

Numerical Reasoning

Test 10



Questions Booklet

Instructions

This practice test contains **30 questions**, and you will have **30 minutes** to answer them.

Each question will have four possible answers, one of which is correct.

Calculators are permitted for this test. It's recommended to have some rough paper for your calculations. You will have to work quickly and accurately to perform well in this test. If you don't know the answer to a question, leave it and come back to it if you have time.

Try to find a time and place where you will not be interrupted during the test. When you are ready, turn to the next page and begin.

Sales (£millions)							
	US (Jan-June)	US (July-Dec)	Annual US Sales Target	EU (Jan-June)	EU (July-Dec)	Annual EU Sales Target	Worldwide Sales (Jan-Dec)
Product A	54.5	50.5	110	90.5	91.4	180	320
Product B	61.1	59.2	120	72.2	77.8	160	300
Product C	60.5	58	120	88	92.2	180	330
Product D	76.5	74.1	150	105.3	98.2	200	380
Product E	72.7	78.2	150	89.2	94.8	190	350
US annual sales tax: 24% on the first £130 million of sales, 0% thereafter. EU annual sales tax: 22% on all sales.							

Q1 If worldwide sales comprise US sales, EU sales and Far Eastern sales, which products had the highest annual Far Eastern Sales?

- (A) Product A
- (B) Product B
- (C) Product C
- (D) Product D
- (E) Product E

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	US (Jan-June)	US (July-Dec)	Annual US Sales Target	EU (Jan-June)	EU (July-Dec)	Annual EU Sales Target	Worldwide Sales (Jan-Dec)
Product A	54.5	50.5	110	90.5	91.4	180	320
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US annual sales tax: 24% on the first £130 million of sales, 0% thereafter. EU annual sales tax: 22% on all sales.							

Q2 For the five products combined there was a difference between total annual Sales and the total annual Sales Target. How did this difference compare for the US and the EU?

- (A) £27.1 million (US); £25.8 million (EU)
- (B) £638.3 million (US); £908.2 million (EU)
- (C) £4.7 million (US); £10.4 million (EU)
- (D) £271.7 million (US); £258.2 million (EU)
- (E) Can't tell

Sales (£millions)							
	US (Jan-June)	US (July-Dec)	Annual US Sales Target	EU (Jan-June)	EU (July-Dec)	Annual EU Sales Target	Worldwide Sales (Jan-Dec)
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Q3 If the annual EU sales for Products B and C both comprise online: offline sales in a ratio of 2:3 then what are the online EU sales for Products B and C combined?

- (A) £198,120,000
- (B) £19,812,000
- (C) £13,208,000
- (D) £132,080,000
- (E) None of These

Sales (£millions)							
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Product E	72.7	78.2	150	89.2	94.8	190	350
US annual sales tax: 24% on the first £130 million of sales, 0% thereafter. EU annual sales tax: 22% on all sales.							

Q4 How much US and EU annual sales tax is due for Products B, C and D combined (to the nearest £million)?

- (A) £244 million
- (B) £211 million
- (C) £149 million
- (D) £243 million
- (E) £120 million

Sales (£millions)							
	US (Jan-June)	US (July-Dec)	Annual US Sales Target	EU (Jan-June)	EU (July-Dec)	Annual EU Sales Target	Worldwide Sales (Jan-Dec)
Product A	54.5	50.5	110	90.5	91.4	180	320
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Product C	60.5	58	120	88	92.2	180	330
Product D	76.5	74.1	150	105.3	98.2	200	380
Product E	72.7	78.2	150	89.2	94.8	190	350
US annual sales tax: 24% on the first £130 million of sales, 0% thereafter. EU annual sales tax: 22% on all sales.							

Q5 Which of the following represents the smallest amount?

- (A) Product B's change in EU sales between Jan-June and July-Dec
- (B) 7% of Product D's US sales (Jan-June)
- (C) Product E's change in US sales between Jan-June and July-Dec
- (D) Average US Product A sales per month (July-Dec)
- (E) Average US Product C sales per month (Jan-June)

Share	Dividend paid (pence per Company Share)	Previous Day's Company Value* (£million)	Total Number of Company Shares (million)	Current Price Per Share (£)	Previous month's share price:	
					Low (pence)	High (pence)
Relf plc	14	240	80	2.75	241	275
Studt Systems	8	171	55	3	238	352
Tombe	10	840	460	1.85	170	203
Xan Inc.	15	28	12	2.28	218	249
IWE Ltd	5	200	114	1.48	160	178

* Company Value = Price Per Share x Total Number of Company Shares

The number of company shares has not changed for the past year

Q6 A rights issue brings an additional 10% of Studt Systems shares to the market. If the current price per share drops by 8%, what is Studt Systems' new company value (to the nearest £million)?

- (A) £166 million
- (B) £167 million
- (C) £16.6 million
- (D) £1,670,000
- (E) £169 million

Share	Dividend paid (pence per Company Share)	Previous Day's Company Value* (£million)	Total Number of Company Shares (million)	Current Price Per Share (£)	Previous month's share price:	
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* Company Value = Price Per Share x Total Number of Company Shares

The number of company shares has not changed for the past year

Q7 At current prices, if the owner of 150,000 Studd Systems shares collected the dividend then sold the shares, how many Tombe shares could they buy with the proceeds (to the nearest 10,000)?

