

Appendix 4

Values of exponents, which give rise to the following sequence of octane isomers of increasing branching: Oct < 2M7 < 3M7 < 4M7 < 3Et6 < 25M6 < 24M6 < 23M6 < 34M6 < 3Et2M5 < 22M6 < 33M6 < 3Et3M5 < 234M5 < 224M5 < 223M5 < 233M5 < 2233M4.

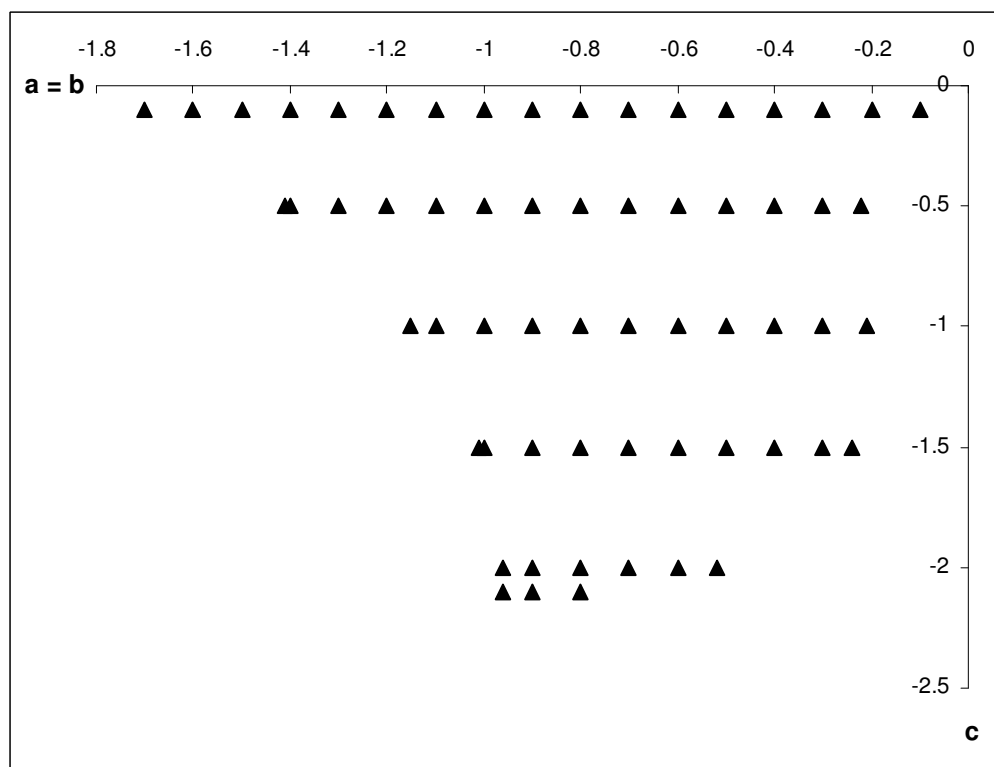


Figure A4a. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the index $V_L(a, b, c)$ in the case of $a = b$ vs. c .

