Numerical Test 4

Solutions Booklet

Instructions

This numerical reasoning test comprises **30 questions**, and you will have **30 minutes** in which to correctly answer as many as you can. Calculators are permitted for this test, and it is recommended you have some rough paper to work on.

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. Each question will have five possible answers, one of which is correct. You may click Back and Next during the test to review or skip questions.

You can submit your test at any time. If the time limit is up before you click submit the test will automatically be submitted with the answers you have selected. It is recommended to keep working until the time limit is up.

Try to find a time and place where you will not be interrupted during the test. **The test will begin on the next page.**

Tze Motor Cars - Accounts (2006-2010)

	2010	2009	2008	2007	2006
Sales	£1,047.9 m	£761.9 m	£1,005.0 m	£627.7 m	£637.8 m
Car units sold	16,710	12,636	15,905	12,163	12,360
Average sales price (per car)	£62,709	£60,296	£63,188	£51,607	£51,602
Average production cost (per car)	£14,500	£15,800	£13,600	£11,400	£13,750
Annual service charge per car	£250	£300	£350	£275	£400

Q1 In which year was there the highest ratio of average sales price: average production cost?

(A) 2006
(B) 2007
(C) 2008
(D) 2009
(E) 2010

Step 1 *- Calculate the ratio for each of the 5 years shown:*

	2010	*2009*	*2008*	*2007*	*2006*
Average sales price	*£62,709*	*£60,296*	*£63,188*	*£51,607*	*£51,602*
Production cost	*£14,500*	*£15,800*	*£13,600*	*£11,400*	*£13,750*
Ratio	*4.3:1*	*3.8:1*	*4.6:1*	*4.5:1*	*3.8:1*

Thus the correct answer is (C) 2008

Tze Motor Cars - Accounts (2006-2010)

	2010	2009	2008	2007	2006
Sales	£1,047.9 m	£761.9 m	£1,005.0 m	£627.7 m	£637.8 m
Car units sold	16,710	12,636	15,905	12,163	12,360
Average sales price (per car)	£62,709	£60,296	£63,188	£51,607	£51,602
Average production cost (per car)	£14,500	£15,800	£13,600	£11,400	£13,750
Annual service charge per car	£250	£300	£350	£275	£400

Q2 What were the total production costs for 2009 (to the nearest £100,000)?

(A) £199.6 million
(B) £199.7 million
(C) £216.2 million
(D) £216.3 million
(E) £242.2 million

Step 1 *- Production costs = production cost per car x number of cars*
= £15,800 x 12,636 = £199.648 million
= £199.6 million (to the nearest £100,000)

Thus the correct answer is (A) £199.6 million

Tze Motor Cars - Accounts (2006-2010)

	2010	2009	2008	2007	2006
Sales	£1,047.9 m	£761.9 m	£1,005.0 m	£627.7 m	£637.8 m
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Average production cost (per car)	£14,500	£15,800	£13,600	£11,400	£13,750
Annual service charge per car	£250	£300	£350	£275	£400

Q3 If the dealer paid upfront for the annual service charge of each car sold, in which year would this have cost the dealer the least amount?

(A) 2006
(B) 2007
(C) 2008
(D) 2009
(E) 2010

Step 1 *- Calculate the cost to the dealer for each of the 5 years as shown:*

	2010	*2009*	*2008*	*2007*	*2006*
Car units sold	*16,710*	*12,636*	*15,905*	*12,163*	*12,360*
Service charge	*£250*	*£300*	*£350*	*£275*	*£400*
Cost to car manufacturer	*£4.18 million*	*£3.79 million*	*£5.57 million*	*£3.34 million*	*£4.94 million*

Thus the correct answer is (B) 2007

Tze Motor Cars - Accounts (2006-2010)

	2010	2009	2008	2007	2006
Sales	£1,047.9 m	£761.9 m	£1,005.0 m	£627.7 m	£637.8 m
Car units sold	16,710	12,636	15,905	12,163	12,360
Average sales price (per car)	£62,709	£60,296	£63,188	£51,607	£51,602
Average production cost (per car)	£14,500	£15,800	£13,600	£11,400	£13,750
Annual service charge per car	£250	£300	£350	£275	£400

Q4 If the average sales price for 2010 was 5% higher, but the number of cars sold that year was 9% lower, by what percent would the sales revenue have decreased for 2010?