- (A) 290,000
- (B) 280,000
- (C) 270,000
- (D) 260,000
- (E) 250,000

Share	Dividend paid (pence per Company Share)	Previous Day's Company Value*	Total Number of Company Shares (million)	Current Price Per Share (£)	Previous month's share price:	
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* Company Value = Price Per Share x Total Number of Company Shares

The number of company shares has not changed for the past year

Q8 Which share has changed in price by the largest amount since the previous day?

- (A) Relf plc
- (B) Studt Systems
- (C) Xan Inc
- (D) IWE Ltd
- (E) Cannot Say

Share	Dividend paid	Previous Day's Company Value*	Total Number of Company Shares	Current Price Per Share	Previous month's share price:	
	(pence per Company Share)	(£million)	(million)	(£)	Low (pence)	High (pence)
Relf plc	14	240	80	2.75	241	275
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* Company Value = Price Per Share x Total Number of Company Shares
The number of company shares has not changed for the past year

Q9 A day trader bought 50,000 Tombe shares at last month's low, received the Tombe dividend and then sold all these shares at last month's high. What was the approximate percentage gain or loss?

- (A) 25.3%profit
- (B) 19.4%profit
- (C) 25.3% loss
- (D) 20.5%loss
- (E) 20.5% profit

Share	Dividend paid (pence per Company Share)	Previous Day's Company Value* (£million)	Total Number of Company Shares (million)	Current Price Per Share (£)	Previous month's share price:	
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* Company Value = Price Per Share x Total Number of Company Shares

The number of company shares has not changed for the past year

Q10 A trader has £185,000 to invest and decides to invest this money equally across the 5 shares shown. How many Tombe and IWE Ltd shares does the trader purchase at current prices?

- (A) 2,000 Tombe shares; 2,250 IWE Ltd shares
- (B) 20,000 Tombe shares; 225 IWE Ltd shares
- (C) 20,000 Tombe shares; 25,000 IWE Ltd shares
- (D) 2,000 Tombe shares; 225,000 IWE Ltd shares
- (E) None of these

Number of new mobile phone packages sold (over the previous 12 months)				
IK-Connections Ltd	Platinum	Gold	Silver	Bronze
Central Region stores	4,540	4,854	5,083	5,425
Northern Region stores	4,725	5,005	5,382	5,846
Southern Region stores	4,584	5,123	5,759	5,428
Western Region stores	4,682	4,759	4,956	4,869
Eastern Region stores	4,884	5,256	4,982	4,592
Price of package (per month)	£40	£35	£30	£25

Q11 Which regional store sold the second highest number of new mobile phone contracts for the Platinum and Gold packages combined (over the previous 12 months)?

- (A) Central
- (B) Northern
- (C) Southern
- (D) Eastern
- (E) Western

Number of new mobile phone packages sold (over the previous 12 months)				
IK-Connections Ltd	Platinum	Gold	Silver	Bronze
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Northern Region stores	4,725	5,005	5,382	5,846
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Western Region stores	4,682	4,759	4,956	4,869
Eastern Region stores	4,884	5,256	4,982	4,592
Price of package (per month)	£40	£35	£30	£25

Q12 If the price of each package was a one-off payment and not a monthly charge, what would be the difference in revenue between the package with the lowest number of sales and the package with the highest number of sales over the 12 month period, across all regions combined?

- (A) £151,740
- (B) £101,750
- (C) £15,400
- (D) £5,747
- (E) Cannot Say

Number of new mobile phone packages sold (over the previous 12 months)				
IK-Connections Ltd	Platinum	Gold	Silver	Bronze
Central Region stores	4,540	4,854	5,083	5,425
Northern Region stores	4,725	5,005	5,382	5,846
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Eastern Region stores	4,884	5,256	4,982	4,592
Price of package (per month)	£40	£35	£30	£25

Q13 What is the difference in average monthly sale values between the most and the least expensive packages? Referring to the initial cost of the package only and not subsequent monthly payments.

