Numerical Reasoning

Test 11

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.

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	Number of Employees				
Parent Company's 5 subsidiary companies	2005	2006	2007	2008	2009
Subsidiary 1	1,538	1,584	1,573	1,585	1,614
Subsidiary 2	1,107	1,084	1,060	1,068	962
Subsidiary 3	1,340	1,384	1,393	1,398	1,412
Subsidiary 4	1,505	1,495	1,528	1,548	1,583
Subsidiary 5	1,010	980	946	997	1,029
Parent company: Employees working part-time (%)	12.0	8.1	8.0	5.4	5.0

Note: the entire workforce of the parent company comprises only the employees of its five subsidiary companies

Q1 Between which three years was there an average of 1,553 employees for one of the Subsidiary Companies?

(A) 2005-2007 Subsidiary 1
(B) 2006-2008 Subsidiary 1
(C) 2007-2009 Subsidiary 4
(D) 2007-2009 Subsidiary 1
(E) None of these

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Note: the entire workforce of the parent company comprises only the employees of its five subsidiary companies

Q2 In 2008 subsidiary company 4 comprised 2 regions with double the number of employees in one region compared to the other. If the ratio of male:female employees in the smaller region was 1:1.15, what was this region's number of male employees?

(A) 240
(B) 828
(C) 414
(D) 394
(E) 360

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Note: the entire workforce of the parent company comprises only the employees of its five subsidiary companies

Q3 1 in 15 of the parent company's part-time employees were managers in 2005, and 1 in 13 part-time employees were managers in 2007. What was the difference in the number of part-time managers in 2005 compared to 2007?

(A) 14 less
(B) 12 more
(C) 12 less
(D) 13 more
(E) Cannot Say

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Parent company: Employees working part-time (%)	12.0	8.1	8.0	5.4	5.0

Note: the entire workforce of the parent company comprises only the employees of its five subsidiary companies

Q4 What % of the Parent Company's total employees worked for Subsidiary 5 in 2006 (to the nearest whole %)?

(A) 12%
(B) 10%
(C) 18%
(D) 15%
(E) 9%

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Parent company: Employees working part-time (%)	12.0	8.1	8.0	5.4	5.0

Note: the entire workforce of the parent company comprises only the employees of its five subsidiary companies

Q5 In 2009 what was the absolute difference between the Parent Company's full-time employees and part-time employees (if Number of employees = Full-time employees + part-time employees)?

(A) 6,270
(B) 90
(C) 4,733
(D) 6,600
(E) 5,940

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Laptop model	COSTS		UK Price (£)	Sale price as fraction of normal UK price
	Manufacturing cost (£)	Design cost (£)		
Adelphi	165	60	400	1/2
Adele	140	90	350	3/4
Faze	120	60	380	2/5
Stunn	145	115	420	1/2
Brete	195	130	650	2/3

Q6 For which laptop, or laptops, is the difference between the manufacturing cost and the design cost less than 20% of the manufacturing cost?

(A) Brete
(B) Stunn and Adelphi
(C) Adelphi
(D) Stunn
(E) None of these

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Faze	120	60	380	2/5
Stunn	145	115	420	1/2
Brete	195	130	650	2/3

Q7 Put the laptop models in order of increasing mark-up (Mark-up = Price – Costs).

(A) Adele, Adelphi, Stunn, Faze, Brete
(B) Adele, Stunn, Brete, Adelphi, Faze
(C) Adele, Stunn, Adelphi, Faze, Brete
(D) Stunn, Adele, Adelphi, Brete, Faze
(E) Adele, Stunn, Adelphi, Brete, Faze

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Faze	120	60	380	2/5
Stunn	145	115	420	1/2
Brete	195	130	650	2/3

Q8 If the same number of each model was sold last month and total sales were £220,000, how many of each model were sold? Prices have remained the same.

(A) 200
(B) 2510
(C) 100
(D) 2150
(E) Cannot Say

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Brete	195	130	650	2/3

Q9 Which of the following would generate the highest total amount at the sale prices shown?

(A) 75 Adele laptops on sale
(B) 150 Adele laptops at a further 60% reduction to the sale price
(C) 50 Faze and 50 Stunn laptops on sale
(D) 45 Brete laptops on sale
(E) 90 Stunn laptops on sale

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Q10 The current exchange rate for US Dollars to the Pound is 1.62 USD to 1 Pound. How much would it cost a customer in the USA to purchase a Faze laptop once a discount of 12% has been applied? Assuming that the USA prices are equivalent to that in the UK and do not include a sale price fraction.

