



3. Pass global test

43-3

$$\hat{\sigma}_0^2 Q_{00} = \hat{\Sigma}_{00}$$

not pass

$$\hat{\sigma}_0^2 Q_{00} = \hat{\Sigma}_{00} \quad \hat{\sigma}_0^2 = \frac{\hat{1}'W}{r}$$

4.  $\lambda$ 's come from  $2 \times 2$  submatrix of  $\Sigma$   
not get  $\lambda_1$  for  $3 \times 3$

5. AXIS EQUAL

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6. Pass

NOT PASS

43-4

$$h_{ij} = \sqrt{\lambda_1 \chi_{2,p}^2}$$

$$h_{ij} = \sqrt{\lambda_1 \cdot 2 \cdot F_{2,p}}$$

$$h_{ij} = \sqrt{\lambda_2 \chi_{2,p}^2}$$

$$h_{ij} = \sqrt{\lambda_2 \cdot 2 \cdot F_{2,p}}$$

7. GLS :  $f = -F(l^0, x^0) - A \begin{pmatrix} \tilde{v} \\ \tilde{v}^0 \end{pmatrix}$

orig current

outlier detection

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Redundancy number:

43-5

$$Q = W^{-1}$$

$$Q_{vv} = Q - Q_{\hat{\beta}\hat{\beta}} = Q - B\bar{N}^{-1}B^T$$

$$Q_{vv}W = \bar{W} \quad \text{--- look @ diagonal elements}$$

$n, n \quad n, n \quad n, n$

$$\bar{w}_{ii} = r_i \quad \text{redundancy number}$$

$$\sum_{i=1}^n r_i = r$$

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$r_i$ : proportion of total redundancy due to obs  $i$  436

$$0 \leq r_i \leq 1 \quad u_i = 1 - r_i$$

$$0 \leq u_i \leq 1$$

$r_i$ : the fraction of the error in  $l_i$  that is revealed in the residual  $v_i$

$u_i$ : the fraction of the error in  $l_i$  that is "absorbed" by the parameter est.

$$u_i + r_i = 1$$

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43-7

The image contains two hand-drawn diagrams. The top diagram shows a graph with four nodes arranged in a square. Edges are labeled  $l_1$  (top),  $l_2$  (right),  $l_3$  (bottom), and  $l_4$  (left). A fifth node is connected to the bottom-right node of the square by two edges labeled  $l_5$  and  $l_6$ . To the right of this diagram is the text  $r_1 = 0$  with a large 'X' over it, and the phrase "important design tool".

The bottom diagram shows a tree structure with five nodes. Edges are labeled  $l_{20}$  (top horizontal),  $l_{21}$  (right horizontal), and several unlabeled edges. A dashed line with a cross on it extends from the bottom-right node.

$r_{20} = 0$   
 $r_{21} = 0$

Dec 7-10:01 AM