- (A) £1,850
- (B) £2,745
- (C) £23,550
- (D) £27,450
- (E) Cannot Say

Number of new mobile phone packages sold (over the previous 12 months)				
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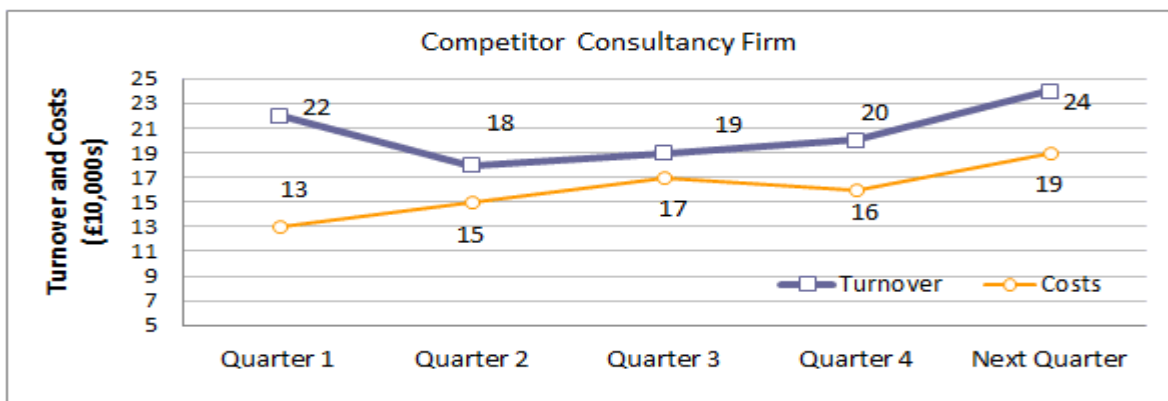
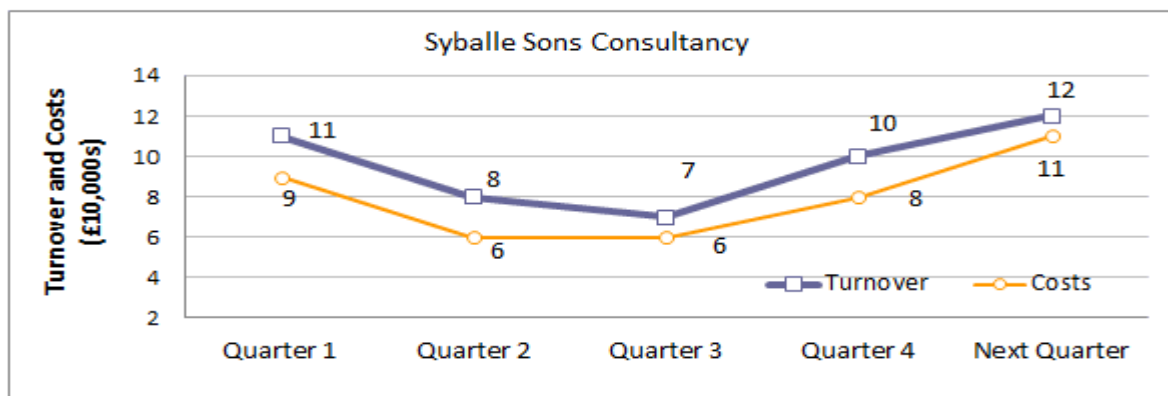
Q14 Assuming the only costs are those of the monthly package, what was the annual cost saving for a customer who switched from the Gold to the Bronze package?

- (A) £10
- (B) £50
- (C) £75
- (D) £120
- (E) £180

Number of new mobile phone packages sold (over the previous 12 months)				
IK-Connections Ltd	Platinum	Gold	Silver	Bronze
Central Region stores	4,540	4,854	5,083	5,425
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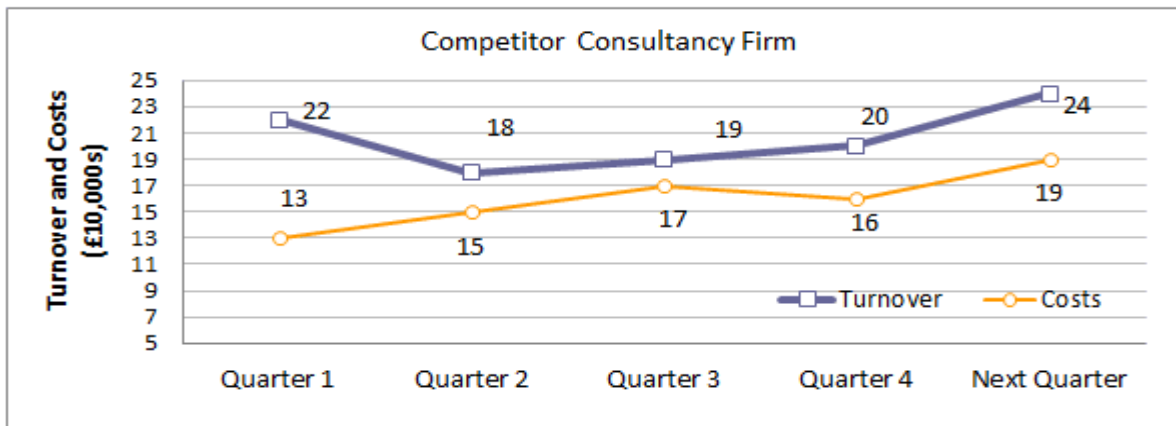
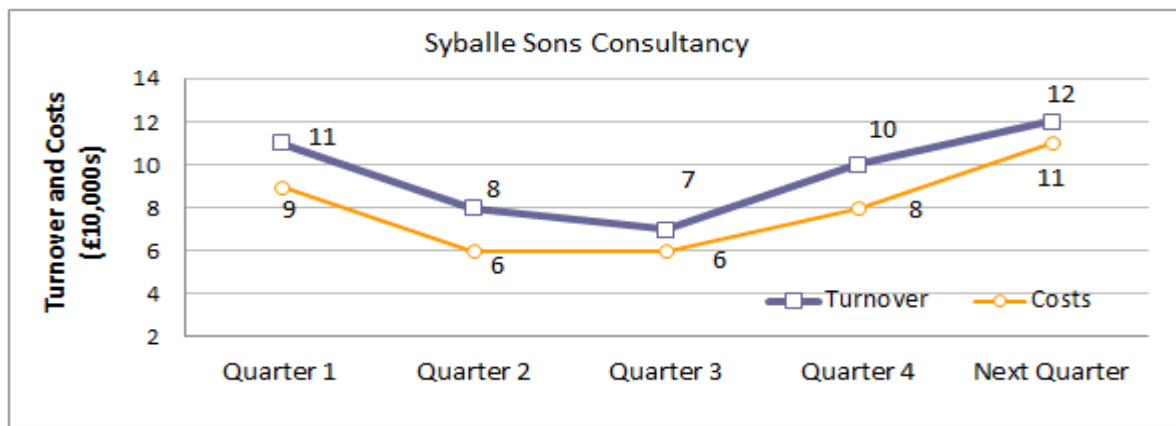
Q15 Over the next twelve months the number of Bronze package sales increases by 12.5% and 25% for the Eastern and Southern regional stores respectively, whilst other sales remain the same. What are the total Bronze package sales for the next twelve months across all IK-Connections stores?