(A) $612.89
(B) $590.47
(C) $574.66
(D) $541.73
(E) $523.52

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Online Monthly Average	Number of people searching (1000s)	Total Searches (millions)	% of people searching	
			Selling goods/services	Buying goods/services
Australia	19,613	2,412	10	32
Ireland	1,146	170	3	28
UK	31,225	3,975	12	22
Italy	14,850	1,855	6	8
Sweden	16,204	9,578	21	42

Goods/services bought online (%)	Household goods	Films/ music	Financial products	Tickets	Holidays
Australia	9	12	3	17	22
Ireland	3	9	2	10	18
UK	13	10	2	9	15
Italy	9	8	3	8	9
Sweden	5	2	1	3	4

Q11 In which country was there the second highest number of people searching who were buying goods/services online?

(A) Australia
(B) Ireland
(C) UK
(D) Italy
(E) Sweden

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Italy	9	8	3	8	9
Sweden	5	2	1	3	4

Q12 In which country was there the second lowest number of people searching who were selling goods/services online?

(A) Australia
(B) Ireland
(C) UK
(D) Italy
(E) Sweden

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Sweden	5	2	1	3	4

Q13 Of those in the UK that buy goods/services online they spend on average £1.50 per month. Approximately, what is the total annual spend from this group of people?

(A) £125 million
(B) £10 million
(C) £56 million
(D) £124 million
(E) £12.3 million

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Sweden	5	2	1	3	4

Q14 If the three countries *I.U.I.* (Ireland, UK, Italy) are grouped together and the other two countries *S.A.* (Sweden, Australia) are also grouped together, what is the difference between the total number of searches per *I.U.I.* country and the total number of searches per *S.A.* country?

(A) None of these
(B) 2,000 million
(C) 3,995 million
(D) 6,000 million
(E) 1,500 million

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UK	13	10	2	9	15
Italy	9	8	3	8	9
Sweden	5	2	1	3	4

Q15 Which country has the lowest number of online searches per person searching?

(A) Australia
(B) Ireland
(C) UK
(D) Italy
(E) Sweden

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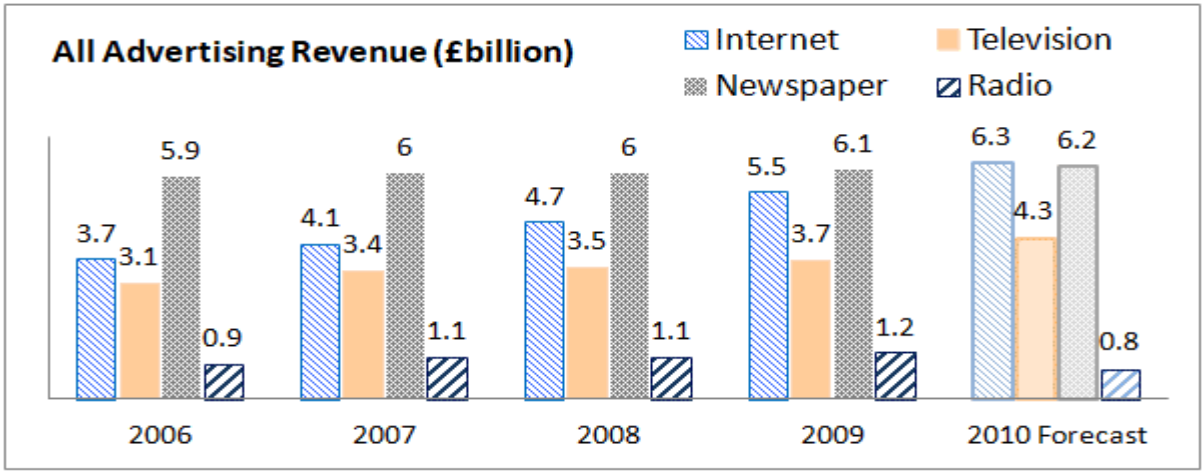

