

## **Appendix A Answers to the Exercises**

# **From Essential Financial Techniques for Hospitality Managers**

**A practical approach**

Cathy Burgess

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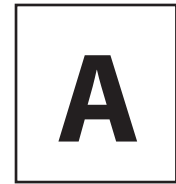


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# Essential Financial Techniques for Hospitality Managers

**Cathy Burgess**

## Answers to the Exercises

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# Answers to the Exercises

## Chapter 2

### Exercise 2.1 (Pub P&L)

	Actual		Budget		Variance	
	(£)	(%)	(£)	(%)	(£)	(%)
<b>Food and beverage</b>						
Sales	12,000	100.0	12,500	100.0	(500)	(4.0)
Cost of sales	(3,800)	(31.7)	(3,800)	(30.4)	0	0.0
Gross profit	8,200	68.3	8,700	69.6	(500)	(5.7)
Payroll	(2,700)	(22.5)	(2,700)	(21.6)	0	0.0
Benefits	(500)	(4.2)	(500)	(4.0)	0	0.0
Departmental expenses	(1,600)	(13.3)	(1,600)	(12.8)	0	0.0
Departmental profit	3,400	28.3	3,900	31.2	(500)	(12.8)
<b>Accommodation</b>						
Sales	1,900	100.0	1,950	100.0	(50)	(2.6)
Payroll	(400)	(21.1)	(400)	(20.5)	0	0.0
Benefits	(80)	(4.2)	(80)	(4.1)	0	0.0
Departmental expenses	(200)	(10.5)	(200)	(10.3)	0	0.0
Departmental profit	1,220	64.2	1,270	65.1	(50)	(3.9)
<b>Administration</b>						
Admin. expenses	1,100	7.9	1,100	7.6	0	0.0
Maintenance	100	0.7	100	0.7	0	0.0
Total	1,200	8.6	1,200	8.3	0	0.0
<b>Fixed charges</b>						
Rates	500	3.6	500	3.5	0	0.0
Depreciation	1,400	10.1	1,400	9.7	0	0.0
Total	1,900	13.7	1,900	13.1	0	0.0
<b>Front page P&amp;L</b>						
	(£)	(%)	(£)	(%)	(£)	(%)
Sales – F&B	12,000	86.3	12,500	86.5	(500)	(4.0)
Sales – accommodation	1,900	13.7	1,950	13.5	(50)	(2.6)
Total sales	13,900	100.0	14,450	100.0	(550)	(3.8)
Cost of sales	(3,800)	(27.3)	(3,800)	(26.3)	0	0.0
Gross profit	10,100	72.7	10,650	73.7	(550)	(5.2)
Departmental payroll	(3,100)	(22.3)	(3,100)	(21.5)	0	0.0
Departmental benefits	(580)	(4.2)	(580)	(4.0)	0	0.0
Departmental expenses	(1,800)	(12.9)	(1,800)	(12.5)	0	0.0
Departmental profit	4,620	33.2	5,170	35.8	(550)	(10.6)
Administration costs	(1,200)	(8.6)	(1,200)	(8.3)	0	0.0
Gross operating profit	3,420	24.6	3,970	27.5	(550)	(13.9)
Fixed charges	(1,900)	(13.7)	(1,900)	(13.1)	0	0.0
Net profit	1,520	10.9	2,070	14.3	(550)	(26.6)

### Exercise 2.2

	<u>Assets</u>	<u>Liabilities</u>
Point of sale system	√	
Mortgage		√
Delivery van	√	
Staff accommodation that is owned	√	
Stocks of frozen food	√	
Phone units used but not paid for		√
Yearly rental on coffee machine, paid in advance	√	
Amount owing from a customer	√	
Overdraft		√
Amount owing to a supplier		√

Did you get them right? Can you think of any more in your area?