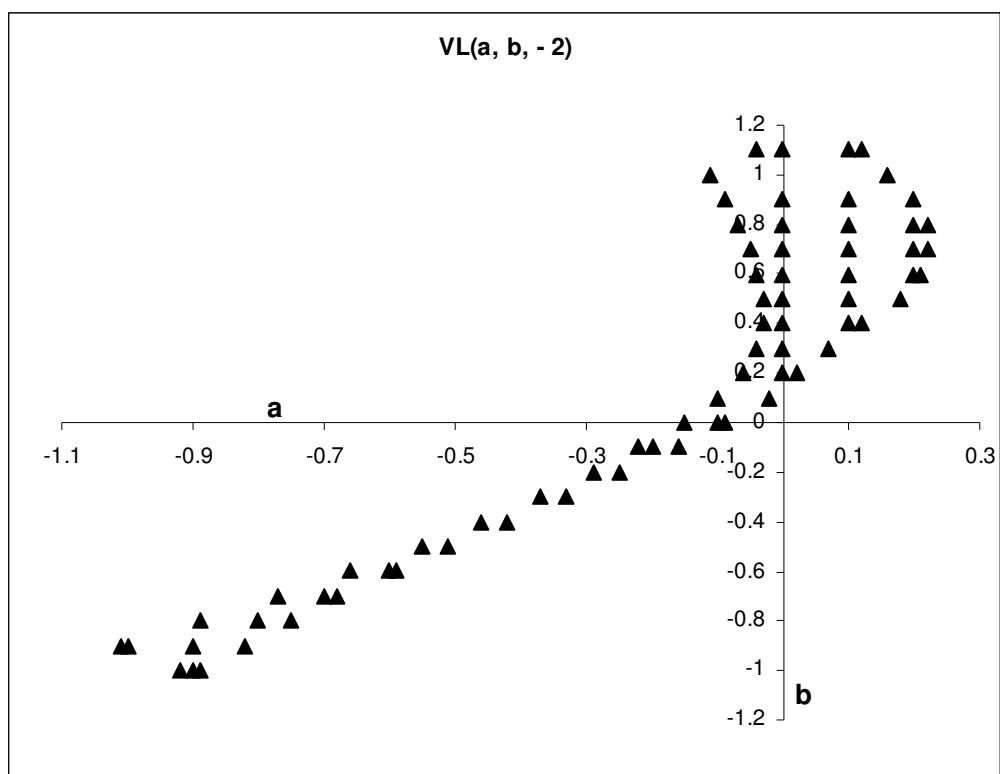
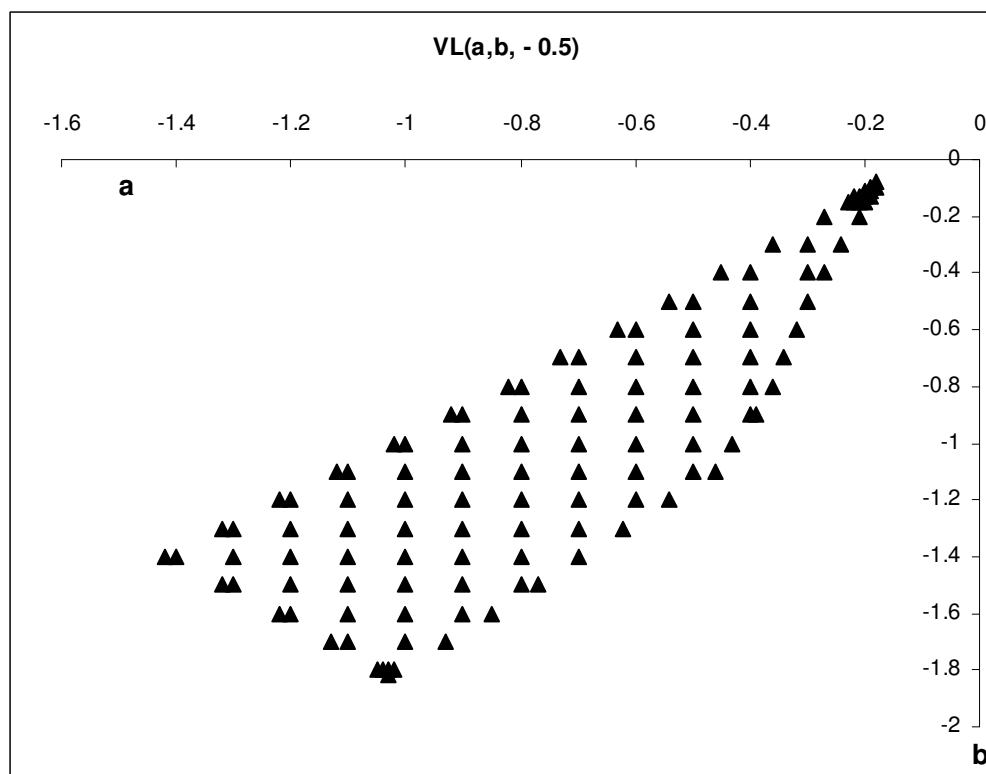


Figure A4b. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the index $V_L(a, b, c)$ in the case of a vs. b at $c = -0.5$ resp. at $c = -2$.