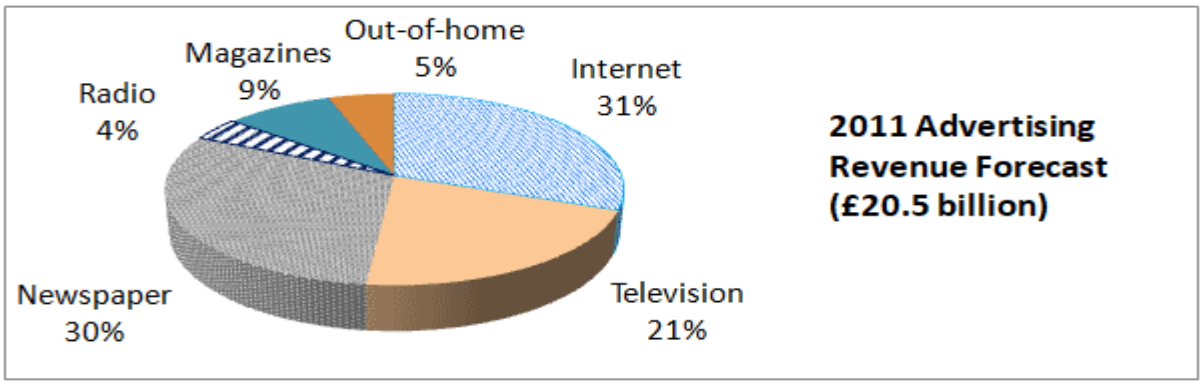

Q16 Which of the following two media are predicted together to generate £6.15 billion of advertising revenue in 2011?

(A) Television and Radio
(B) Newspaper and Radio
(C) Out-of-home and Newspaper
(D) Radio and Magazines
(E) Magazines and Television

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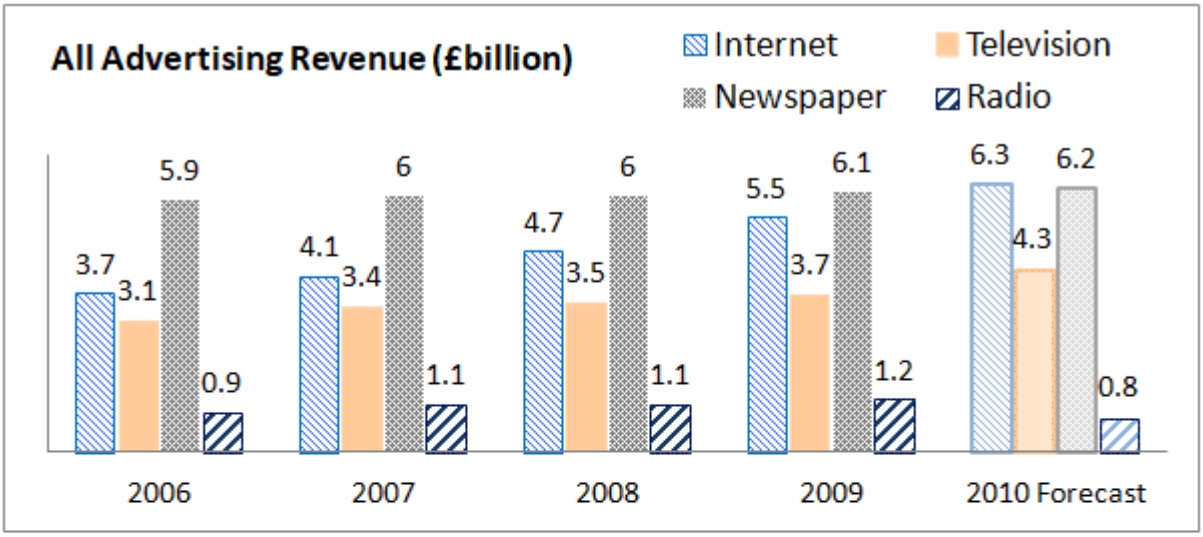

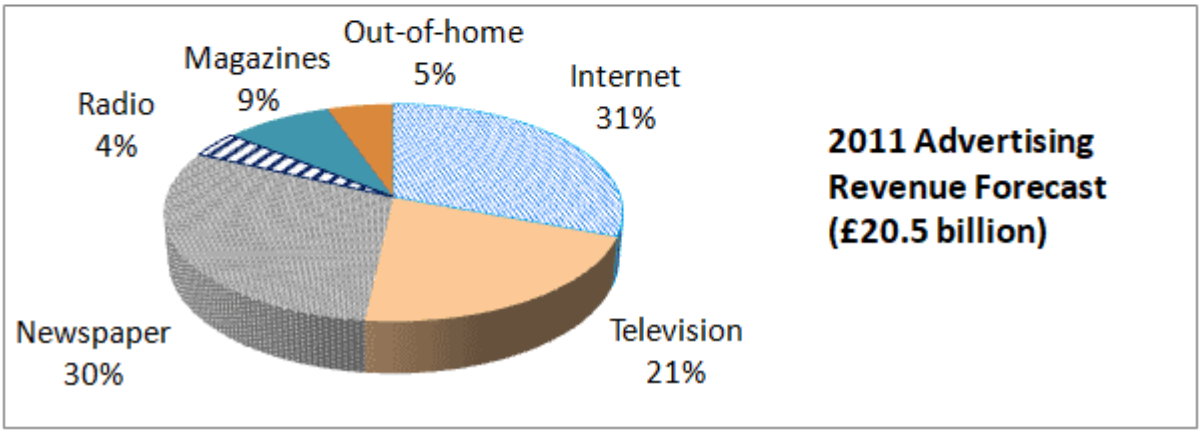

Q17 If the Internet advertising forecast for 2011 is expected to split into mobile: display advertising in a 1:4 ratio, what is the mobile forecast?

