CLOSER ESTIMATORS OF A COMMON MEAN
IN THE SENSE OF PITMAN

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Abstract.   Consider the problem of estimating the common mean of two normal populations with different unknown variances. Suppose a random sample of size m is drawn from the first population and a random sample of size n is drawn from the second population. The paper gives a family of estimators closer than the sample mean of the first population in the sense of Pitman (1937, *Proc. Cambridge Phil. Soc.*, **33**, 212–222). In particular, the Graybill-Deal estimator (1959, *Biometrics*, **15**, 543–550) is shown to be closer than each of the sample means if $m \geq 5$ and $n \geq 5$.

Key words and phrases: Pitman closeness, common mean, Graybill-Deal estimator.