- (A) 28,091
- (B) 28,951
- (C) 30,091
- (D) 31,951
- (E) 30,020



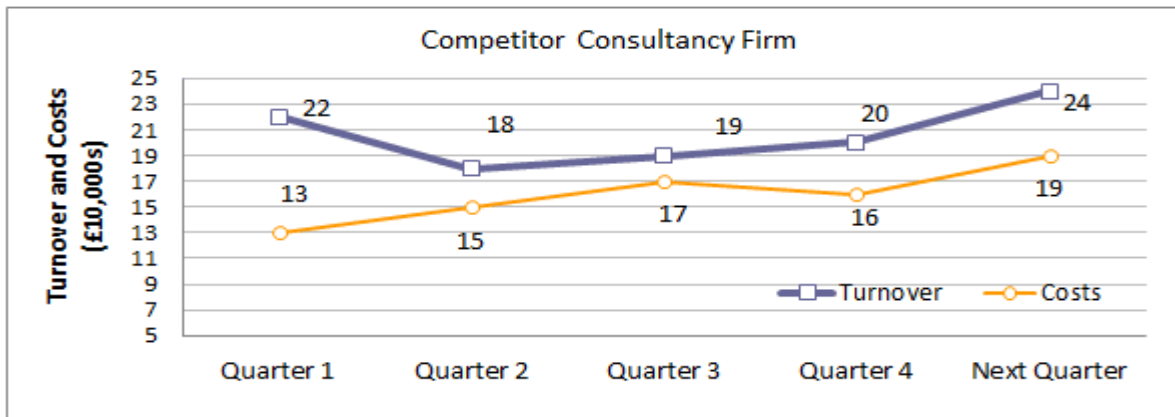
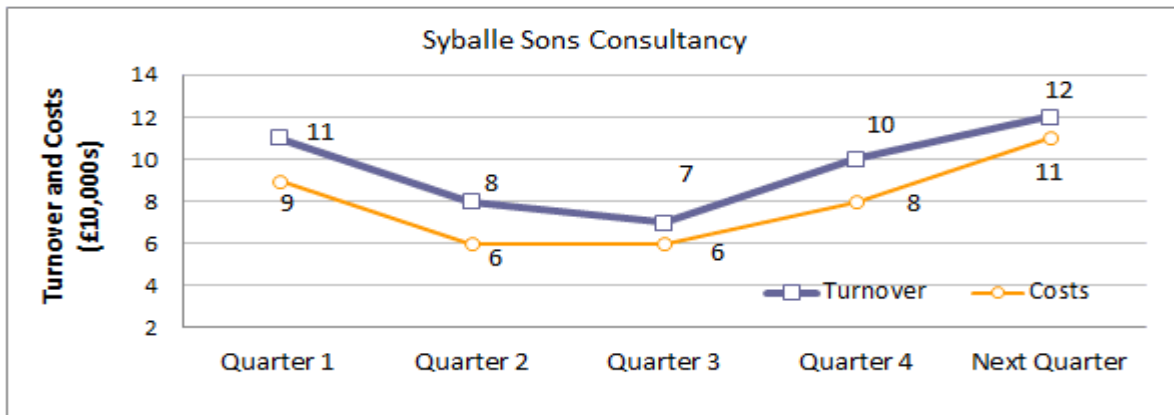
Q16 What is the average quarterly turnover for Syballe Sons compared to the Competitor Consultancy Firm across Quarters 1-4?

- (A) £90,000 Syballe Sons; £197,500 Competitor Consultancy Firm
- (B) £96,000 Syballe Sons; £200,000 Competitor Consultancy Firm
- (C) £90,000 Syballe Sons; £25,750 Competitor Consultancy Firm
- (D) £90,000 Syballe Sons; £19,750 Competitor Consultancy Firm
- (E) £96,000 Syballe & Sons; £20,000 Competitor Consultancy Firm