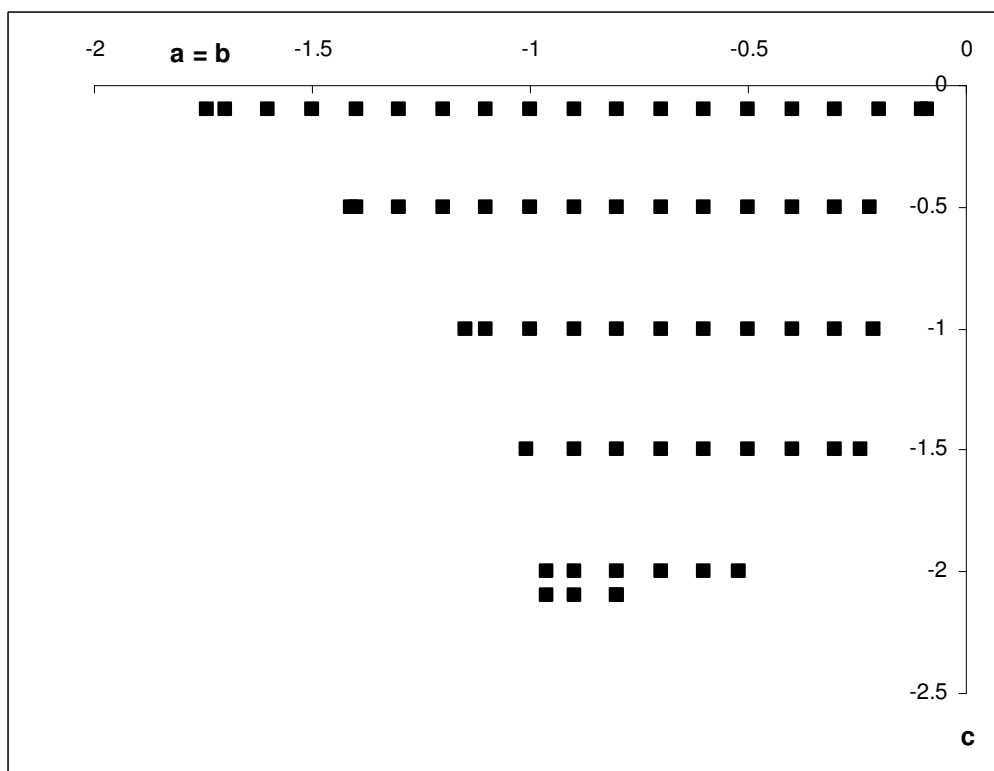


Figure A4c. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the index $V_{wm}(a, b, c)$ for the case $a = b$ vs. c .

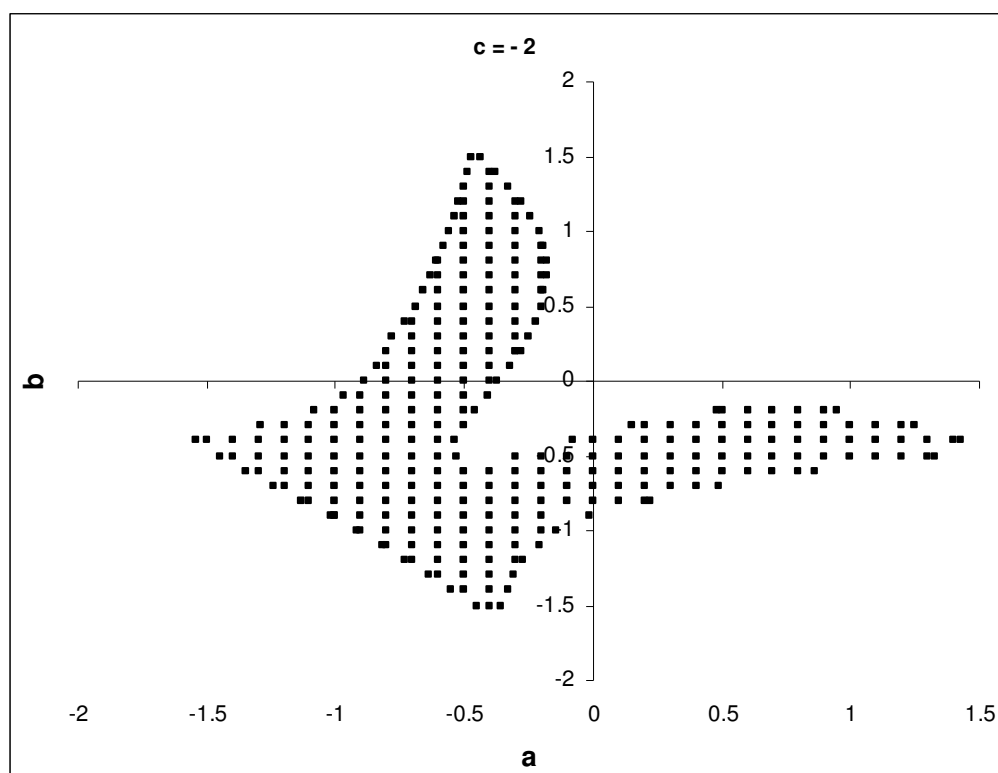


Figure A4d. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the index $V_{wm}(a, b, c)$ in the case of a vs. b at $c = -2$.