### Exercise 2.3

	Assets (£)	=	Capital (£)	+	Liabilities (£)
A	2,800	=	<b>700</b>	+	2,100
B	285	=	226	+	<b>59</b>
C	52,000	=	<b>31,400</b>	+	20,600
D	<b>4,900</b>	=	3,400	+	1,500

### Exercise 2.4

	= Net value (£)
<b>Fixed assets</b>	
Equipment	22,000
<b>Current assets</b>	
Debtors	7,650
Stocks	1,150
Cash	<u>1,700</u>
Total current assets	10,500
<b>Less current liabilities</b>	
Creditors	(4,300)
Total current liabilities	(4,300)
<b>= Working capital</b>	6,200
Net assets total	<u>28,200</u>
<b>Financed by</b>	
Profit	1,200
Capital for year	<u>27,000</u>
Total	28,200

### Exercise 2.5

	(£)
Opening stock (as at the start of the period)	490
Plus purchases	<u>11,060</u>
=	11,550
Minus cost of staff meals	(920)
Minus closing stock	<u>(530)</u>
= Cost of sales	10,100

### Exercise 2.6

	(£)
Rental (per year)	10,400
Charge per 4 weekly period is (divide by 13)	800
Eight periods amortised on the P&L	6,400
Five periods remaining on the BS	4,000

### Exercise 2.7

Item	Cost	Depreciation rate	Amount	Net (at end year 1)
Equipment	£6,800	10%	£680	£6,120
Furniture	£2,600	20%	£520	£2,080

### Exercise 2.8

#### Workings out

Depreciation	Rate	Value (£)	Depreciation (£)
Equipment	10%	10,200	1,020
Furniture	15%	<u>3,900</u>	<u>585</u>
Total		14,100	1,605

Prepayment	Value (£)	Prepay (£)	Net (£)
Rates	870	174	696
Marketing	300	60	240
Total		234	936

Accrual	Value (£)	Accrue	Net (£)
Utilities	1,395	342	1,737
Payroll	8,835	90	8,925
Total		432	10,662

#### Cost of sales calculation

	(£)
Opening stock	738
Plus purchases	16,482
Less staff meals	(1,380)
Less closing stock	(804)
Equals cost of sales (CoS)	15,036

#### Profit & Loss Report

	(£)	(%)
Sales	39,852	100.0
Less cost of sales	(15,036)	(37.7)
Gross profit	24,816	62.3
Less payroll	(8,925)	(22.4)
	15,891	39.9

Less other expenses		
Utilities	(1,737)	(4.4)
Marketing	(240)	(0.6)
Repairs & maintenance	(1,275)	(3.2)
Staff meals	(1,380)	(3.5)
Laundry	(1,239)	(3.1)
Miscellaneous	<u>(3,528)</u>	(8.9)
Total	<u>(9,399)</u>	(23.6)
Gross operating profit	6,492	16.3
Less fixed charges		
Depreciation	<u>(1,605)</u>	(4.0)
Rates	<u>(696)</u>	(1.7)
Total	<u>(2,301)</u>	(5.8)
Net profit	4,191	10.5

**Balance Sheet**

Fixed assets	Gross (£)	Depreciation (£)	Net (£)
Buildings	18,000		18,000
Equipment	10,200	(1,020)	<u>9,180</u>
Furniture	3,900	(585)	<u>3,315</u>
China, glass & silver	1,500		<u>1,500</u>
Total			31,995
<b>Current assets</b>			
Cash	3,000		
Floats	60		
Stocks	<u>804</u>		
Prepayments	<u>234</u>		
Debtors	<u>1,560</u>		
Total current assets	5,658		
<b>Current liabilities</b>			
Creditors	2,520		
Accruals	432		
Total current liabilities	2,952		
<b>Working capital</b>			<u>2,706</u>
<b>Net assets</b>			34,701
<b>Financed by</b>			
Capital			33,510
Plus net profit			<u>4,191</u>
Less drawings			<u>(3,000)</u>
Total			<u>34,701</u>

## Chapter 3

### Exercise 3.1

Rooms sold		Occupancy (%)
Rack rate	5	5.6
Leisure	10	11.1
Business	<u>60</u>	<u>66.7</u>
	75	83.3

Rooms revenue	Total	Average room rate (£)
Rack rate	£550	110.00
Leisure	£650	65.00
Business	<u>£6,000</u>	<u>100.00</u>
Total	£7,200	96.00