(A) £20.5 billion
(B) £1.55 billion
(C) £1.27 billion
(D) £31.00 billion
(E) £7.75 billion

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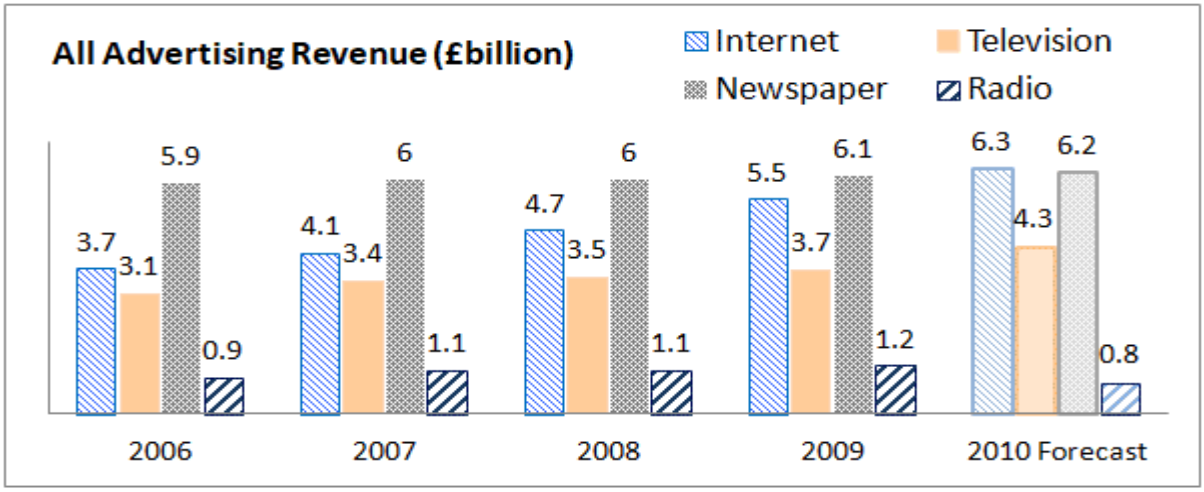

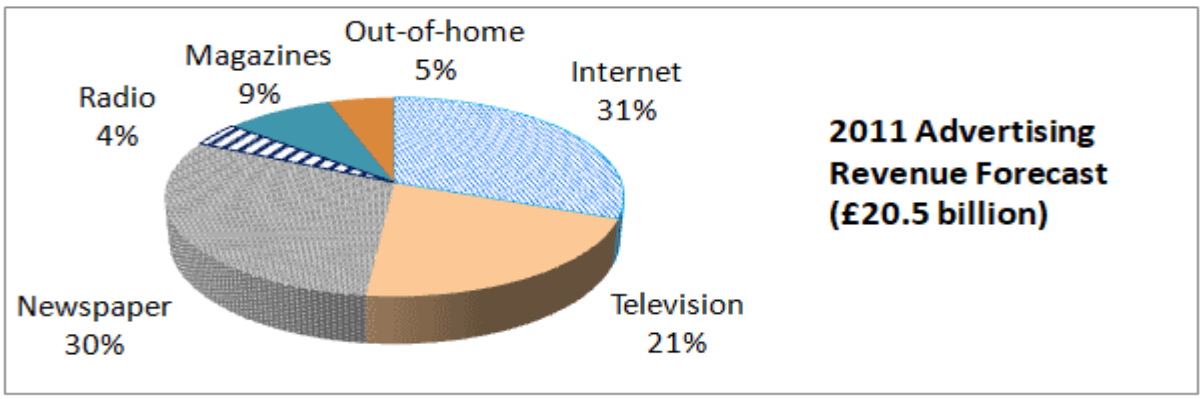

Q18 If the same absolute trends in advertising revenue from 2009 to 2010 continue for 2010 to 2011, then what will be the 2011 advertising revenue for Television and Internet combined?