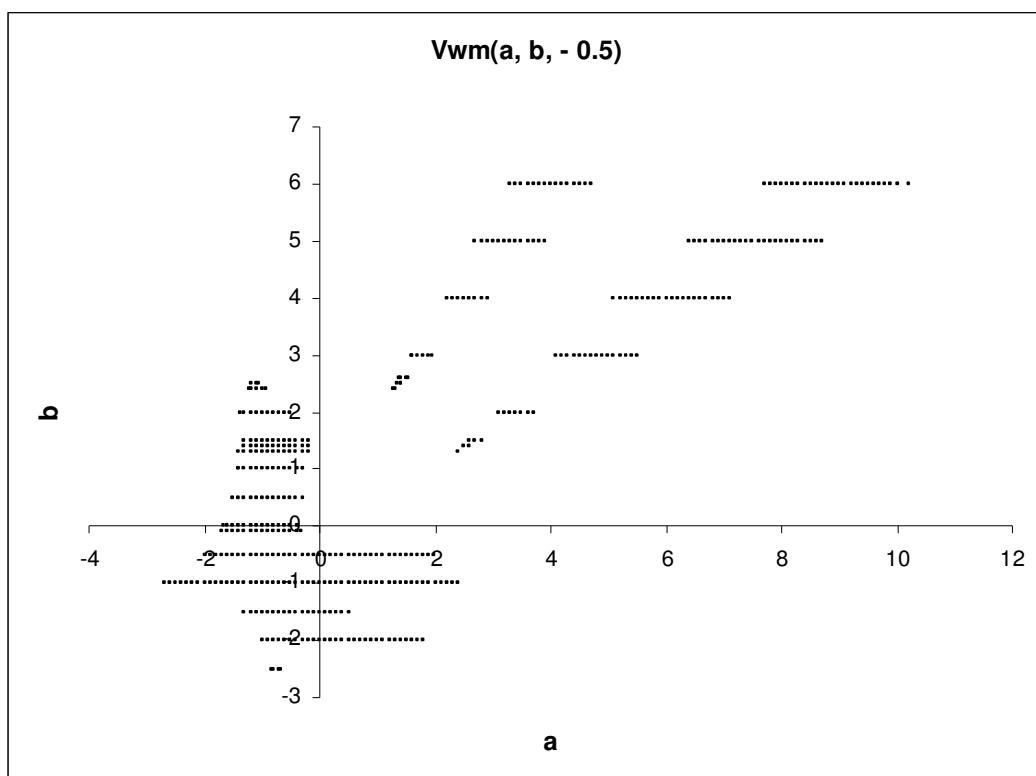


Figure A4e. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the index $V_{wm}(a, b, c)$ in the case of a vs. b at $c = -0.5$.

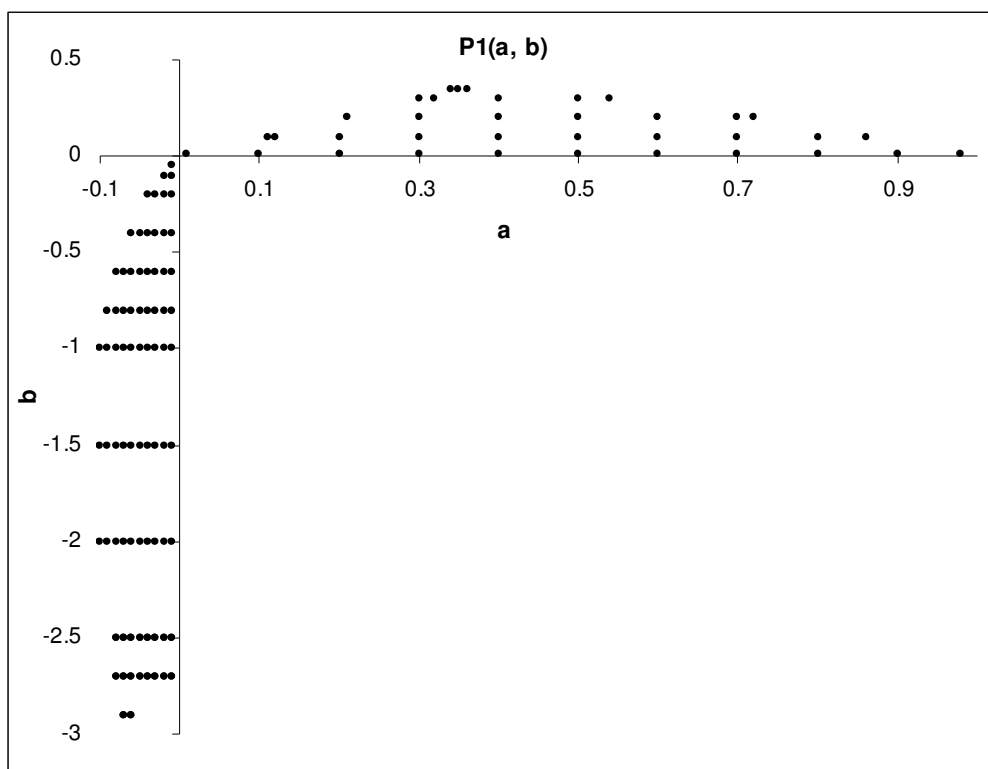


Figure A4f. Values of exponents, which give rise to the above sequence of octane isomers of increasing branching at the vertex degree weighted path one index $P_1(a, b)$. In all cases, $P_1(a, b)$ of 3M7 = $P_1(a, b)$ of 4M7.