(A) No change
(B) 3.50%
(C) 3.55%
(D) 4.45%
(E) 4.60%

Step 1 *– Calculate the new average sales price*
£62,709 x 105% = £65,844.45

Step 2 *– Calculate the new number of cars sold*
16,710 x 91% = 15,206.1

Note*: They can't sell.1 of a car so we will use 15,206.0. In this question it doesn't actually make a difference to the final answer but it's worth remembering things like this for other questions.*

Step 3 *– Calculate the total sales increase*
£65,844.45 x 15,206 = £1,001.230707 million

Step 4 *– Calculate the total sales decrease as a %*
1,001.230707 ÷ 1,047.9 = 0.95546, which is a 4.45% decrease.

Thus the correct answer is (D) 4.45%

Tze Motor Cars - Accounts (2006-2010)

	2010	2009	2008	2007	2006
Sales	£1,047.9 m	£761.9 m	£1,005.0 m	£627.7 m	£637.8 m
Car units sold	16,710	12,636	15,905	12,163	12,360
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Annual service charge per car	£250	£300	£350	£275	£400

Q5 In 2008, car sales were split across 3 equally-priced models in the ratio of 7:8:6 for models A, B and C respectively. What was the sales revenue for model A?

(A) £287 million
(B) £335 million
(C) £382 million
(D) £383 million
(E) Can't tell from data

Step 1 *- Apply the ratio to the total sales for 2008*
7 x £1,005.0 m / 21 = £335 million.

Note*: we can answer this question because we are told that the three models were equally priced. If we were not told this information we would have to answer "cannot tell".*

Thus the correct answer is (B) £335 million

YLF plc – Total costs by year (£000s)

	2006	2007	2008	2009	2010
Staff costs	226	234	248	230	215
Property depreciation	120	117	112	115	132
Inventories	11,410	12,505	11,842	15,322	16,420
Loan impairment	13	12	9	17	22
Other expenses	336	459	357	413	502

Q6 For how many years has the combined cost of Property depreciation and Staff costs exceeded that of Other expenses?

(A) 1 year
(B) 2 years
(C) 3 years
(D) 4 years
(E) 5 years

Step 1 *– Calculate each year's combined cost of Property depreciation and Staff costs*

	2006	***2007***	***2008***	***2009***	***2010***
Staff costs + Property depreciation	*226 + 120 = 346*	*234 + 117 = 351*	*248 + 112 = 360*	*230 + 115 = 345*	*215 + 132 = 347*
Step 2 *> or < Other expenses?*					
	> 336	*< 459*	*> 357*	*< 413*	*< 502*

Thus the correct answer is (B) 2 years

YLF plc – Total costs by year (£000s)

	2006	2007	2008	2009	2010
Staff costs	226	234	248	230	215
Property depreciation	120	117	112	115	132
Inventories	11,410	12,505	11,842	15,322	16,420
Loan impairment	13	12	9	17	22
Other expenses	336	459	357	413	502

Q7 In which year, or years, was there a 2:1 ratio of Staff costs: Property depreciation?

(A) 2010
(B) 2007 and 2008
(C) 2008 and 2009
(D) 2007 and 2009
(E) 2006, 2007 and 2009

Step 1 *- This can probably be done in your head: go along the columns and double the Property depreciation to see if it equals the Staff costs. You will see this is true for years 2007 and 2009.*

In long-hand tabular form we have for each year:

	2006	*2007*	*2008*	*2009*	*2010*
Staff costs/ Property depreciation	*226/120*	*234/117*	*248/112*	*230/115*	*215/132*
Ratio	*>2*	*2*	*>2*	*2*	*<2*

Thus the correct answer is (D) 2007 and 2009

YLF plc – Total costs by year (£000s)

	2006	2007	2008	2009	2010
Staff costs	226	234	248	230	215
Property depreciation	120	117	112	115	132
Inventories	11,410	12,505	11,842	15,322	16,420
Loan impairment	13	12	9	17	22
Other expenses	336	459	357	413	502

Q8 What percent of total costs did Property depreciation represent in 2007?