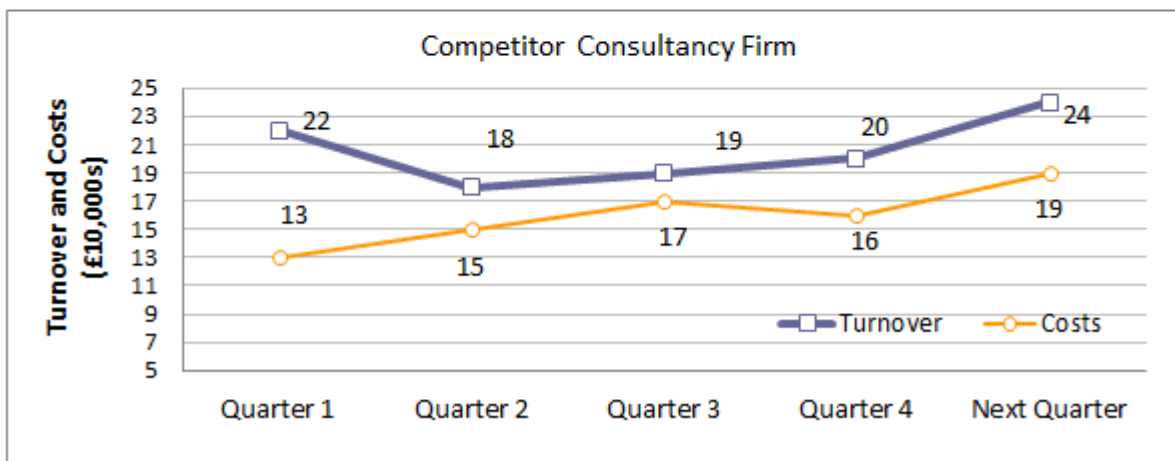
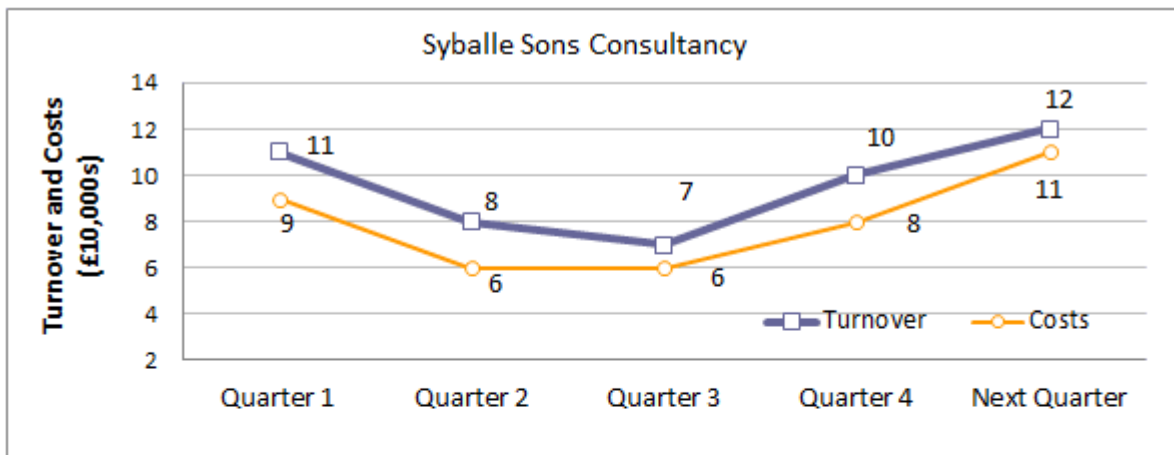
Q17 Between which two quarters was there the same percentage change in turnover for both Syballe Sons and the Competitor Consultancy Firm?

- (A) Quarter 1 – Quarter 2
- (B) Quarter 2 – Quarter 3
- (C) Quarter 3 – Quarter 4
- (D) Quarter 4 – Next Quarter
- (E) Cannot Say



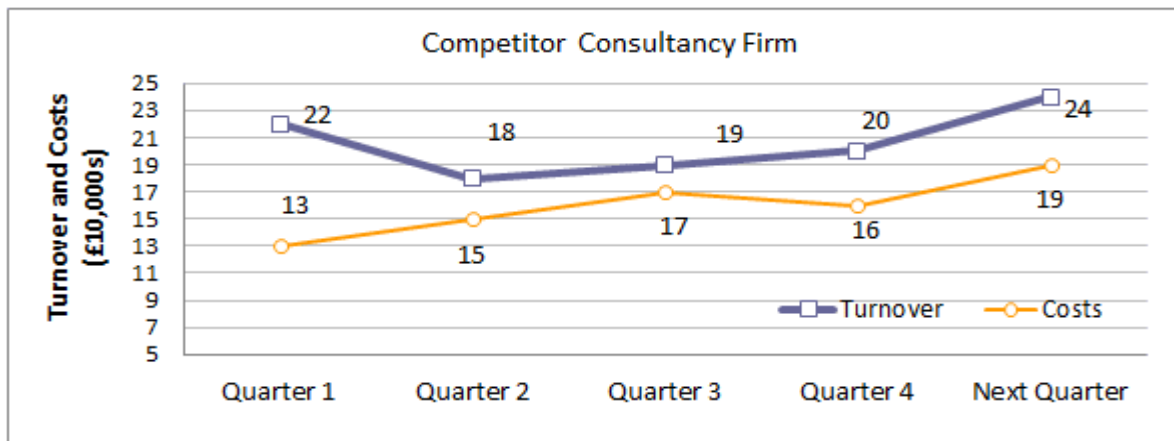
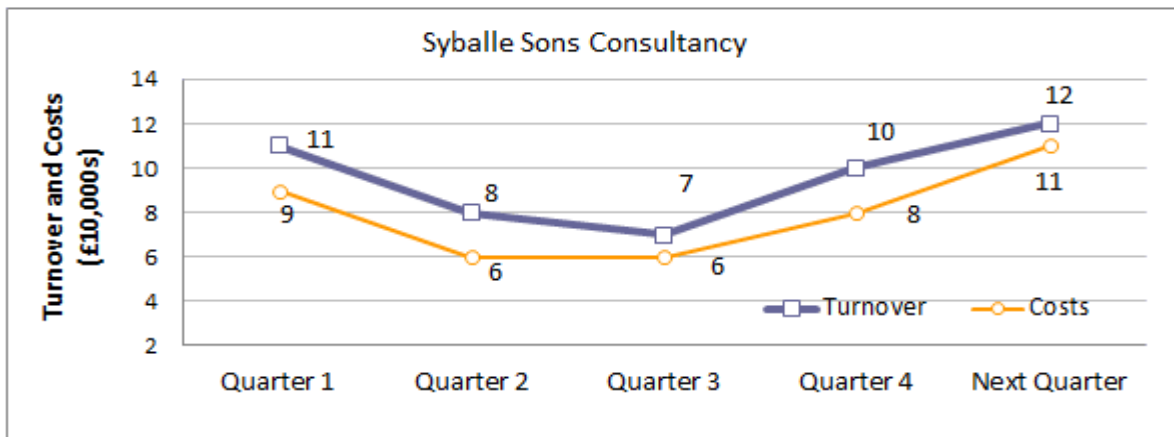
Q18 The quarter immediately following the period shown will see Syballo Sons' cost and turnover both increase by the same absolute amounts as between Quarter 4 and Next Quarter. What will be the difference between their turnover and costs in that following quarter?

