





Q1 How much did the combined revenue from Slot machines and Roulette differ from that of Other table games between 2006-2009 inclusive (in £millions)?

0.9 9.0 9.2 **0.92** None of these

Step 1 – Calculate the totals for Slot machines, Roulette, Other table games Slot machines = 6 Roulette = 2.7 Other table games = 17.9

Step 2 – calculate the difference 17.9 - 6 - 2.7 = 9.2

Step 3 – put into £millions = 0.92

So the correct answer is 0.92

Q2 What was the average amount gambled on Slot machines in 2007 by each individual who attended Calewall casino?

£90.00	£9.00	£0.90	£900.00	£0.09
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Amount gambled/No of people = 140,000 / 1,520,000 = £0.09

Thus the correct answer is £0.09



2

- **Q3** There is a £15 entrance fee for each person gambling at Calewall casino. In which year, or years, was the entrance fee revenue less than £23 million?
 - 2006, 2007 2007, 2008 2007 2006 None of these

Calculate the entrance fee revenue for each year, as follows;

	Attendances	Entrance fee
		revenue
2006	1,460,000	x 15 = £21,900,000
2007	1,520,000	x 15 = £22,800,000
2008	1,630,000	x 15 = £24,450,000
2009	1,680,000	x 15 = £25,200,000

Thus the correct answer is 2006, 2007

- **Q4** What will be the average annual change in attendance at Calewall casino across the years 2006-2010 if the 2010 prediction proves to be accurate?
 - 47,500 decrease 53,500 decrease 52,500 increase **47,500 increase** 53,500 increase

Step 1 – calculate the yearly change in attendance 2007 = 0.6 increase 2008 = 1.1 increase 2009 = 0.5 increase 2010 prediction = 0.3 decrease

Step 2 - calculate the average yearly change in attendance (0.6 + 1.1 + 0.5 - 0.3) / 4 = 0.475 (100,000s) = 47,500

Thus the correct answer is 47,500 increase



Q5 Calewall casino is subject to a takeover bid of 7 times its 2010 projected casino revenues. The Board responds that it can deliver 10% added value through cost-cuttings to this purchase price. What valuation is the Board putting on Calewall casino (in £millions)?

£48.51 million £44.1 million **£4.85 million** £4.41 million £6.3 million

2010 projected casino revenues = 4.7 + 1.1 + 0.5 = 6.3 6.3 x 7 = 44.1 44.1 x 110%/100 = 48.51 (£100,000s)

So the correct answer is £4.85 million





Q6 If the 2010 prediction proves to be accurate, what is the average annual percentage change in Teala Media's R&D spend across the 5 years shown?

0.53 0.54 0.55 **0.56** 0.57

Calculate the average (2.6 + 1.6 -1.8 - 0.8 + 1.2) / 5 = 0.56

So the correct answer is 0.56

- **Q7** What is the R&D spend projected to be for 2010?
 - **£2.5 million** £2.75 million £3.0 million £3.25 million £3.5 million

Step 1 – calculate the total R&D spends per project for 2009 Addition of 5 projects = 2,483.4 (£1000's) Step 2 – add the 1.2% predicted increase for 2010 2,483,400 x 101.2% = \pounds 2.51 million

So the correct answer is £2.5 million



Q8 What was the R&D spend for 2008 (to the nearest £1,000)?

£2,235,000 £2,613,000 **£2,503,000** £2,483,000 £2,305,000

Step 1 – total R&D spend for 2009 is obtained from the table. Addition of 5 projects = 2,483.4 (\pounds 1000's) = \pounds 2,483,400. You may still have this number from your previous notes.

Note 1: notice that the graph gives "change in R&D spend compared with previous year". So in 2009 the change compared to 2008 was -0.8% from the graph. It is NOT the difference between -1.8% and -0.8% (i.e. +1.0%).

Note 2: to get the correct percentage calculation think about a 0.8% drop from the 2008 figure to the 2009 figure. We would say [2008 figure] \times 0.992 = [2009 figure]. We have calculated the 2009 figure to be £2,483,400 so by rearranging we can find 2008.

Step 2 – allow for the 0.8% decrease in R&D spend for 2009 compared with 2008 \pounds 2,483,400 \div 0.992 = \pounds 2,503,427

Step 3 – to the nearest £1000

So the correct answer is £2,503,000

Q9 R&D costs were 12% of R&D spend in 2009. If R&D costs are projected to rise by 1.1% between 2009 and 2010, what is the 2010 predicted R&D sum available after costs are taken in to account?

£1.02million £1.22million £2.11million £2.21million £2.48million

Step 1

Total R&D spend in 2009 was £2,483.4 (thousands). So £2,483,400.

Step 2

R&D costs we are told are 12% of spend so $12\% \times \pounds2,483,400 = \pounds298,008$.