(A) 4.7%
(B) 3.7%
(C) 2.7%
(D) 1.9%
(E) 0.9%

***Tip**: Notice the top of the table tells us we are looking at "Total costs by year". This enables us to answer the question. If we were not told the costs given are the whole picture (i.e. Total costs) we would be right to say "cannot say" since we would not know if there are other costs we don't know about. Watch out for this in other questions.*

***Step 1** – Calculate total costs*
234 + 117 + 12,505 + 12 + 459 = 13,327

***Step 2** - Calculate Property depreciation as a % of total costs*
117 / 13,327 = 0.878%

Thus the correct answer is (E) 0.9%

YLF plc – Total costs by year (£000s)

	2006	2007	2008	2009	2010
Staff costs	226	234	248	230	215
Property depreciation	120	117	112	115	132
Inventories	11,410	12,505	11,842	15,322	16,420
Loan impairment	13	12	9	17	22
Other expenses	336	459	357	413	502

Q9 Which cost changed by the second largest percent from 2008 to 2010?

(A) Other expenses
(B) Staff costs
(C) Loan impairment
(D) Inventories
(E) Property depreciation

Step 1 *– Calculate the % change for each of the 6 costs between the years 2008 to 2010.*

Staff costs	*215 / 248 = 0.867 ; 13.3% decrease*
Property depreciation	*132 / 112 = 1.179 ; 17.9% increase*
Inventories	*16,420 / 11,842 = 1.387 ; 38.7% increase*
Loan impairment	*22 / 9 = 2.44 ; 144.4% increase*
Other expenses	*502 / 357 = 1.406 ; 40.6% increase*

Note: *be careful to note the question asks for "the second largest". It is a common mistake to overlook this and select the largest increase.*

Thus the correct answer is (A) Other expenses

YLF plc – Total costs by year (£000s)

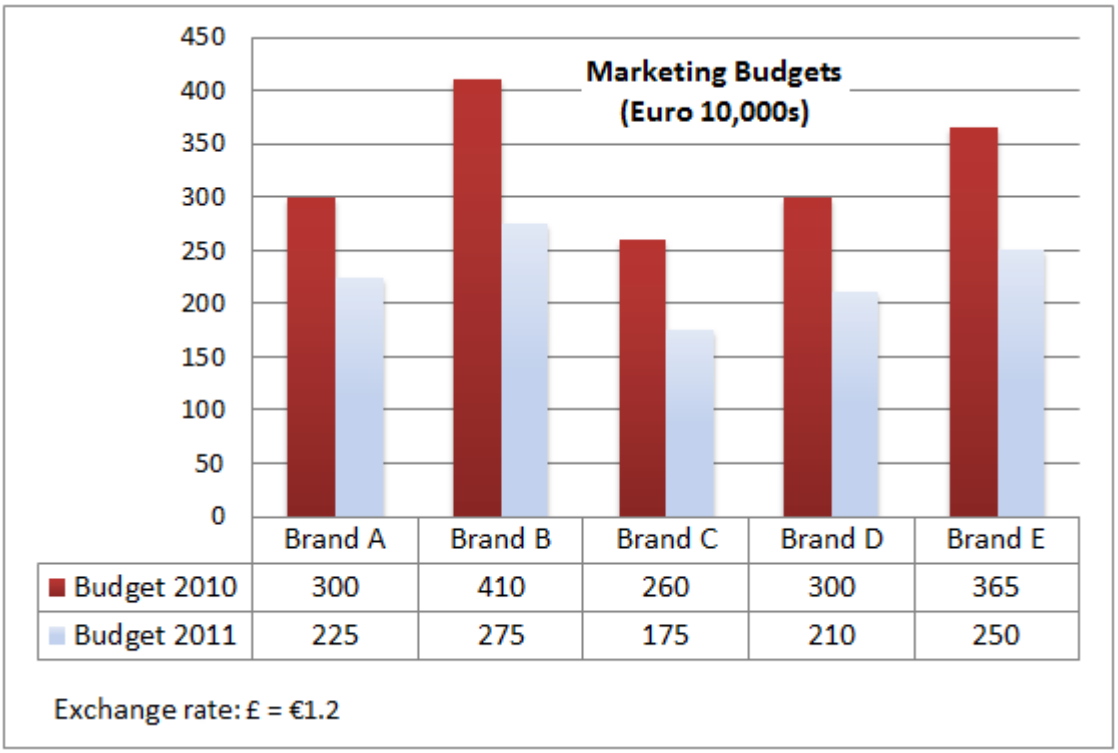
	2006	2007	2008	2009	2010
Staff costs	226	234	248	230	215
Property depreciation	120	117	112	115	132
Inventories	11,410	12,505	11,842	15,322	16,420
Loan impairment	13	12	9	17	22
Other expenses	336	459	357	413	502

Q10 If the 2006 Inventories cost had increased by an eighth compared to the previous year, what was the previous year's Inventories cost (to the nearest £10,000)?

