Comparison of GUIDE, CART and M5' regression tree algorithms

	GUIDE	CART	M5'
Unbiased splits	Yes	No	No
Pairwise interaction detection	Yes	No	No
Importance scores	Yes	Yes	No
Loss functions	Weighted least squares, least median of squares, quantile, Poisson, proportional hazards	Least squares, least absolute deviations	Least squares only
Survival, longitudinal and multiresponse data	Yes, yes, yes	No, no, no	No, no, no
Node models	Constant, multiple, stepwise linear, polynomial, ANCOVA	Constant only	Constant and linear
Linear models	Multiple or stepwise (forward-backward and forward only)	N/A	Stepwise
Variable roles	Split only, fit only, both, neither, weight, censored, offset	Split only	Split and fit
Categorical variable splits	Subsets of categorical values	Subsets	0-1 variables
Tree selection	Pruning or stopping rules	Pruning only	Pruning only
Tree diagrams	Text and LaTeX	Proprietary	Text
Operation modes	Interactive and batch	Interactive and batch	Interactive
Case weights	Yes	Yes	No
Transformations	Powers and products	No	No
Missing values	Missing values treated as a special category	Surrogate splits	Imputation
Bagging & forests	Yes, yes	No, no	No, no
Data conversions	ARFF, C4.5, Minitab, R, SAS, Statistica, Systat, CSV	No	No