Step 3

The graph tells us that the R&D spend in 2010 is projected to increase by 1.2%. This will be $\pounds 2,483,400 \times 1.012 = \pounds 2,513,200.8$ And we are told in the question that the R&D costs are expected to increase be 1.1%. This will be $\pounds 298,000 \times 1.011 = \pounds 301,286.1$.

Step 4

So the available R&D money left after costs is (2,513,200.8 – 301,286.1) = £2,211,914.7.

So the correct answer is £2.21 million





Q10 If delays at the end of 2009 resulted in a 2.5% increase in the cost of each of the two most expensive projects, what is the total R&D spend for 2009 (to the nearest £1,000)?

£2,482,000 **£2,527,000** £2,528,000 £2,556,000 None of These

Step 1 – add the additional 2.5% R&D charge for the two most expensive R&D projects for 2009 2010 additional New product development spend = 1056 x 0.025 = 26.4 2010 additional Process improvement systems spend = 672.8 x 0.025 = 16.82

Step 2 – Calculate Total R&D spend for 2009 Total R&D spend = 425.9 + 672.8 + 215.5 + 1,056 + 113.2 + 26.4 + 16.82 = £2,526,620

Thus the correct answer is £2,527,000





		Number of Shares	
List of All Directors	At 1st April 2009	At 30 April 2009	At 31 st May 2009
Geoffrey Yates	1,100	1,050	910
Tobey Gilham	1,050	950	820
Susan Preddy	950	820	250
Samantha Hoxton	990	1,100	550
Trudy Stupples	1,200	960	2,400

Q11 What is the number of shares not held by Directors of Leutts (as of 30 April 2009)?

25,620	6,850	43,500	4,880	Cannot tell from data
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The data you need is in both the pie-chart and the table.

- Step 1 The pie-chart shows that 16% of Directors hold shares, so 100 16 = 84% do not hold shares
- Step 2 Calculate the total number of director shares at 30 April 2009

Director	At 30 April 2009
Geoffrey Yates	1,050
Tobey Gilham	950
Susan Preddy	820
Samantha Hoxton	1,100
Trudy Stupples	960
Total =	4,880

Step 3 - Calculate 84% 16% = 4,880

84% = 4,880 x 84 / 16 = 25,620

So the correct answer is 25,620



Q12 Which Director has bought or sold the largest number of shares across the 2-month period shown?

Geoffrey Yates **Trudy Stupples** Samantha Hoxton Susan Preddy Tobey Gilham

The largest number of shares can be found by calculating the differences in shareholdings between the periods 1^{st} April – 30 April and 30 April – 31^{st} May.

Director	At 1st April 2009	At 30 April 2009	Shares Dealt over period	At 30 April 2009	At 31 st May 2009	Shares Dealt over period	Total Shares Dealt
Geoffrey Yates	1,100	1,050	50	1,050	910	140	50 + 140 = 190
Tobey Gilham	1,050	950	100	950	820	130	100 + 130 = 230
Susan Preddy	950	820	130	820	250	570	130 + 570 = 700
Samantha Hoxton	990	1,100	110	1,100	550	550	110 + 550 = 660
Trudy Stupples	1,200	960	240	960	2,400	1,440	240 + 1,440 = 1,680

So the correct answer is Trudy Stupples

Q13 If Tobey Gilham sells half of his shareholding at 31 May 2009 at £45 per share, how much is this trade worth?

£3.690	£18.250	£18.450	£9.230	£36.900
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From the table, Tobey Gilham holds 820 shares at 31 May 2009 820 / 2 = 410 shares at £45 per share \pounds 45 x 410 = £18,450

Hence the correct answer is £18,450



Q14 Which of the following statements is true?

Current employees and Directors owned 40% of Leutts shares on 30 April 2009 **The largest Director share dealing was 1,440 shares** Directors held 4,870 shares in total on 30 April 2009 Tobey Gilham held the most shares of any Director on 1st April 2009 Each Director has less shares on 31 May 2009 compared to 1st April 2009

Go through checking whether each answer option is true or false

Current employees and Directors owned 37% of Leutts shares on 30 April 2009 – not 40%. FALSE

The largest Director share dealing was 1440 shares which Trudy Stupples bought between 30 April – 31^{st} May. TRUE

Directors held 4,880 shares in total on 30 April 2009 - not 4870 shares. FALSE

Trudy Stupples held the most shares of any Director on 1st April 2009 – not Tobey Gilham. FALSE

Each Director does not have less shares on 31 May 2009 compared to 1st April 2009 – Trudy Stupples has more shares. FALSE

So the correct answer is "The largest Director share dealing was 1440 shares"

Q15 If Leutts shares are worth £52 on 30 April 2009, then what is the share valuation of the entire company?