(A) £8.1 billion
(B) £16.2 billion
(C) £21.2 billion
(D) £12 billion
(E) £10.6 billion

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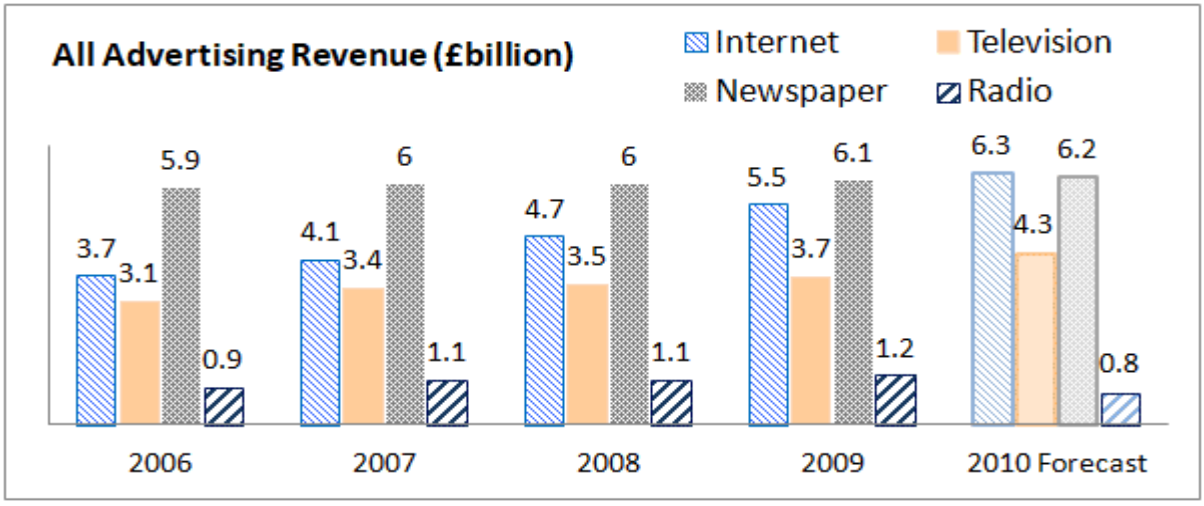

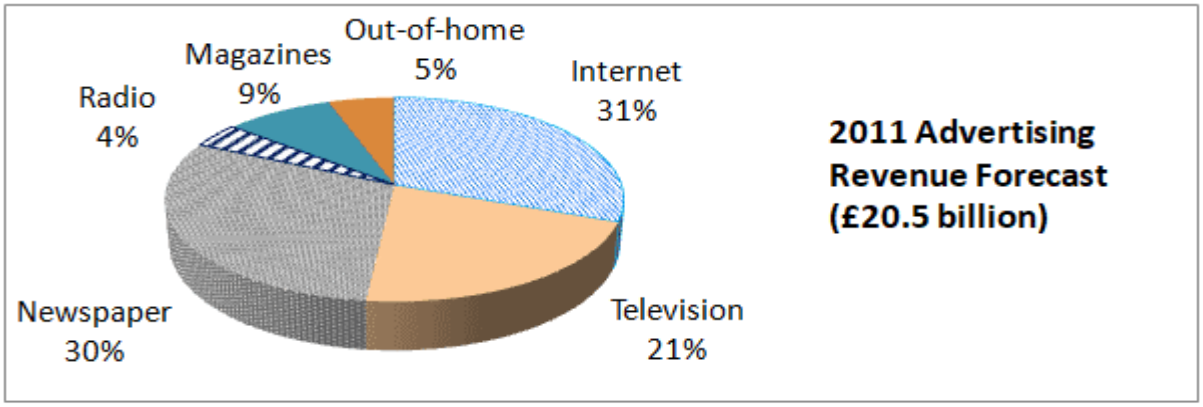

Q19 In which year, or years, was Television advertising revenue less than 22.5% of the year's total advertising revenue?

(A) Cannot Say
(B) 2008 and 2006
(C) 2006
(D) 2009 and 2008
(E) 2009

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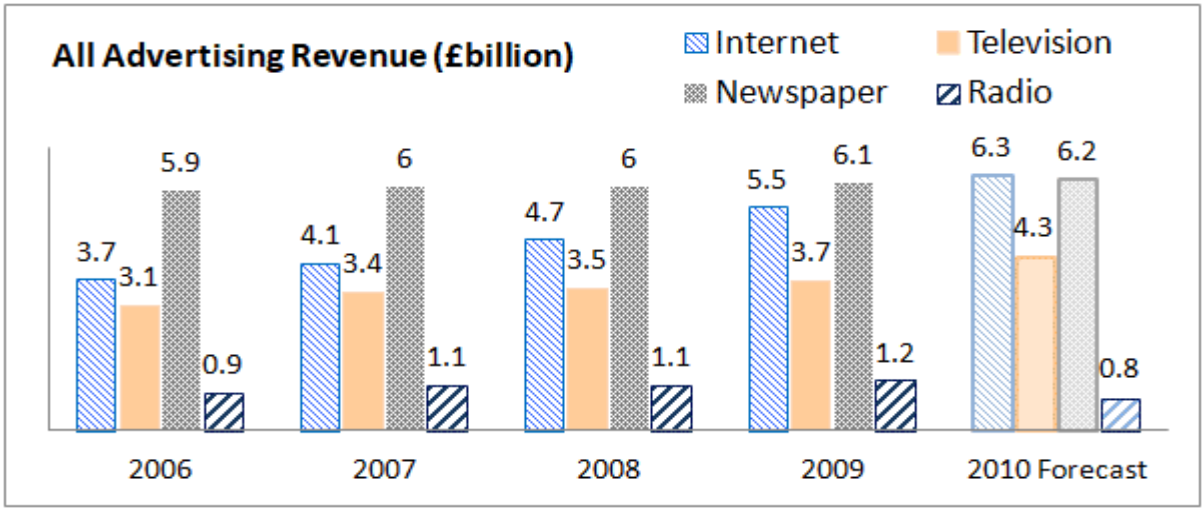