### Exercise 3.2

#### Profit & Loss Report – Restaurant: 28-day period

	Budget		Actual		Variance	
Seats available per day	50		50			
Seats per 28-day period	1,400		1,400		0	0.0
Covers sold	1,120		952		(168)	(15.0)
Sales	(£)	(%)	(£)	(%)	(£)	(%)
Food	20,100	75.0	17,600	80.4	(2,500)	(12.4)
Beverage	6,700	25.0	4,300	19.6	(2,400)	(35.8)
Total	26,800	100.0	21,900	100.0	(4,900)	(18.3)
Average spend/cover – food £p	17.95		18.49		0.54	3.0
Average spend/cover – beverage £p	5.98		4.52		(1.47)	(24.5)
Seat occupancy %	80.0		68.0		(12.0)	(15.0)

So – what does it mean? Here are a few comments:

Customers – Seat occupancy is down by 15% – this means that, with an average of 34 seats occupied a day, 16 aren't sold. Can you identify why this is? Are any particular days worse than others are?

Average spend for food is up on budget, but beverage is down – so you should add the two together. This gives an overall actual of £23.01 whereas the budget was £23.93 – down almost 4%. Do you know why? Was the budget wrong (easy to say yes, with hindsight – but why did you set it as this)?

Together (occupancy and spend) means a shortfall of almost £5,000 on revenue – 18%. Is there anything happening locally that would affect both of these factors? If you can identify why things have gone wrong then perhaps you can do something about it.



### Exercise 3.3

		July	August	September
Days in month		23	22	22
		(£)	(£)	(£)
Sales	Deli-bar	19,200	15,000	22,875
	Food hall	<u>39,750</u>	<u>33,750</u>	<u>59,250</u>
	Total	<u>58,950</u>	<u>48,750</u>	<u>82,125</u>
Covers	Deli-bar	5,200	4,200	5,900
	Food hall	8,300	7,600	12,300
	Total	13,500	11,800	18,200
Covers per day	Deli-bar	226	191	268
	Food hall	<u>361</u>	<u>345</u>	<u>559</u>
	Total	<u>587</u>	<u>536</u>	<u>827</u>
		(£p)	(£p)	(£p)
Average spends	Deli-bar	3.69	3.57	3.88
	Food hall	<u>4.79</u>	<u>4.44</u>	<u>4.82</u>
	Total	<u>4.37</u>	<u>4.13</u>	<u>4.51</u>
		(£)	(£)	(£)
Sales per day	Deli-bar	835	682	1,040
	Food hall	<u>1,728</u>	<u>1,534</u>	<u>2,693</u>
	Total	<u>2,563</u>	<u>2,216</u>	<u>3,733</u>

What can you work out from these numbers? What's the trend in customers and spends?

## Chapter 4

### Exercise 4.1: Restaurant

	Budget		Actual		Variance	Var %
Seats available	50		50			
Seats per period	1,400		1,400		0	0.0
Covers sold	1,120		952		(168)	(15.0)
	(£)	(%)	(£)	(%)	(£)	(%)
Sales						
Food	20,100	75.0	17,600	80.4	(2,500)	(12.4)
Beverage	<u>6,700</u>	<u>25.0</u>	<u>4,300</u>	<u>19.6</u>	<u>(2,400)</u>	<u>(35.8)</u>
Total	<u>26,800</u>	<u>100.0</u>	<u>21,900</u>	<u>100.0</u>	<u>(4,900)</u>	<u>(18.3)</u>

Cost of sales						
Food	(10,000)	(49.8)	(7,900)	(44.9)	2,100	21.0
Beverage	(2,670)	(39.9)	(1,620)	(37.7)	1,050	39.3
Total	<u>(12,670)</u>	<u>(47.3)</u>	<u>(9,520)</u>	<u>(43.5)</u>	<u>3,150</u>	<u>24.9</u>
Gross profit						
Food	10,100	50.2	9,700	55.1	(400)	(4.0)
Beverage	4,030	60.1	2,680	62.3	(1,350)	(33.5)
Total	<u>14,130</u>	<u>52.7</u>	<u>12,380</u>	<u>56.5</u>	<u>(1,750)</u>	<u>(12.4)</u>
Payroll cost	<u>(9,520)</u>	<u>(35.5)</u>	<u>(8,400)</u>	<u>(38.4)</u>	<u>1,120</u>	<u>11.7</u>
Departmental expenses	<u>(2,100)</u>	<u>(7.8)</u>	<u>(1,600)</u>	<u>(7.3)</u>	<u>500</u>	<u>23.8</u>
Food & beverage profit	<u>2,510</u>	<u>9.4</u>	<u>2,380</u>	<u>10.9</u>	<u>(130)</u>	<u>(5.2)</u>
	(£)		(£)		(£)	(%)
Average spend/cover – food	17.95		18.49		0.54	3.0
Average spend/cover – beverage	5.98		4.52		(1.47)	(24.5)
Total cost of sales/cover	11.31		10.00		(1.31)	(11.6)
Total gross profit/cover	12.62		13.00		0.39	3.1
Payroll cost per cover	8.50		8.82		0.32	(3.8)
Expenses cost per cover	1.88		1.68		0.19	(10.4)
Profit per cover	2.24		2.50		0.26	11.6
Seat occupancy %	80.0		68.0		(12.0)	(15.0)