£1,686,000 £1,588,000 £1,566,000 **£1,586,000** £1,856,000

Total number of Director shares = 4,880This represents 16% of the total shares So, 100% = $4880 \times 100 / 16 = 30,500$ Company share valuation = $30,500 \times \pounds 52 = \pounds 1,586,000$

Thus the correct answer is £1,586,000





Q16 The total number of £400,000 Apline houses sold in 2009 represented 80% of the annual sales target. If this target was split equally across 5 salerooms, what was the individual sales target for each salesroom?

155	120	125	325	225
Step 1 Total £400,000 hou	ıse sales = 230	+ 270 = 500 hou	ises	
Step 2 500 = 2009 target (2009 target (5 sale	′5 salesrooms) srooms) = 500/	x 80% / 100 0.8 = 625		
Step 3 2009 target per sal	esroom = 625/5	5 = 125		

So the correct answer is (E) 125



Q17 Stamp duty of 3% is paid on house sales over £250,000. How much stamp duty is paid by purchasers of Apline houses in 2009?

£16,425,000 £18,550,000 **£19,425,000** £6,000,000 £8,550,000

Step 1 – calculate the total number of houses where stamp duty is due

£300,000 houses: 460 + 490 = 950 £400,000 houses: 230 + 270 = 500 £500,000 houses: 150 + 175 = 325

Step 2 – calculate the stamp duty due

 $950 \times \pounds 300,000 \times 3\% = \pounds 8,550,000$ $500 \times \pounds 400,000 \times 3\% = \pounds 6,000,000$ $325 \times \pounds 500,000 \times 3\% = \pounds 4,875,000$ $Total = \pounds 19,425,000$

So the correct answer is £19,425,000

Q18 What is the total value of 2009 Apline house sales?

£127.5 million £777.5 million £115 million £162.5 million £353,409 million

Calculate the total house sales for each half-year period, as follows;

Price	Jan to June 2009	July to Dec 2009	Total Sales (£million)
£200,000	310	340	130
£300,000	460	490	285
£400,000	230	270	200
£500,000	150	175	162.5
			777.5

So the correct answer is £777.5 million



Q19 In 2010, the absolute difference in Alpine house sales between 2009's July-Dec and Jan-June periods is expected to increase by a fifth. What is the projected difference in Apline house sales between July-Dec and Jan-June for 2010 (in £million)?

43.5	52.2	100	125	125.5
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Step 1 - Calculate the difference for 2009, as follows;

		Jan to June 2009	July to Dec 2009	Difference (houses sold)	Difference (£million)
£20	0,000	310	340	30	6
£30	0,000	460	490	30	9
£40	0,000	230	270	40	16
£50	0,000	150	175	25	12.5
				125	43.5

Step 2 – Add the increase of a fifth $43.5 \times 1.2 = \pounds 52.2$ million

Thus the correct answer is 52.2.

Q20 A marketing drive in 2009 is to be used to increase the level of Jan-June house sales to the level of July-December house sales. If the ratio of marketing spend to additional sales is 1:3, then what level of marketing spend is required?

£156.6 million £75.4 million £52.2 million £36.6 million **£14.5 million**

Step 1 - Difference in the level of Jan-June house sales to the level of July-December house sales = \pounds 43.5 million

Step 2 – Calculate the marketing spend needed 43.5/3 = 14.5

So the correct answer is £14.5 million



TOTAL SALES (£millions)						
Region	Previous Year	Current Year	Next Year's Projection			
Northern	310	310	320			
Southern	170	160	165			
Eastern	290	300	275			
Western	255	280	270			
Central	110	90	125			

Q21 If the sales projections for next year prove accurate, which region will have maintained or increased sales levels each year from the previous year to next year?

Northern region Southern region Eastern region Western region Central region

Step 1 – Calculate the regional sales for the current year using the table.

Step 2 – Compare the numbers from Step 1 to the figures for the previous year and for next year, as follows;

			Next Year's	
Region	Previous Year	Current year	Projection	
Northern	310	310		320
Southern	170	160		165
Eastern	290	300		275
Western	255	280		270
Central	110	90		125

Only the Northern region has maintained sales at 310 for the previous and current year, as well as projecting an increase in sales to 320 for next year.

Thus the correct Answer is Northern region



Q22 What is the absolute difference between the lowest and the highest performing region (to the nearest £million) in the current year?

£216 million £217 million £218 million £219 million £220 million

Step 1 - Calculate the difference between the highest regional sales (Northern) and the lowest regional sales (Central) $310 - 90 = \pounds 220$ million

Thus the correct Answer is £220 million

Q23 If next year's forecasts are scaled back by a quarter for the Northern and Western region, and by a fifth for the Southern and Eastern regions, what will be the total projected sales for all 5 regions?