(A) £10.41 million
(B) £10.14 million
(C) £1.04 million
(D) £1.01 million
(E) Can't tell from data

Step 1 *- To increase by an eighth (12.5%) we simply multiply by 1.125. So we can say (previous year's Inventory costs) x 1.125 = £11,410. Rearranging we have previous year's inventory costs = (£11,410 ÷ 1.125) = £10,142,222*

Thus the correct answer is (B) £10.14 million



	Brand A	Brand B	Brand C	Brand D	Brand E
Budget 2010	300	410	260	300	365
Budget 2011	225	275	175	210	250

Exchange rate: £ = €1.2

Q11 Between 2010 and 2011 what is the total cut in the marketing budget across the 5 Brands combined (in €10,000s)?

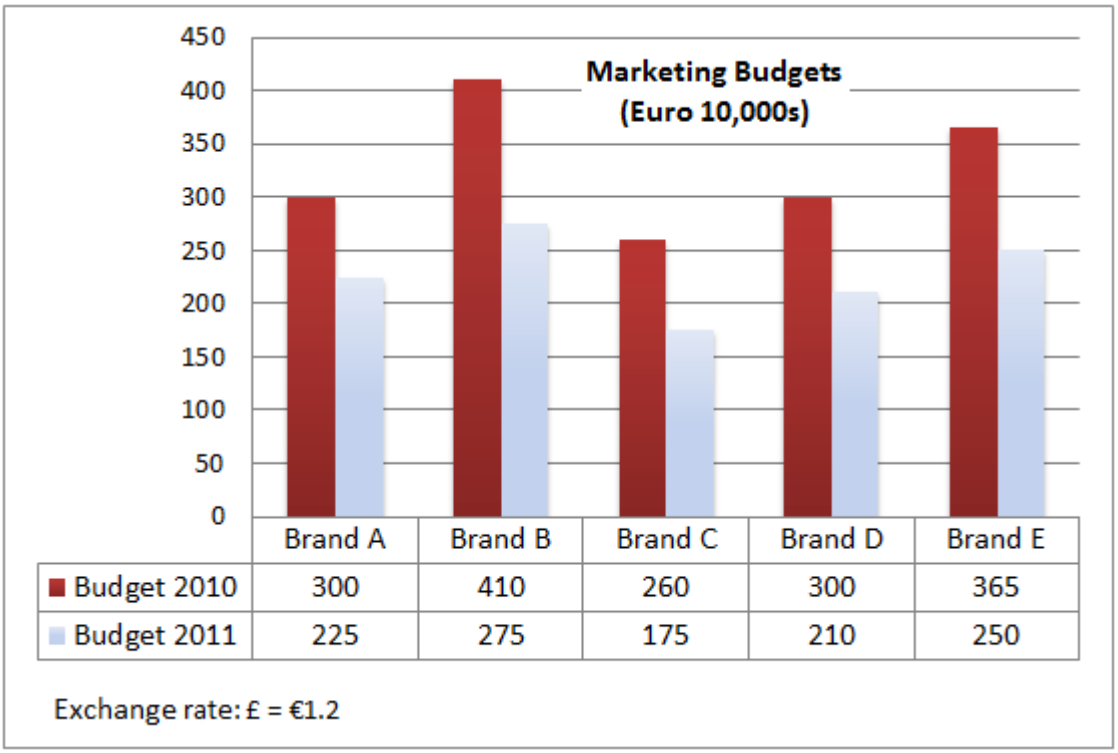
(A) 135
(B) 400
(C) 500
(D) 1,135
(E) 1,535

Step 1 *– Calculate the 2010 total marketing budget*
300 + 410 + 260 + 300 + 365 = 1635

Step 2 *– Calculate the 2011 total marketing budget*
225 + 275 + 175 + 210 + 250 = 1135

Step 3 *– Calculate cut*
2010 marketing budget – 2011 marketing budget = 1635 – 1135 = 500 (in €10,000s)

Thus the correct answer is (C) 500



	Brand A	Brand B	Brand C	Brand D	Brand E
Budget 2010	300	410	260	300	365
Budget 2011	225	275	175	210	250