What do all these figures mean? Look at these:

- Is there any relationship between the average spends for food and for beverage?
- What about the cost of food amounts? The average costs look less, but what about the percentage?
- Is payroll cost 'good' or 'bad' – and from whose perspective? Is there a relationship between payroll and cost of sales, for instance?
- What about other expenses?
- Lastly, what about profit?

### Exercise 4.2: Town centre department store

	March		April		May	
	(£)	(%)	(£)	(%)	(£)	(%)
Sales						
Cafe	9,000	42.9	10,500	41.2	12,000	36.4
Restaurant	<u>12,000</u>	<u>57.1</u>	<u>15,000</u>	<u>58.8</u>	<u>21,000</u>	<u>63.6</u>
Total	<u>21,000</u>	<u>100.0</u>	<u>25,500</u>	<u>100.0</u>	<u>33,000</u>	<u>100.0</u>
Cost of sales						

Cafe	(4,500)	50.0	(5,670)	54.0	(6,840)	57.0
Restaurant	<u>(4,800)</u>	<u>40.0</u>	<u>(6,300)</u>	<u>42.0</u>	<u>(9,030)</u>	<u>43.0</u>
Total	(9,300)	44.3	(11,970)	46.9	(15,870)	48.1
Gross profit						
Cafe	4,500	50.0	4,830	46.0	5,160	43.0
Restaurant	<u>7,200</u>	<u>60.0</u>	<u>8,700</u>	<u>58.0</u>	<u>11,970</u>	<u>57.0</u>
Total	11,700	55.7	13,530	53.1	17,130	51.9
Wages	(5,250)	25.0	(5,860)	23.0	(4,485)	13.6
Overtime	<u>(450)</u>	<u>2.1</u>	<u>(530)</u>	<u>2.1</u>	<u>(2,115)</u>	<u>6.4</u>
Net profit	6,000	28.6	7,140	28.0	10,530	31.9
Covers						
Cafe	3,750		4,667		5,714	
Restaurant	<u>1,667</u>		<u>2,128</u>		<u>3,043</u>	
Total	5,417		6,795		8,757	
	(£)		(£)		(£)	
Average spends						
Cafe	2.40		2.25		2.10	
Restaurant	<u>7.20</u>		<u>7.05</u>		<u>6.90</u>	
Total	3.88		3.75		3.77	
Gross profit/cover						
Cafe	1.20		1.03		0.90	
Restaurant	4.32		4.09		3.93	
Total	2.16		1.99		1.96	
Wages/cover	0.97		0.86		0.51	
Overtime/cover	0.08		0.08		0.24	
Net profit/cover	1.11		1.05		1.20	

By the way – the total average spend is the total revenue divided by total covers. It's not calculated by averaging the two spends as you can't 'average an average'. That's why it might look slightly odd.

Where do you start with your analysis? Look at the trends in sales – customers and spends – and compare month to month. There's a rise in covers as you move towards summer – what does this tell you about the location?

Look at the changes in both CoS and payroll % (basic and OT). Could they be linked? What is happening here?

The most likely scenario is that a lack of staff ('HR issue') is resulting in more purchasing of ready-prepared foods (leading to higher CoS – 'F&B issue'). As a result, you would also have to consider the morale and health of staff (are they overworked?) and the implications of this (are they giving the best service?) and so on. Again, you need to take a holistic approach here.