- (A) No difference
- (B) £1,500
- (C) £1,000
- (D) £500
- (E) £2,000



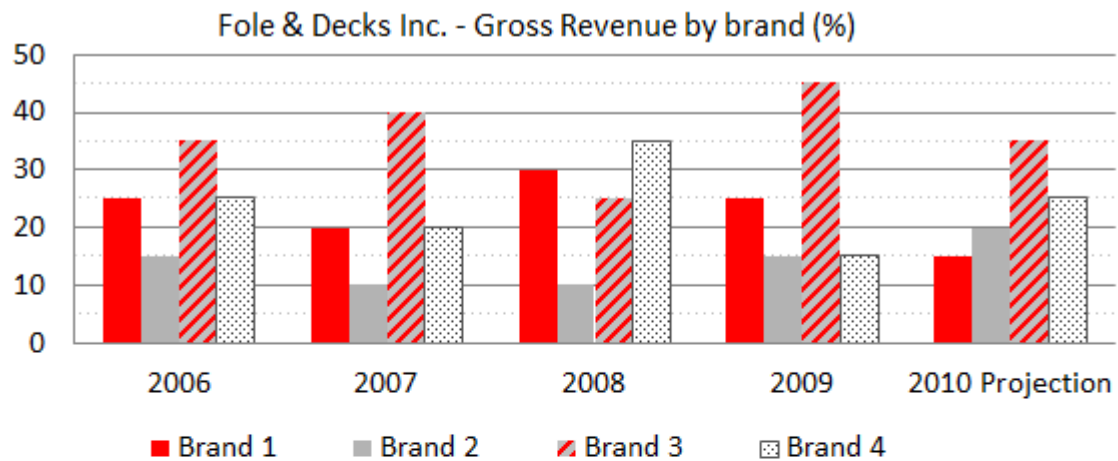
Q19 In the Next Quarter a new competitor enters the market and takes $\frac{1}{10}$ th of Syballle Sons' turnover, as well as $\frac{1}{8}$ th of the Competitor Consultancy's turnover. What is the turnover for this new competitor in the Next Quarter?

- (A) £14,000
- (B) £16,000
- (C) £42,000
- (D) £168,000
- (E) £179,000



Q20 If Gross Profit is Turnover minus Costs, what was the absolute difference in the Gross Profit between Syballe Sons and the Competitor Consultancy Firm for Quarters 1-4 inclusive?

- (A) Can't Tell
- (B) £110,000
- (C) £147,000
- (D) £47,000
- (E) £11,000

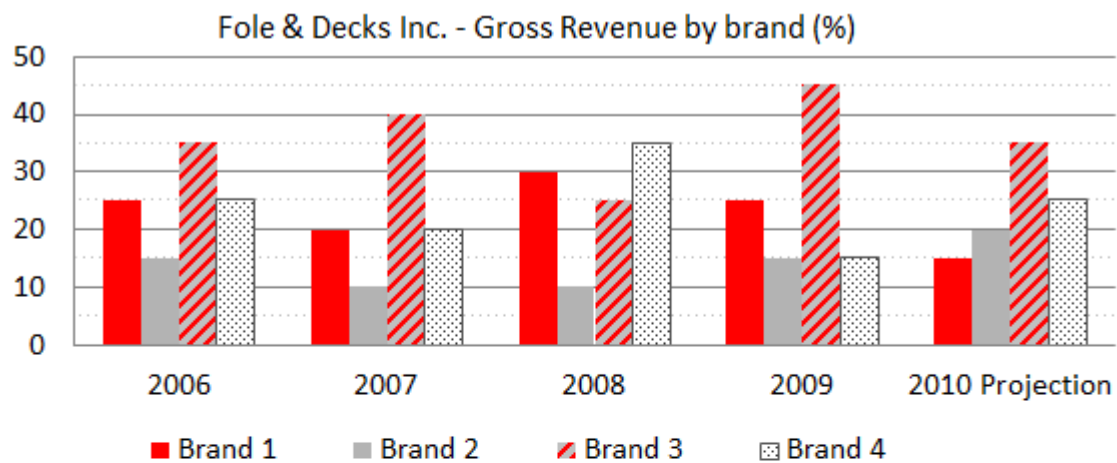


	Total Gross Revenue * (£million)	Pre-Tax Profit (£million)	Earnings per share (pence)
2006	40	8.5	85
2007	42.7	8.7	104.7
2008	44.4	9	120
2009	50	9.6	120.3
2010 Projection	48.7	10.1	119.8

