Formulas for Variance

Direct Material Price Variance
AQ X (AP-SP)
AQ=Actual Quantity of Direct Material Used
AP=Actual Price of Direct Material Per Unit
SP=Standard Price of Direct Material Per Unit

Direct Material Quantity Variance
SP X (AQ – SQ)
SP=Standard Price of Direct Material Per Unit
AQ=Actual Quantity of Direct Material Used
SQ=Standard Quantity of Direct Material

Total Materials Variance
(AQ X AP) – (SQ X SP)
AQ=Actual Quantity of Direct Material Used
AP=Actual Price of Direct Material Per Unit
SQ=Standard Quantity of Direct Material
SP=Standard Price of Direct Material Per Unit

Direct Labor Rate Variance
AH X (AR – SR)
AH=Actual Hours Worked
AR=Actual Rate of Labor Per Hour
SR=Standard Rate of Labor Per Hour

Direct Labor Time (efficiency) Variance
SR X (AH – SH)
SR=Standard Rate of Labor Per Hour
AH=Actual Hours Worked
SH=Standard Hours

Predetermined Factory Overhead Rate
Estimated Total Factory Overhead Costs / Estimated Activity Base (or Driver)

Predetermined Variable Factory Overhead Rate
Budgeted Variable Overhead / Estimated Activity Base

Predetermined Fixed Factory Overhead Rate
Budgeted Fixed Overhead / Estimated Activity Base

Variable Factory Overhead Controllable Variance
Actual Variable Overhead – (Variable Overhead Rate X Units Produced X Standard Hours per Unit)

Fixed Factory Overhead Volume Variance
Budgeted Factory Overhead at Normal Productive Capacity / Normal Productive Capacity

Total Overhead Variance
Variable Factory Overhead Controllable Variance + Fixed Factory Overhead Volume Variance

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