## Chapter 5

### Exercise 5.1

Coffees		5,000
	Total	Per cup
	(£)	(£)
Fixed costs	5,000	1.00
Profit required	1,250	0.25
Variable costs		
Food		0.25
Labour		0.20
Paper		0.07
Add all these together to get a selling price		1.77
Add the VAT (multiply by 1.2)		2.12

You could check it works by multiplying it all out to see if you reach the profit that you require.

	(£)
Sales	8,850
Variable costs	(2,600)
Contribution	6,250
Fixed costs	(5,000)
Net profit	1,250

Now you can see why good cups of coffee are so expensive!

### Exercise 5.2

If contribution is 45% then variable costs are 45%:

$$\frac{\text{Variable cost } \pounds}{\text{Variable cost \%}} = \frac{\pounds 32.45}{55\%} = \pounds 59.00 \text{ selling price} = \pounds 70.80 \text{ inc VAT (say } \pounds 71?)$$

### Exercise 5.3

Rooms available	27,740	365 days per year
Rooms sold	19,418	70% occupancy
	(£)	
Profit required	980,000	then add back tax
= Income before tax	1,361,111	(check tax £381,111 28%)
Fixed costs	600,000	
Administration costs	435,000	
Departmental operating profit	2,396,111	
Less F&B & other dept profit	(200,000)	
= Rooms profit	2,196,111	

Rooms expenses	394,185	£20.30 cost times rooms sold
Rooms revenue required	2,590,297	
	(£p)	
Average room rate	133.40	revenue divided by rooms sold
Rate plus VAT	160.08	@ 20%

### Exercise 5.4

#### Information and workings out

Average spend	£ 43.00	Return on investment	15%
Cost of sales	32%		
Other variable costs	15%	Furniture and equipment	£4,500,000
Salaries	£750,000	Depreciation (years)	10
Rent and rates	£700,000	Depreciation per year	£450,000
Insurance	£80,000		
Administration	£120,000	days in year	365
Fixed costs	(£)	Contribution margin	(£) (%)
Salaries	750,000	Selling price	43.00 100.0
Rent and rates	700,000	Cost of sales	(13.76) (32.0)
Insurance	80,000	Other variable costs	(6.45) (15.0)
Administration	120,000	= total variable costs	(20.21) (47.0)
Depreciation	450,000		
Total fixed costs	2,100,000	Contribution Margin	22.79 53.0

#### Answer

Fixed costs	$\frac{£2,100,000}{£22.79}$	= 92,146 covers total or 252.5 per day
Contribution margin		
Investment	$\frac{£4,500,000}{15\%}$	= £675,000 profit required (which = 15% of the £4.5m)
Return required		
Fixed costs + profit required	$\frac{£2,775,000}{£22.79}$	= 121,764 covers total or 333.6 per day
Contribution margin		

This assumes that it is open every day of the year. What if it were not? Then the average per day would be different. You could try it for, say, 350 days.

### Exercise 5.5

First you need to find out the number of extra visitors

Workings out

Extra visitors	June	July	August	Total
total days	30	31	31	
Weekend days	8	8	8	
Weekdays	22	23	23	
Visitors – weekend (40 per day)	320	320	320	
Visitors – weekday (25 per day)	550	575	575	
Total extra visitors	870	895	895	2,660

Then you need to find out the costs

Total existing visitors	6,500
	(£)
Total variable costs for existing visitors (£4,000+£890+£1,750)	6,640
Cost per existing visitor	1.02
Extra variable costs per new visitor	3.25
Total variable cost per new visitor	4.27
Additional fixed cost (advertising) per new visitor (£1,700 divided by 2,660 new visitors)	0.64
Total cost per new visitor	4.91

### Selling price

Profit % required 30%, therefore Total cost % =70%. Use grossing up technique to find selling price.

$$\text{Selling price} = \frac{\text{Cost } \pounds}{\text{Cost \%}} = \frac{\pounds 4.91}{70 \%} = \pounds 7.01$$

### Break-even point

Contribution per unit	(£)
Selling price	7.01
Variable costs per new visitor	(4.27)
Contribution per new visitor	2.74

BEP

$$\frac{\text{Fixed costs (advertising)} \pounds 1,700}{\text{Contribution/unit } \pounds 2.74} = 620 \text{ visitors}$$

