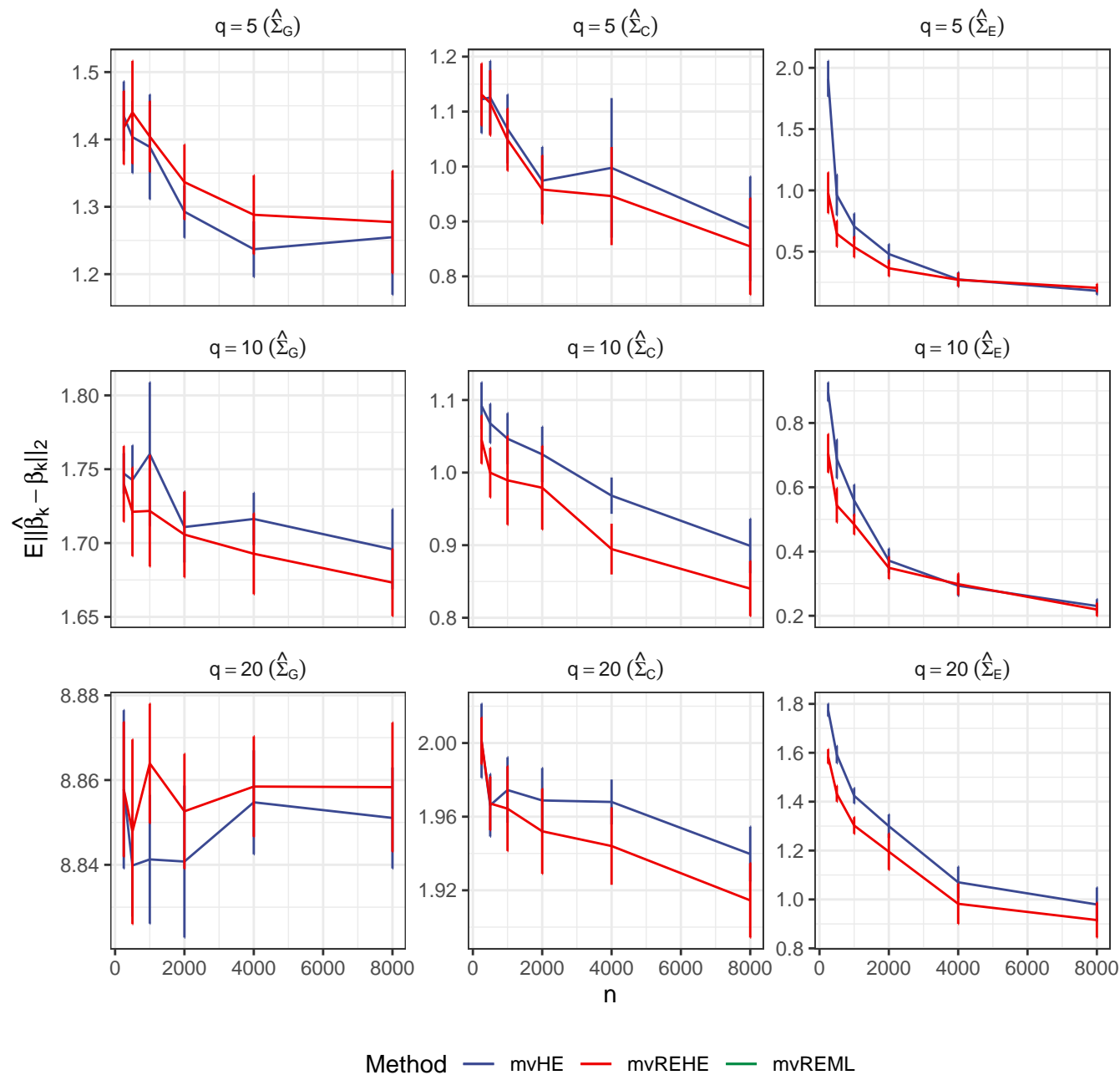


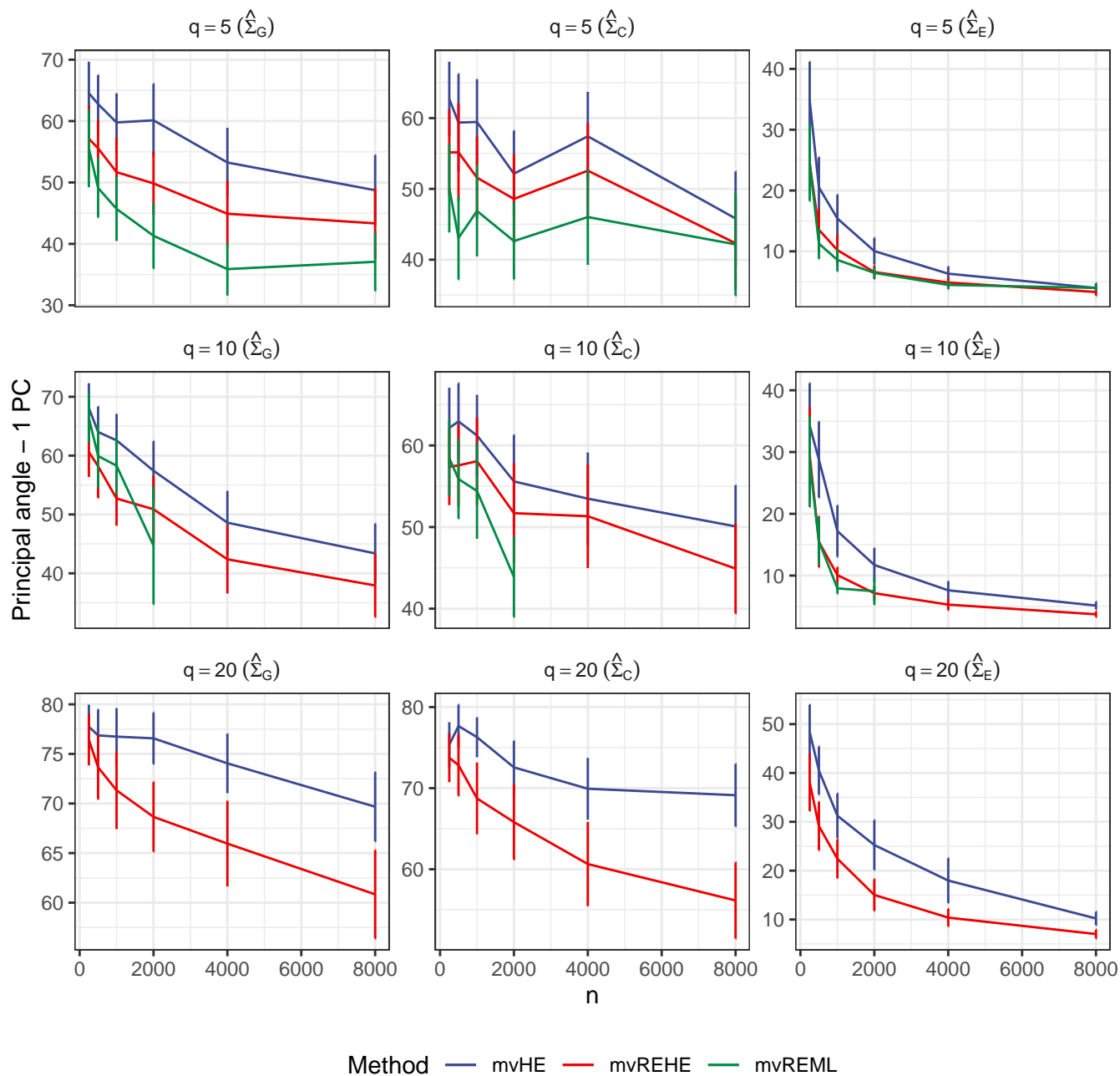
$q = 5 (\hat{\Sigma}_G)$  $q = 5 (\hat{\Sigma}_C)$  $q = 5 (\hat{\Sigma}_E)$  $q = 10 (\hat{\Sigma}_G)$  $q = 10 (\hat{\Sigma}_C)$  $q = 10 (\hat{\Sigma}_E)$  $q = 20 (\hat{\Sigma}_G)$  $q = 20 (\hat{\Sigma}_C)$  $q = 20 (\hat{\Sigma}_E)$ 

Method — mvHE — mvREHE — mvREML

$q = 5 (\hat{\Sigma}_G)$  $q = 5 (\hat{\Sigma}_C)$  $q = 5 (\hat{\Sigma}_E)$  $q = 10 (\hat{\Sigma}_G)$  $q = 10 (\hat{\Sigma}_C)$  $q = 10 (\hat{\Sigma}_E)$  $q = 20 (\hat{\Sigma}_G)$  $q = 20 (\hat{\Sigma}_C)$  $q = 20 (\hat{\Sigma}_E)$ 