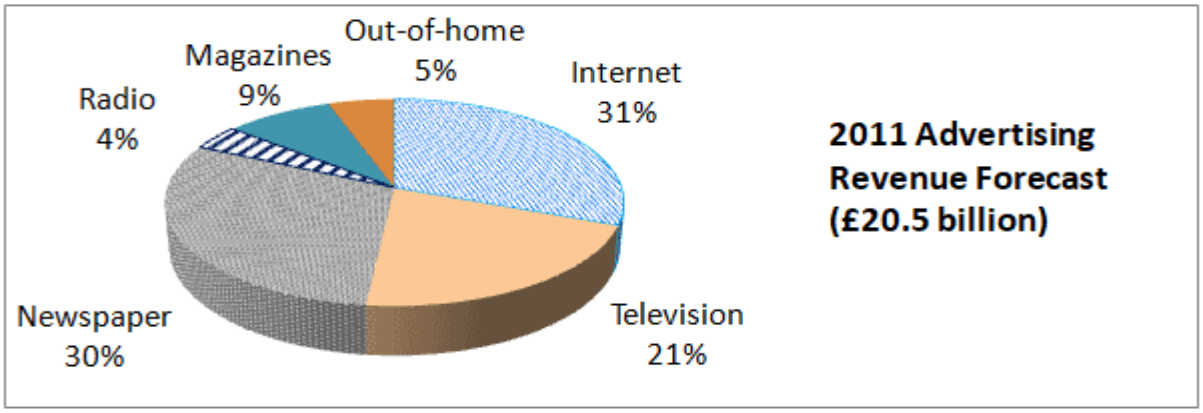

Q20 If in 2009 an external market force had reduced the year's advertising revenue from Newspapers by 10% and from the Internet by 20%, then what was the total 2009 advertising revenue?

(A) None of these
(B) £9.89 billion
(C) £11.6 billion
(D) £10.44 billion
(E) £14.79 billion

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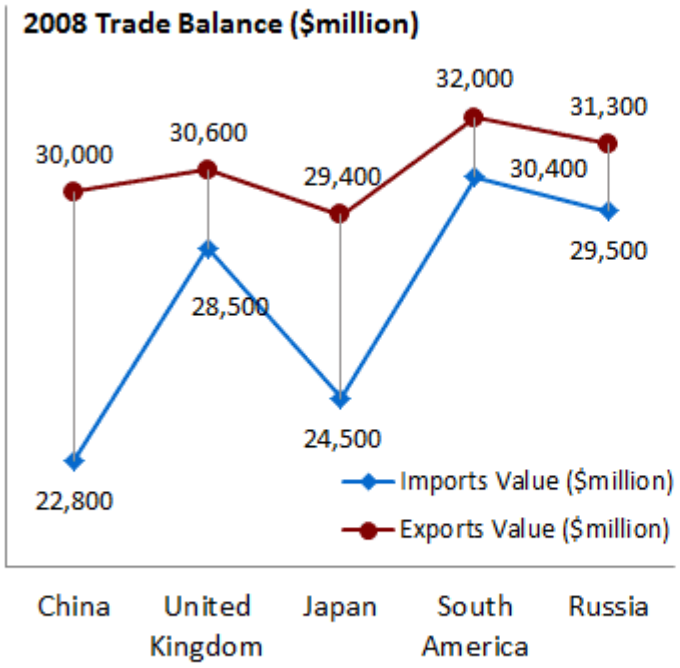

2009 Trade Balance*

	Value ($ million)
China	18,400
United Kingdom	1,825
Japan	5,840
South America	1,950
Russia	1,200

* Trade balance = (Exports Value) – (Imports Value)

Q21 Of the regions shown what was the difference between the highest and the lowest trade balance in 2008?

