6.5 Variance analysis

Name: _____ Class: _____ Date: _____ **Total: 14 marks**

KEY WORDS variance • favourable variance

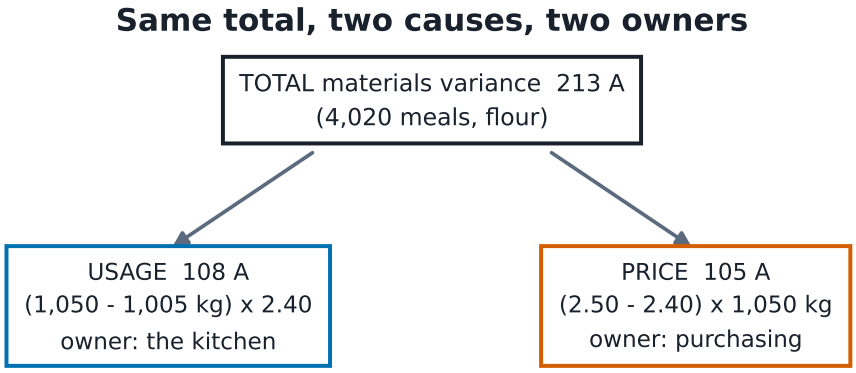
Objective

Compute price, usage and volume variances; flex the budget before judging; route each variance to its owner and read favourable honestly.

1 Key knowledge and worked examples

■ The leaves and their owners

Usage = $(AQ - SQ) \times SP$; price = $(AP - SP) \times AQ$; leaves sum to the total by identity. The flexible budget is the baseline; favourable means below-standard cost, not virtuous.



the leaves sum to the total by identity - the decomposition is an agenda, not a verdict

Same total, two causes, two owners

■ Worked example. July flour

Standard 0.25 kg at £2.40; actual 1,050 kg for 4,020 meals at £2.50: usage £108 A ✓, price £105 A ✓, total £213 A ✓; sales volume 3,700 vs 4,000 at CM 3.40 → £1,020 A, mostly a three-day strike.

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2 Practice

Rice for a meal-prep firm: standard 0.40 kg per tray at £1.80/kg. August: 5,100 trays produced, 2,140 kg used, cost £4,066.

2.1 Compute the standard kilograms allowed and the usage variance. [3]

2.2 Compute the actual price per kg and the price variance. [3]

2.3 Verify the leaves sum to the total materials cost variance. [2]

2.4 Sales: 4,900 trays against a 5,200 budget at CM £6.00. Compute the volume variance, then write ONE sentence of honest interpretation given a two-week supplier ban halved output capacity. [3]

2.5 The buyer switches to a cheaper grade: price variance £190 favourable, usage rises by £150 adverse, customer refunds £80. In two lines: net effect, and the lesson about reading leaves singly. [3]

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Solutions

2.1

- $SQ = 5{,}100 \times 0.40 = 2{,}040$ kg.
- Usage $= (2{,}140 - 2{,}040) \times 1.80$.
- $=$ £180 adverse.

2.2

- $AP = 4{,}066/2{,}140 =$ £1.90/kg.
- Price $= (1.90 - 1.80) \times 2{,}140$.
- $=$ £214 adverse.

2.3

- Total $= 180 + 214 =$ £394 adverse.
- Direct check: actual £4,066 − flexible £$(2{,}040 \times 1.80) =$ £3,672 → £394 ✓.

2.4

- $(4{,}900 - 5{,}200) \times 6.00 =$ £1,800 adverse.
- Honest read: the supplier ban removed capacity – mostly a diagnosis, not performance; flex the budget and judge what execution controlled.

2.5

- Net: $-190 + 150 + 80 =$ £40 adverse once refunds count.
- Lesson: leaves trade – a favourable price BOUGHT adverse usage plus quality cost; read the tree together, never one leaf alone.

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