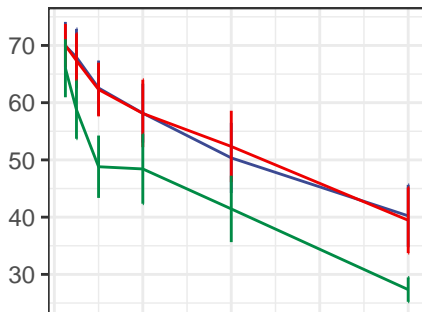
Method — mvHE — mvREHE — mvREML



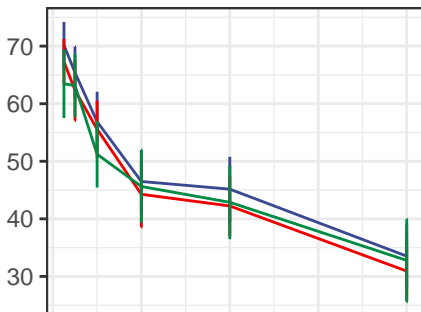


Max principal angle - 3 PCs

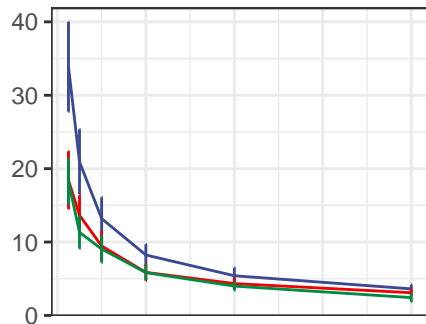
$q = 5 \ (\hat{\Sigma}_G)$



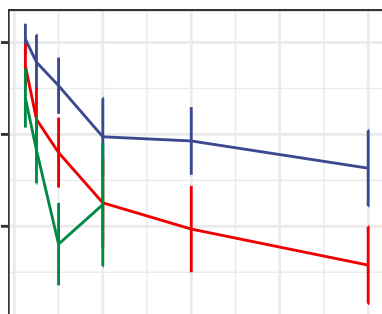
$q = 5 \ (\hat{\Sigma}_C)$



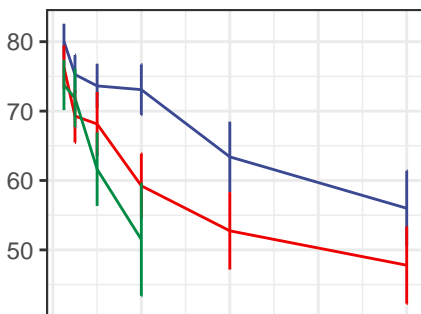
$q = 5 \ (\hat{\Sigma}_E)$



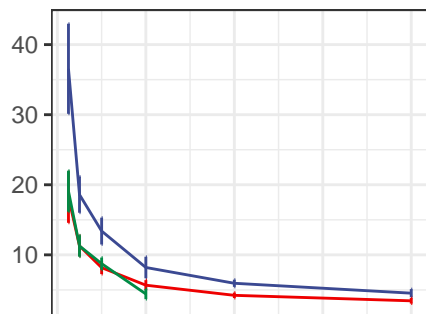
$q = 10 \ (\hat{\Sigma}_G)$



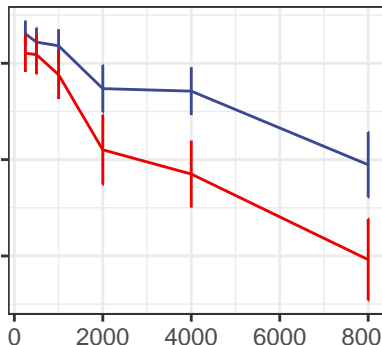
$q = 10 \ (\hat{\Sigma}_C)$



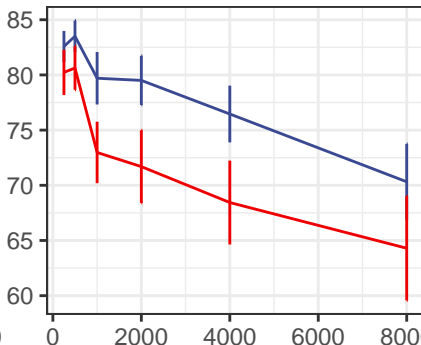
$q = 10 \ (\hat{\Sigma}_E)$



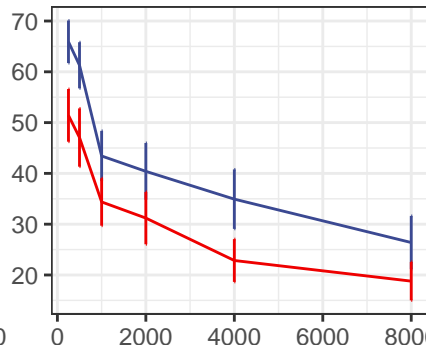
$q = 20 \ (\hat{\Sigma}_G)$



$q = 20 \ (\hat{\Sigma}_C)$



$q = 20 \ (\hat{\Sigma}_E)$



Method — mvHE — mvREHE — mvREML