(A) None of these
(B) $5,100 million
(C) $510 million
(D) $5,400 million
(E) $5,600 million

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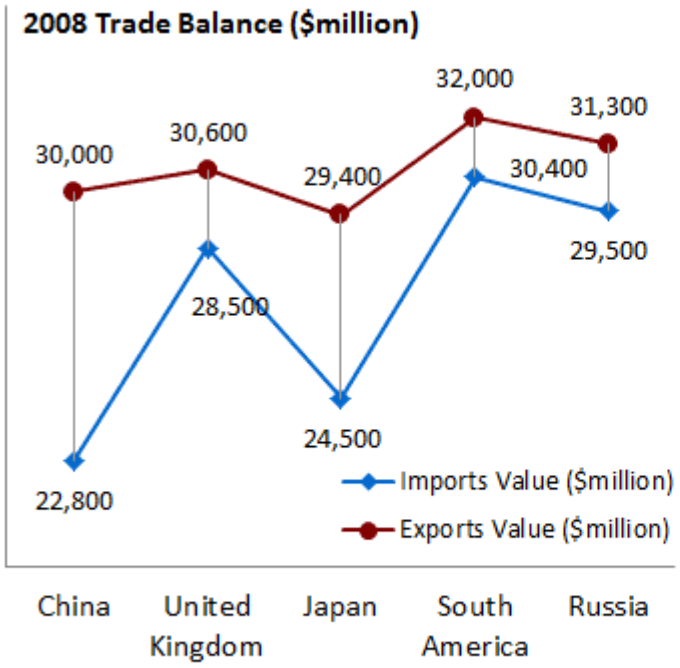

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South America	1,950
Russia	1,200

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Q22 If Japan's exports value increased by 1/5th between 2008 and 2009 then what was Japan's imports value in 2009?

(A) Cannot Say
(B) $29,400 million
(C) $23,560 million
(D) $25,560 million
(E) $29,440 million

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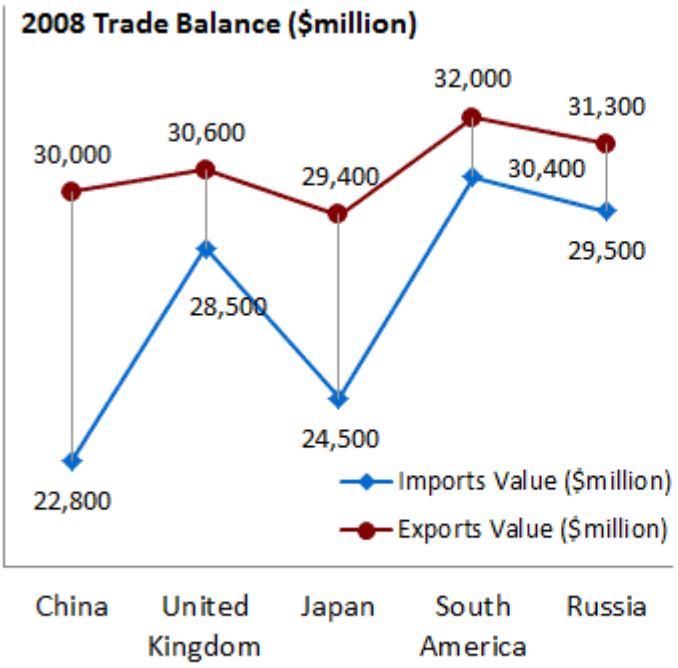

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Japan	5,840
South America	1,950
Russia	1,200

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Q23 Compared to 2009, the UK's trade balance is expected to increase by 3.5% in 2010 and China's trading balance is expected to decrease by 4.4%. What is the difference between the 2010 trade balance forecasts for these countries (to the nearest $million)?

(A) $14,405 million
(B) $15,000 million
(C) $16,000 million
(D) $15,702 million
(E) $17,000 million

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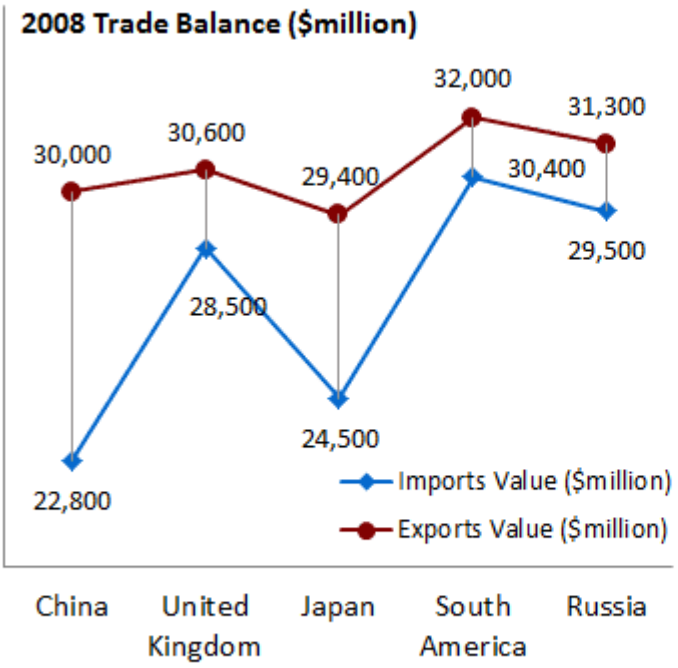