*Total Gross Revenue = Gross Revenue (Brand 1 + Brand 2 + Brand 3 + Brand 4)

Q21 What was Brand 2's gross revenue in 2008?

- (A) £10,000,000
- (B) £4,440,000
- (C) £44,400,000
- (D) £9,100,000
- (E) £100,000,000

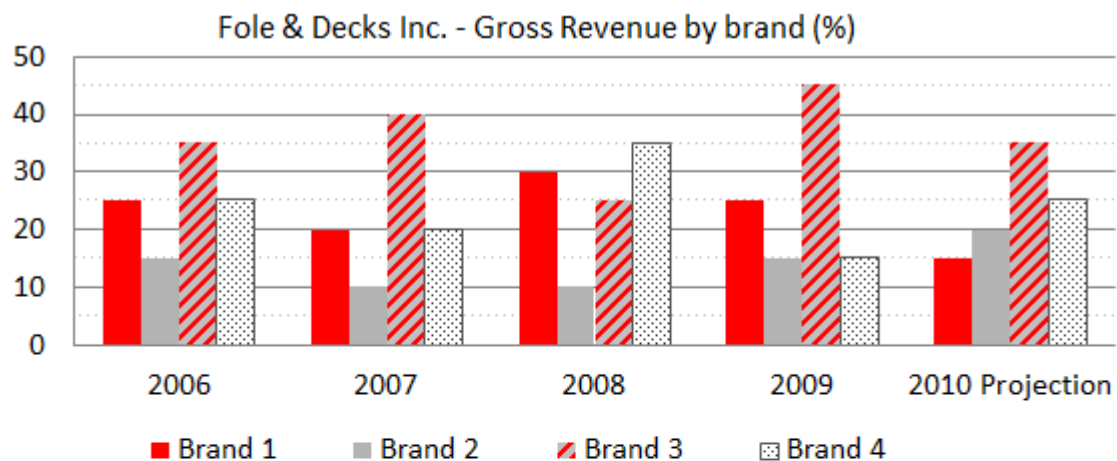


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2009	50	9.6	120.3
2010 Projection	48.7	10.1	119.8

**Total Gross Revenue = Gross Revenue (Brand 1 + Brand 2 + Brand 3 + Brand 4)*

Q22 Which Brand's gross revenue has increased in value by the largest amount between 2006 and 2008?

- (A) Brand 1
- (B) Brand 2
- (C) Brand 3
- (D) Brand 4
- (E) Cannot Say

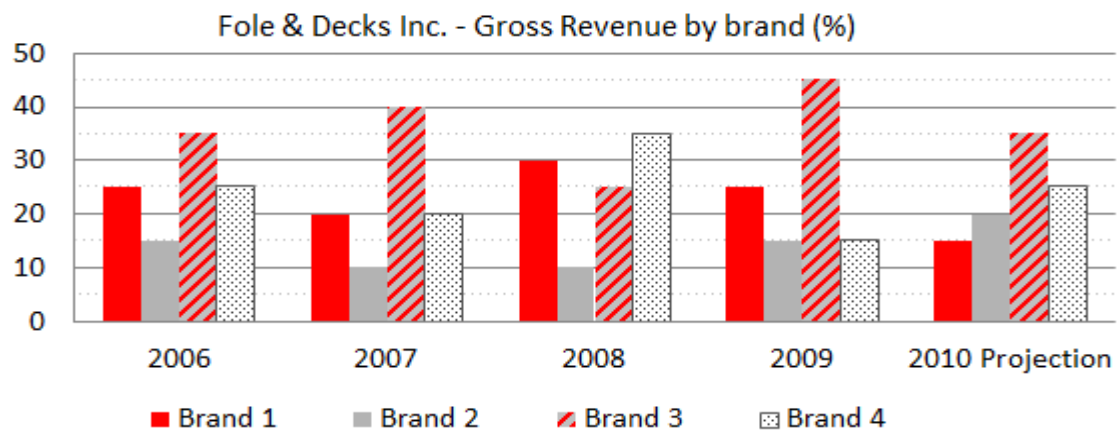


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2009	50	9.6	120.3
2010 Projection	48.7	10.1	119.8

**Total Gross Revenue = Gross Revenue (Brand 1 + Brand 2 + Brand 3 + Brand 4)*

Q23 If Earnings per share = Pre-tax profit / Number of shares issued, how many shares were issued in 2008 compared to 2006?