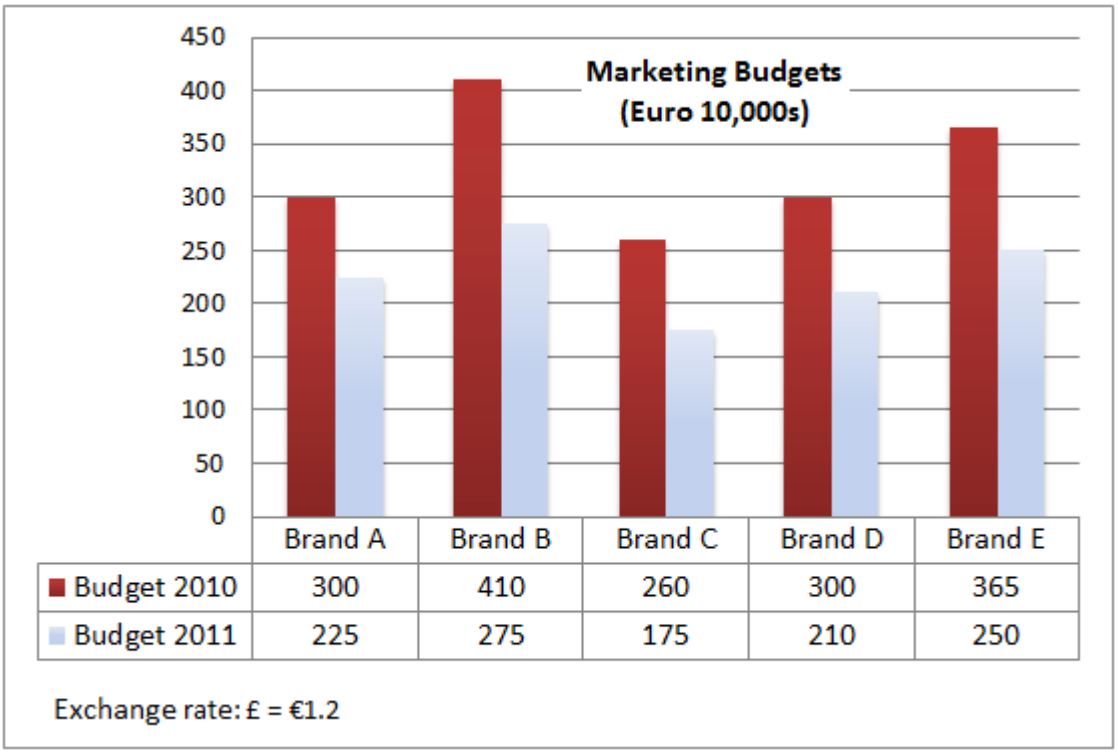
Exchange rate: £ = €1.2

Q12 Which Brand has suffered the largest percentage cut in its Marketing Budget?

(A) Brand A
(B) Brand B
(C) Brand C
(D) Brand D
(E) Brand E

Step 1 *- Calculate the % cut for each branch from 2010 to 2011:*
Brand A = 75/300 x 100% = 25%
Brand B = 135/410 x100% = 32.9%
Brand C = 85/260 x 100% = 32.7%
Brand D = 90/300 x 100% = 30%
Brand E = 115/365 x 100% = 31.5%

Thus the correct answer is (B) Brand B



	Brand A	Brand B	Brand C	Brand D	Brand E
Budget 2010	300	410	260	300	365
Budget 2011	225	275	175	210	250

Exchange rate: £ = €1.2

Q13 Between 2010 and 2011 what has been the mean percentage Budget reduction for each of the 5 Brands (to 1 decimal place)?

