

UNIFIED APPROACH TO REFINEMENTS OF JENSEN'S INEQUALITIES

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Abstract. In this note we introduce a notion of M -dominated k -sample mean, where M is fixed multiset, which unifies several refinements of the Jensen's inequality for any mid-convex function. The approach treats on equal basis sample means over samples with of without repetitions.

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REFERENCES

- [1] D. S. MITRINOVIĆ AND J. PEČARIĆ, *Unified treatment of some inequalities for mixed means*, Österr. Akad. Wiss. Math.-Naturwiss. Klasse. Sonderdruck aus Sitzungsab. **197** (1988), 391–397.
- [2] J. PEČARIĆ AND V. VOLENEC, *Interpolation of the Jensen inequality with some applications*, Österr. Akad. Wiss. Math.-Naturwiss. Klasse. Sonderdruck aus Sitzungsab. **197** (1988), 463–467.
- [3] J. PEČARIĆ AND D. SVRTAN, *New refinements of the Jensen inequality based on samples with repetitions*, J. Math. Anal. Appl. **222** (1998), 365–373.