£1,155 million £924 million **£919.50 million** £942 million £866.25 million

Calculate the new regional sales for the 4 regions affected and sum these, as shown in the table below;

	Next Year's	New
Region	Projection	projection
Northern	320	x 3/4 = 240
Southern	165	x 4/5 = 132
Eastern	275	x 4/5 = 220
Western	270	<i>x 3/4 = 202.5</i>
Central	125	125
TOTAL		919.50

Thus the correct Answer is £919.50 million



Q24 What were the ratios for the Central: Eastern regional sales for the Previous Year compared to the Current Year?

9:30 (Previous Year); 3:11 (Current Year) 20:50 (Previous Year); 3:11 (Current Year) 10:30 (Previous Year); 5:11 (Current Year) **11:29 (Previous Year); 3:10 (Current Year)** 5:11 (Previous Year); 11:29 (Current Year)

Step 1 – put the Previous Year's sales for these regions into a ratio 110:290

Step 2 – put the Current Year's sales for these regions into a ratio 90:300

Step 3 – simplify these ratios by dividing by the highest common denominator 11:29 for Previous Year (after division by 10) 3:10 for Current Year (after division by 30)

So the correct answer is 11:29 (Previous Year); 3:10 (Current Year)

Q25 Put the regions in increasing order of total combined sales for the current year and next year's projection

Central, Southern, Western, Eastern, Northern Southern, Central, Western, Eastern, Northern Central, Western, Southern, Eastern, Northern Central, Southern, Western, Northern, Eastern Central, Southern, Northern, Western, Eastern

Calculate the totals for each region, as follows;

	Current Year	Next Year	Total
Northern	310	320	630
Southern	160	165	325
Eastern	300	275	575
Western	280	270	550
Central	90	125	215

Hence the correct answer is Central, Southern, Western, Eastern, Northern



2009	Country's Gross Domestic Product	GDP Per person		
	(£billion)	(£1000s)		
UK	2.05	24		
France	2.4	24.5		
Germany	3.1	25.7		
Spain	1.4	20.5		
Italy	1.95	23.6		

- **Q26** In which year (or years) was there more than a 3.3% difference in the GDP per person for France compared to the UK?
 - 2005, 2007 2006, 2008 2007, 2008 **2008, 2005** 2009, 2005

Step 1 – Calculate the % difference as shown in the table below;

Ye	ar	UK	France	Difference	% Difference
20	05	22000	23500	1500	6.82
20	06	23250	23250	0	0.00
20	07	23750	23000	-750	-3.16
20	08	23000	24000	1000	4.35
20	09	24000	24500	500	2.08

Thus the correct answer is 2008, 2005



Q27 Which of the following statements is false?

Germany has the highest GDP of the countries shown. Germany's GDP is over 20% higher than the France's GDP in 2009. **The 2005-2009 range of UK GDP per person is £23,500-£24,500.** The average GDP per country for the 5 countries shown is £2.18 billion. The lowest and highest GDP per person are £20,500 and £25,700 respectively.

Go through each of the answer options checking if it is true or false:

- a) Is True
- b) Germany's GDP (3.1) is over 20% higher than the France's GDP (2.4). TRUE
- c) From the graph, France's GDP per person ranges from £23,500 to £24,500, not the UK's. So this is FALSE.
- d) The average GDP per country for the 5 countries shown is (2.05 + 2.4 + 3.1 + 1.4 + 1.95) / 5 = 2.18 TRUE

e) The lowest and highest GDP per person are £20,500 and £25,700 respectively. TRUE

So the False answer is "The 2005-2009 range of UK GDP per person is £23,000-£24,500."

Q28 Which two countries had the smallest difference in GDP per person in 2009?

UK, Italy France, Italy Germany, Italy Spain, Italy Spain, France

From looking at the table Country Gross Domestic Product there is only a 0.4 difference in GDP per person between the UK (24.0) and Italy (23.6)

So the correct answer is UK, Italy

Q29 Between which years were the GDPs per person increasing in both France and the UK?

2008-2009 2007-2008 2006-2007 2005-2006 Cannot tell from data

Look at the direction of the lines representing the UK and France (on the line graph). For both the France and the UK to be increasing the lines need to both be pointing upwards. This is only true for 2008-2009.



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So the correct answer is 2008-2009



Q30 What was the average GDP per person for France and the UK across the 5 years shown?

£23,500 (France); £23,200 (UK) £23,650 (France); £23,500 (UK) £23,500 (France); £23,000 (UK) £23,000 (France); £23,500 (UK) **£23,650 (France); £23,200 (UK)**

Calculate the average as shown in the table below;

Year	UK	France
2005	22000	23500
2006	23250	23250
2007	23750	23000
2008	23000	24000
2009	24000	24500
TOTAL	116000	118250
AVERAGE	23200	23650

So the correct answer is £23,650 (France); £23,200 (UK).