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	Value ($ million)
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* Trade balance = (Exports Value) – (Imports Value)

Q24 Which region or regions have experienced a decrease in their trade balance between 2008 and 2009?

(A) South America, United Kingdom
(B) United Kingdom, Russia
(C) South America, Russia
(D) South America
(E) Russia

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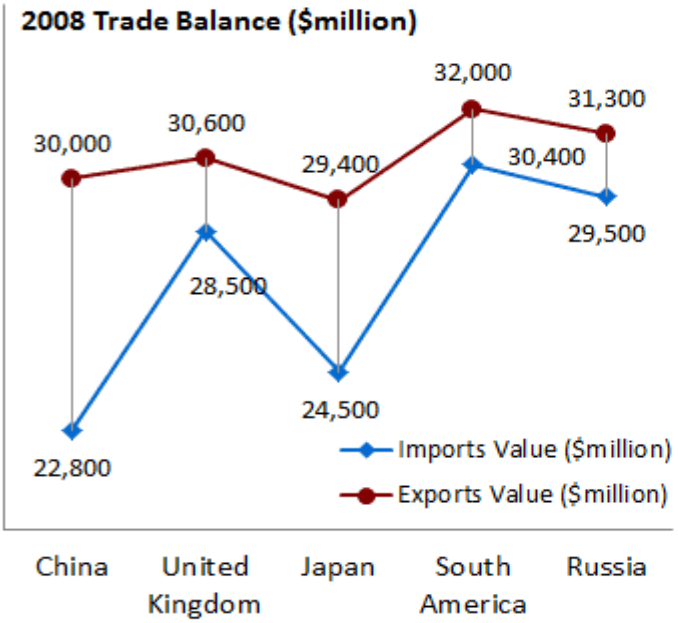

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	Value ($ million)
China	18,400
United Kingdom	1,825
Japan	5,840
South America	1,950
Russia	1,200

* Trade balance = (Exports Value) – (Imports Value)

Q25 What is the trading balance range (highest minus lowest) for the five regions between 2008-2009?

(A) $1,200 million – $18,400 million
(B) $5,400 million
(C) $17,200 million
(D) $1,600 million – $18,400 million
(E) $1,800 million – $7,200 million

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	Annual Birth rate	Annual births		Annual birth rate for sets of twins
	(per 1000 of total population)	Male	Female	(as a % of annual births)
COUNTRY				
Scotland	12.2	28,693	27,086	1.6
Northern Ireland	14.8	13,515	12,934	1.9
Wales	12.5	18,640	16,800	1.25
REGION				
Inner London	16.4	24,735	23,461	1.7
Outer London	15.1	35,811	34,189	2
South West	12	30,258	28,747	1.8
South East	12.3	53,141	50,099	1.8
East	12.1	34,745	32,564	2

Q26 If the number of annual births are distributed evenly across the year and they remain constant at the levels shown, then how many months will it take for Outer London‘s population to increase by 245,000? (Ignoring death rate)

(A) 34
(B) 36
(C) 38
(D) 40
(E) 42

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South East	12.3	53,141	50,099	1.8
East	12.1	34,745	32,564	2

Q27 Which country or countries shown have a population of less than 2.9 million people?

(A) Wales, Scotland
(B) Northern Ireland, Wales, Scotland
(C) Scotland
(D) Northern Ireland, Wales
(E) Cannot Say

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Q28 What is the population of Inner and Outer London combined (to the nearest 100,000)?

(A) 8,000,000
(B) 4,600,000
(C) 3,000,000
(D) 7,600,000
(E) None of these

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Q29 How many babies are born on average as twin births in Wales over five years? (Assume that the annual birth rate and number of births remains the same across the five years).

(A) 4,430
(B) 886
(C) 2,215
(D) 443
(E) Cannot Say

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Q30 What percent of births are male across the 5 Regions shown?

(A) 49.5%
(B) 50%
(C) 50.5%
(D) 51%
(E) 51.4%

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End of test

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