**Effect on profit for 3-month period**

	Existing	New	Total	
Visitors	19,500	2,660	22,160	
	(£)	(£)	(£)	(%)
Sales (Visitors × rate)	107,250	18,660	125,910	100.0
Variable costs	(19,920)	(11,362)	(31,282)	24.8
Contribution	87,330	7,298	94,628	75.2
Fixed costs	<u>(55,000)</u>	<u>(1,700)</u>	<u>(56,700)</u>	<u>45.0</u>
Profit	32,330	5,598	37,928	30.1

**Chapter 6**

**Exercise 6.1**

	Normal	Down 20%	Up 20%
Rooms sold	10	8	12
Average rate	£80.00	£80.00	£80.00
Breakfast cost per room	£5.00	£5.00	£5.00
Supplies cost per room	£18.00	£18.00	£18.00
Fixed costs	£210	£210	£210
	£	£	£
Sales	800	640	960
Food cost	(50)	(40)	(60)
Staff & supplies	(180)	(144)	(216)
Fixed costs	(210)	(210)	(210)
Profit	360	246	474

**Exercise 6.2**

	Occupancy normal	Occupancy down 20%, costs up 5%	Occupancy up 20%, costs up 5%
	£	£	£
Sales	800	640	960
Food cost	(50)	(42)	(63)
Staff & supplies	(180)	(151)	(227)
Fixed costs	<u>(210)</u>	<u>(221)</u>	<u>(221)</u>
Profit	360	226	450

So if occupancy is down by 20%, and costs rise by 5%, profits drop by 37% (360 less 226 = 134, expressed as a percentage of 360).

It doesn't look much for such a small business but imagine if it were 50 times bigger.

### Exercise 6.3

	Original percentage	Original (£)	Mailshot (£)	Equipment (£)
Sales	100.0	600,000	60,000	50,000
F&B costs	(40.0)	(240,000)	(24,000)	(20,000)
Gross profit	60.0	360,000	36,000	30,000
Less payroll (variable)	(20.0)	(120,000)	(12,000)	(10,000)
Less other variable costs	(8.0)	(48,000)	(4,800)	(4,000)
Contribution	<u>32.0</u>	<u>192,000</u>	<u>19,200</u>	<u>16,000</u>
Less fixed payroll	(10.0)	(60,000)		
Less other fixed costs	(20.0)	(120,000)		
Mailshot costs			(1,000)	
Equipment costs				(20,000)
Profit	<u>2.0</u>	<u>12,000</u>	<u>18,200</u>	<u>(4,000)</u>

(You could also work out revised percentages)

### Exercise 6.4

Workings out

Forecast sales	£420,000
Shortfall	20%
So the forecast =	80% (of budget)
Therefore, budget sales are	£525,000 Using grossing up technique

	Budget (%)	Budget (£)	Forecast (£)	Variance (£)	Variance (%)
Total sales	100.0%	525,000	420,000	(105,000)	(20.0)
Less food & beverage costs	37.0%	(194,250)	(155,400)	38,850	(20.0)
Less wages (variable)	19.5%	(102,375)	(81,900)	20,475	(20.0)
Less variable expenses	<u>4.5%</u>	<u>(23,625)</u>	<u>(18,900)</u>	<u>4,725</u>	<u>(20.0)</u>
= Contribution	39.0%	204,750	163,800	(40,950)	(20.0)
Less salaries	9.0%	(47,250)	(47,250)	0	0.0
Less other fixed costs	<u>20.0%</u>	<u>(105,000)</u>	<u>(105,000)</u>	<u>0</u>	<u>0.0</u>
= Net Profit	<u>10.0%</u>	<u>52,500</u>	<u>11,550</u>	<u>(40,950)</u>	<u>(78.0)</u>

The same variable cost percentages are applied to the new sales, meaning that the contribution % is the same as budget (39.0%). However, as the fixed costs don't change the result is a 78% drop in profits compared to the 20% drop in sales. If this were your situation you would have to see if you could do something about the sales, but also anything about the fixed costs.



