Std costing formulae 2022 updated

Profit variance

- **Selling and distribution cost variances**
- **Total sales margin variance**
  - [(Actual Selling price - Std variable cost per unit) x Actual sales volume] **less** [(Budgeted selling price - Std variable cost) x Budgeted sales volume]
  - **Sales margin price variance**
    - (Act SP-budgeted SP) x actual sales volume
  - **Sales margin volume variance**
    - (Act sales vol - budgeted sales vol) x std contribution
    - *Sales mix and sales quantity variances NOT COVERED*
    - (Actual market share x actual Industry volume) less (Budget market share x budget Ind vol) x std contribution
      - **Market size**
        - Bud mkt share% x (Act industry sales vol - Bud ind sales vol) x Std contribution
      - **Market share**
        - (Act mkt share% - Bud mkt share%) x Act ind sales vol x Std contribution

Note: Variable costing => contribution per unit
Absorption costing => gross profit per unit

- **Total production cost variances**
  - **Total direct materials variance**
    - (Actual prodctn qty x Std cost per **unit**) - Actual material cost
    - **Material price**
      - (Std cost per unit of mat - actual cost per unit of mat) x actual **quantity purchased**
      - Note: creates a recon item.
    - **Material usage**
      - (Std quantity for actual prod - actual **quantity used**) x Std cost per unit of mat
      - **Mix* variance**
        - (Actual quantity in standard mix proportions - actual quantity used) x std cost per **unit of mat**
      - **Yield# variance**
        - (Actual quantity in std mix prop - std qty in std prop) x std cost per **unit of mat**
    - *Done per raw material type. Then added together.*
  - **Total direct wage variance**
    - (Actual prod vol. x Std labour cost per **unit**) - Actual labour cost
    - **Wage rate**
      - (Std rate per hr - actual rate per hr) x actual hrs worked
    - **Labour efficiency (usage)**
      - (Std hrs for actual prod - actual hrs) x std rate per hr
      - **Mix* variance**
        - (Actual hrs in standard mix proportions - actual hrs used) x std rate per hr
      - **Yield# variance**
        - (Actual hrs in std mix prop - std hrs in std mix prop) x std rate per hr
    - *Done per labour type. Then added together.*
  - **Total variable overhead**
    - (Actual prod vol. x Std var OH rate per **unit**) - Actual variable overheads
    - **V O/H expenditure**
      - Budget VOH for actual input volume - actual VOH cost
    - **V O/H efficiency**
      - (Std qty of input hrs for actual prod - actual input hrs)x std VOH rate per **hour**
  - **Fixed Overhead expenditure**
    - Actual Fixed OH - Budgeted Fixed OH
    - If absorption costing:
      - (Actual production vol x Std fixed OH rate per unit) - Actual Fixed OH cost
      - **Fixed OH volume**
        - (Actual production vol - Budgeted prod vol) x Std fixed OH rate per **unit**
        - **Volume efficiency**
          - (Std quantity of input hrs for actual prod - actual input hrs) x Std fixed OH rate per **hour**
        - **Volume capacity**
          - (Act hrs of input - budgetd hrs of input) x std fixed OH rate per **hour**
      - **Fixed OH expenditure**
        - Actual Fixed OH - Budgeted Fixed OH

* Mix variance arises when the mix of materials/labour used differs from the predetermined mix included in the standard cost calculation.
\# Yield variance arises when the total qty of material used/labour hours and the std qty that was budgeted that should have been used differ