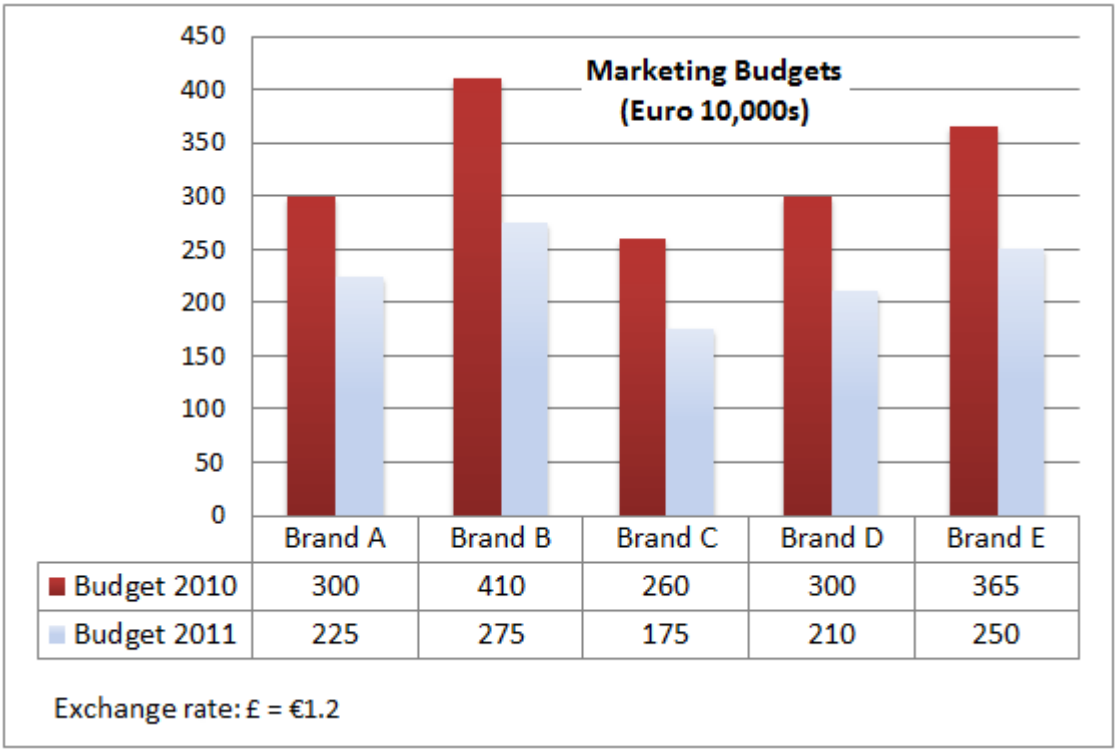
(A) 30.4%
(B) 30.5%
(C) 31.4%
(D) 31.5%
(E) 32.4%

Step 1 *- Calculate the % cut for each Brand. If you still have your notes from the previous question you can re-use those to save time:*
Brand A = 75/300 x 100 = 25%
Brand B = 135/410 x100 = 32.9%
Brand C = 85/260 x 100 = 32.7%
Brand D = 90/300 x 100 = 30%
Brand E = 115/365 x 100 = 31.5%

Step 2 *– Calculate mean reduction.*
(25 + 32.9 + 32.7 + 30 + 31.5)/5 = 30.42%

Step 3 *– Calculate answer to 1 decimal place*
30.4%

Thus the correct answer is (A) 30.4%



	Brand A	Brand B	Brand C	Brand D	Brand E
Budget 2010	300	410	260	300	365
Budget 2011	225	275	175	210	250

Exchange rate: £ = €1.2

Q14 Brand A and Brand D are to have their number of staff reduced by the same percentage reduction seen by their Marketing Budgets between 2010 and 2011. If the number of staff at Brand A was originally 120 and the number of staff at Brand D triple this, what are the new reduced staff numbers for each Brand?