## Chapter 8

### Exercise 8.1

Ingredient F		(£)	
Standard quantity × standard price	255 × £2.00 =	510.00	
Actual quantity × standard price	265.2 × £2.00 =	<u>530.40</u>	
Quantity variance		20.40	ADV
Actual quantity × actual price	265.2 × £1.90 =	<u>503.88</u>	
Price variance		26.52	FAV
(difference between ACTQ SP and ACTQ AP)			
Total variance ingredient F		<u>6.12</u>	FAV
Ingredient O			
Standard quantity × standard price	127.5 × £2.40 =	306.00	
Actual quantity × standard price	178.5 × £2.40 =	<u>428.40</u>	
Quantity variance		122.40	ADV
Actual quantity × actual price	178.5 × £2.60 =	<u>464.10</u>	
Price variance		35.70	ADV
Total variance ingredient O		<u>158.10</u>	ADV
Total variances for recipe (F + O)		151.98	ADV

Can you identify where the major problem has occurred?

It's the ingredient O and is in the actual quantity used – but the price is a problem too. The quantity of ingredient F increased a little but compensated by costing slightly less per kilogram.

### Exercise 8.2

Catering assistants		(£)	
budget hours × budget rate	120 × £7.00 =	840	
actual hours × budget rate	110 × £7.00 =	770	
		70	FAV
actual hours × actual rate	110 × £7.10 =	781	
		11	ADV
Total		<u>59</u>	FAV
General assistants			
budget hours × budget rate	160 × £6.50 =	1,040	
actual hours × budget rate	170 × £6.50 =	1,105	
		65	ADV
actual hours × actual rate	170 × £6.40 =	1,088	
		17	FAV
Total		<u>48</u>	ADV
Total variance		11	FAV

### Exercise 8.3

	Covers	Selling price (£)	Sales (£)	
Budget	3,320	6.75	22,410.00	
Actual	3,170	6.80	<u>21,556.00</u>	
Variance	(150)	0.05	854.00	ADV
Volume (usage)	(150)	6.75	1,012.50	ADV
Price	3,170	0.05	<u>158.50</u>	FAV
Total			854.00	ADV

### Exercise 8.4

	Rooms	Selling price (£)	Sales £	
Budget	50	79.50	3,975.00	
Actual	55	77.50	<u>4,262.50</u>	
Variance	5	(2.00)	287.50	FAV
Volume (usage)	5	79.50	397.50	FAV
Price	55	(2.00)	<u>110.00</u>	ADV
Total			287.50	FAV

## Chapter 10

### Exercise 10.1

Ordinary shares	Called-up share capital	£250,000	
	Number of ordinary shares	500,000	
	So the nominal price of each is	£0.50	
Return on capital employed	=	$\frac{\text{Profit before interest and tax}}{\text{Net assets}}$	= $\frac{£275,000}{£418,000} = 65.8\%$
Gross profit	=	$\frac{\text{Gross profit}}{\text{Sales (Turnover)}}$	= $\frac{£465,000}{£1,875,000} = 24.8\%$
Profitability	=	$\frac{\text{Profit before interest and tax}}{\text{Sales}}$	= $\frac{£275,000}{£1,875,000} = 14.7\%$
Gearing	=	$\frac{\text{Debt}}{\text{Equity}}$	= $\frac{£340,000}{£418,000} = 81.3\%$
Liquidity – Current ratio	=	$\frac{\text{Current assets}}{\text{Current liabilities}}$	= $\frac{£685,000}{£437,000} = 1.57 : 1$
Liquidity – Acid test	=	$\frac{\text{Debtors + cash}}{\text{Current liabilities}}$	= $\frac{£310,000}{£437,000} = 0.71 : 1$

12: Answers to the Exercises

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Earnings per share	=	$\frac{\text{Profit after tax}}{\text{No. Issued ordinary shares}}$	=	£168,000	=	£0.34
			=	500,000		
Dividend per share	=	$\frac{\text{Ordinary dividend paid}}{\text{No. issued ordinary shares}}$	=	£100,000	=	£0.20
			=	500,000		
Price earnings ratio	=	$\frac{\text{Market price per share}}{\text{Earnings per share}}$	=	£1.50	=	4.46 :1
			=	£0.34		
Debtor days	=	$\frac{\text{Debtors}}{\text{Average sales per day}}$	=	£250,000	=	48.67 days
				£5,137		

(If you had prior year figures you could also have compared these figures to those.)