- (A) 2,500,000 less
- (B) 2,250,000 less
- (C) 25,000 more
- (D) 2,500,000 more
- (E) 250,000 less

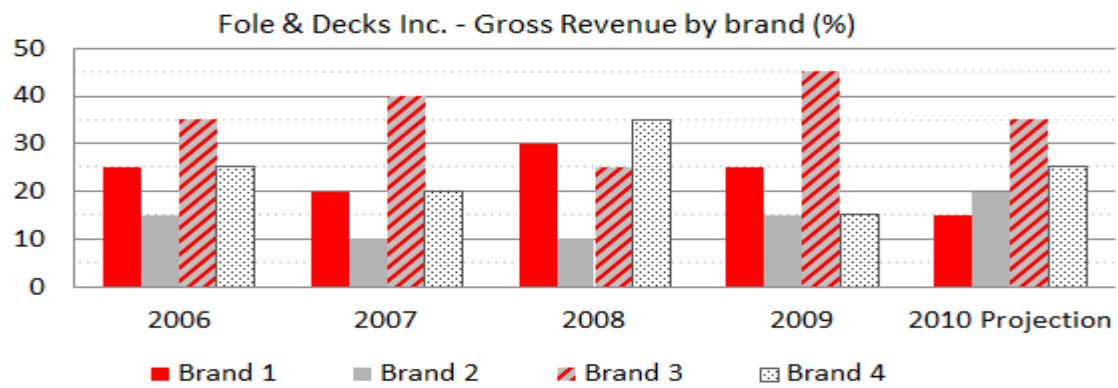


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**Total Gross Revenue = Gross Revenue (Brand 1 + Brand 2 + Brand 3 + Brand 4)*

Q24 For the average annual pre-tax profit (for the years 2007-2009) to equal the average annual pre-tax profit (for the years 2007-2010), what must be the new 2010 Projection?

- (A) £895,000
- (B) £910,000
- (C) £1,150,000
- (D) £8,950,000
- (E) £9,100,000



	Total Gross Revenue * (£million)	Pre-Tax Profit (£million)	Earnings per share (pence)
2006	40	8.5	85
2007	42.7	8.7	104.7
2008	44.4	9	120
2009	50	9.6	120.3
2010 Projection	48.7	10.1	119.8

**Total Gross Revenue = Gross Revenue (Brand 1 + Brand 2 + Brand 3 + Brand 4)*

Q25 In which year was pre-tax profit less than 20% of total gross revenue?

- (A) 2006
- (B) 2007
- (C) 2008
- (D) 2009
- (E) None of these

	Average Earnings (Euros per head of the working population)	Male Population (millions)	Female Population (millions)	Working Population (% of total population)
Netherlands	34,000	8.9	9.1	55
Germany	29,000	39.8	40.2	50
France	30,000	31.1	31.4	48
Spain	25,000	24.2	23.8	45
UK	33,000	27.9	28.1	52

Q26 What are the total earnings for the working population in Spain?

- (A) 54 million Euros
- (B) 540 billion Euros
- (C) 540 million Euros
- (D) 54 billion Euros
- (E) Cannot Say

	Average Earnings (Euros per head of the working population)	Male Population (millions)	Female Population (millions)	Working Population (% of total population)
Netherlands	34,000	8.9	9.1	55
Germany	29,000	39.8	40.2	50
France	30,000	31.1	31.4	48
Spain	25,000	24.2	23.8	45
UK	33,000	27.9	28.1	52

Q27 If the annual birth rates for Germany and Spain are 5.4 births (per 500 population) and 6.4 births (per 500 population) respectively, what is the difference between the number of Spanish and German babies born each year?

- (A) 24,960 more Spanish babies
- (B) 100,000 more German babies
- (C) 249,600 more German babies
- (D) 1,233,000 more Spanish babies
- (E) 123,300 less Spanish babies

	Average Earnings (Euros per head of the working population)	Male Population (millions)	Female Population (millions)	Working Population (% of total population)
Netherlands	34,000	8.9	9.1	55
Germany	29,000	39.8	40.2	50
France	30,000	31.1	31.4	48
Spain	25,000	24.2	23.8	45
UK	33,000	27.9	28.1	52

Q28 Which of the following countries has a non-working population that is closest in number to the UK's non-working population?

- (A) Netherlands
- (B) Germany
- (C) France
- (D) Spain
- (E) Cannot Say

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Netherlands	34,000	8.9	9.1	55
Germany	29,000	39.8	40.2	50
France	30,000	31.1	31.4	48
Spain	25,000	24.2	23.8	45
UK	33,000	27.9	28.1	52

Q29 If the ratio of French unemployed in urban to rural areas is 7:8 and the French unemployment rate is 12% of the working population, how many French unemployed are there in urban areas?

- (A) 1,050,000
- (B) 1,332,000
- (C) 1,680,000
- (D) 2,500,000
- (E) 373,200

	Average Earnings (Euros per head of the working population)	Male Population (millions)	Female Population (millions)	Working Population (% of total population)
Netherlands	34,000	8.9	9.1	55
Germany	29,000	39.8	40.2	50
France	30,000	31.1	31.4	48
Spain	25,000	24.2	23.8	45
UK	33,000	27.9	28.1	52

Q30 If the ratio of France:Belgium average earnings per head of working population is 2:5, then what is Belgium's average earnings in £, at an exchange rate of 1.15 Euros to the £ (to the nearest £100)?

- (A) £124,000
- (B) £86,000
- (C) £86,300
- (D) £124,800
- (E) £65,200

End of test