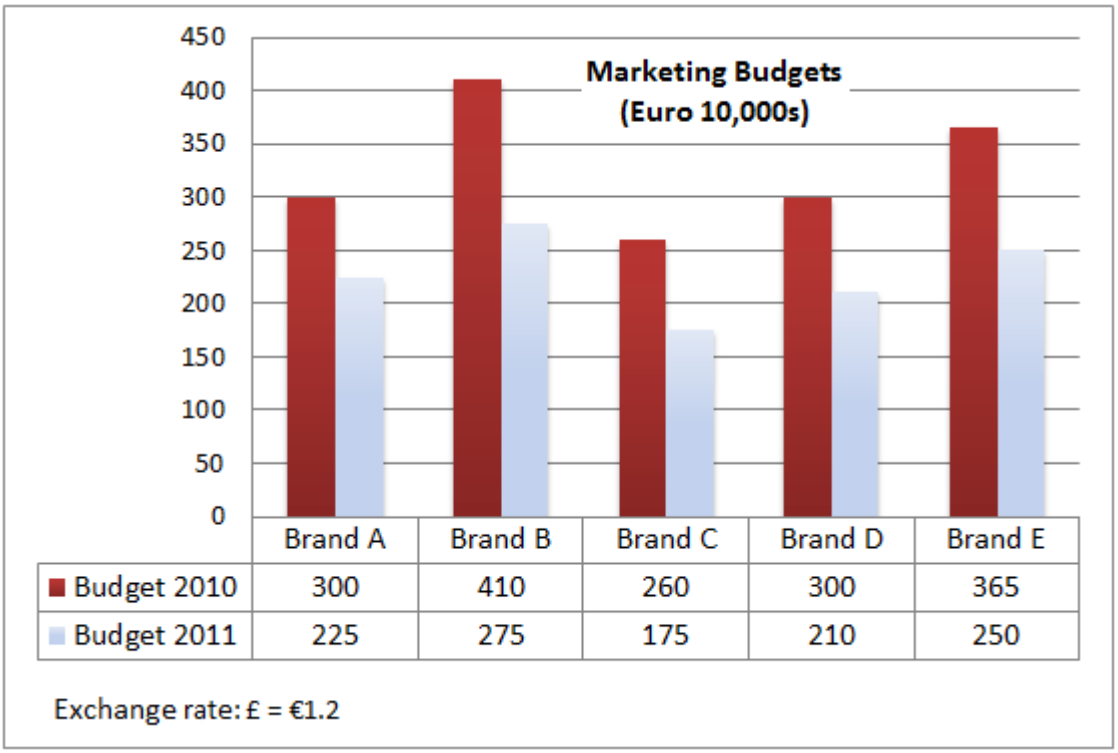
(A) Can't tell from the data
(B) 35 (Brand A); 142 (Brand D)
(C) 90 (Brand A); 252 (Brand D)
(D) 60 (Brand A); 240 (Brand D)
(E) 50 (Brand A); 360 (Brand D)

Step 1 *– Calculate the percentage reduction in Marketing Budget for each Brand.*
Brand A: 225 / 300 = 25% reduction
Brand D: 210 / 300 = 30% reduction

Step 2 *– Calculate the new number of staff for Brand A*
120 x 0.75% = 90

Step 3 *– Calculate the new number of staff for Brand D*
(120 x 3) x 0.7 = 252

Thus the correct answer is (C) 90 (Brand A); 252 (Brand D)



	Brand A	Brand B	Brand C	Brand D	Brand E
Budget 2010	300	410	260	300	365
Budget 2011	225	275	175	210	250

Exchange rate: £ = €1.2

Q15 The total 2011 Marketing Budget for all five Brands is to be cut by a quarter in 2012. In £, what is the 2012 Marketing Budget? (to the nearest £100,000)?

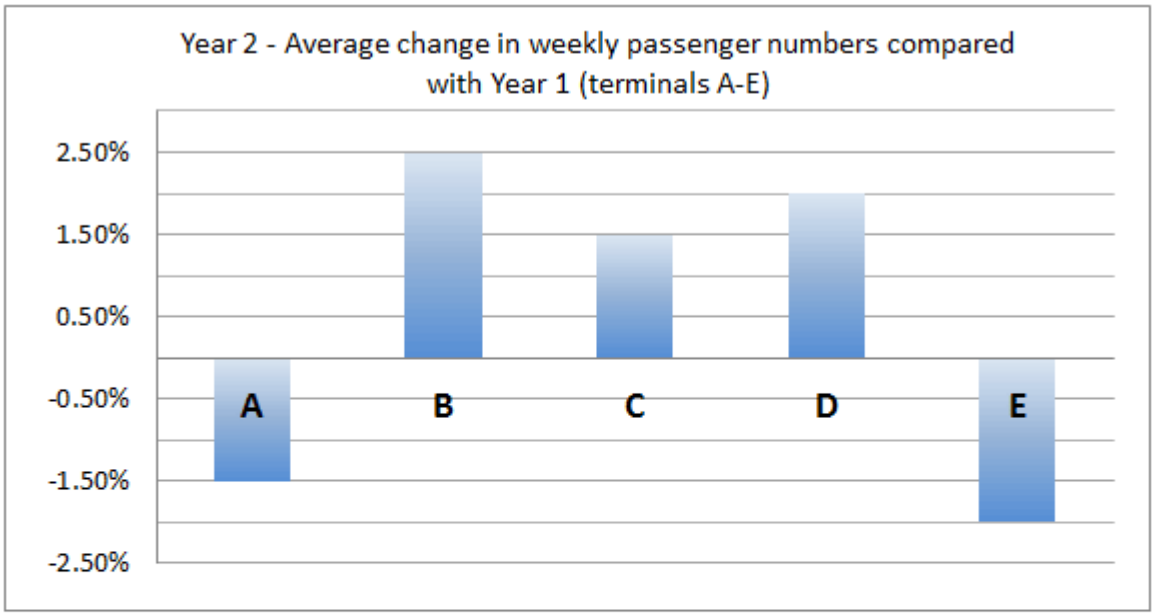
(A) £3 million
(B) £3.1 million
(C) £5.2 million
(D) £6.2 million
(E) £7.1 million

Step 1 *– Calculate the 2012 marketing budget*
2011 marketing budget (from previous question) = 1135 (€10,000s)
2012 marketing budget = €11.35 million x 75% = €8.5125 million

Step 2 *– Convert into £*
8,512,500 / 1.2 = £7.094 million

Step 3 *– Put answer into the nearest £100,000*
£7.1 million

Thus the correct answer is (E) £7.1 million



Year 1 - Average number of passengers per week (1,000s)

All Terminals	A	B	C	D	E
Male passengers	52.9	66.6	62.9	77.1	78.8
Female passengers	52.7	66.5	63.1	76.9	78.5

Q16 Which terminal had the highest number of passengers per week in Year 2?

(A) Terminal A
(B) Terminal B
(C) Terminal C
(D) Terminal D
(E) Terminal E

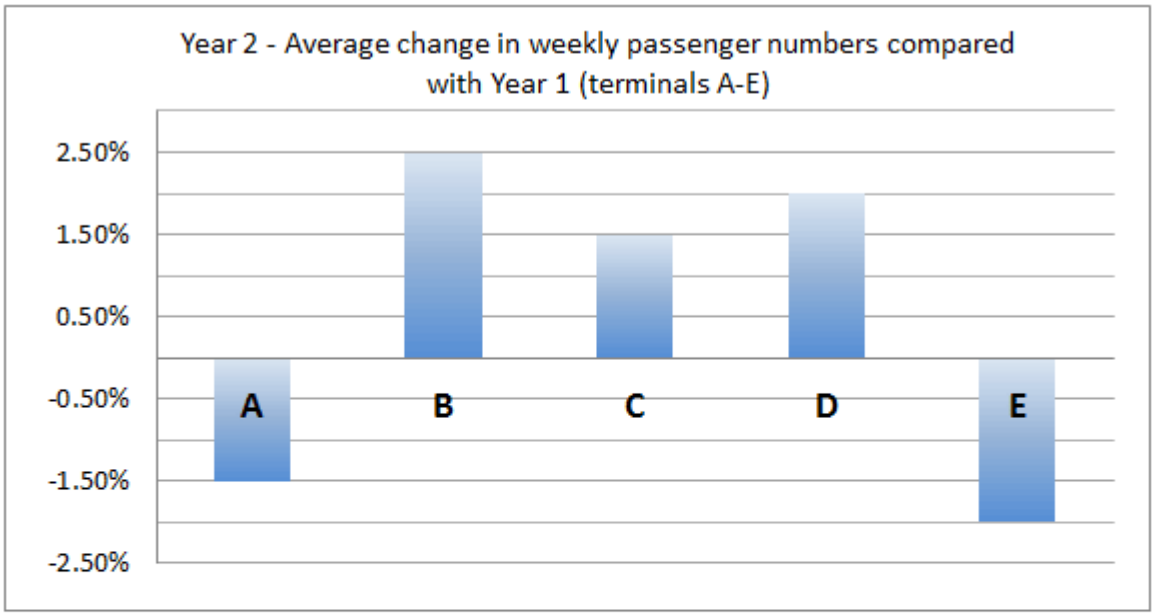
The information that you need is shown in both the table and the graph.

***Step 1** - Given Year 2's 1.5-2.5% increases in passenger numbers, save time by considering only which terminals have the highest number of passengers per week in Year 1. This is Terminal D and E.*

***Step 2** - Calculate Year 1's total passengers for Terminals D and E (by adding male and female passenger numbers):*
Terminal D = 77.1 + 76.9 = 154
Terminal E = 78.8 + 78.5 = 157.3

***Step 3** - Calculate Year 2's totals for these Terminals:*
Terminal D = 154 x 102% = 157.08
Terminal E = 157.3 x 98% = 154.15

Thus the correct answer is (D) Terminal D



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All Terminals	A	B	C	D	E
Male passengers	52.9	66.6	62.9	77.1	78.8
Female passengers	52.7	66.5	63.1	76.9	78.5

Q17 For Year 1 what was the average weekly difference between male and female passengers per terminal?

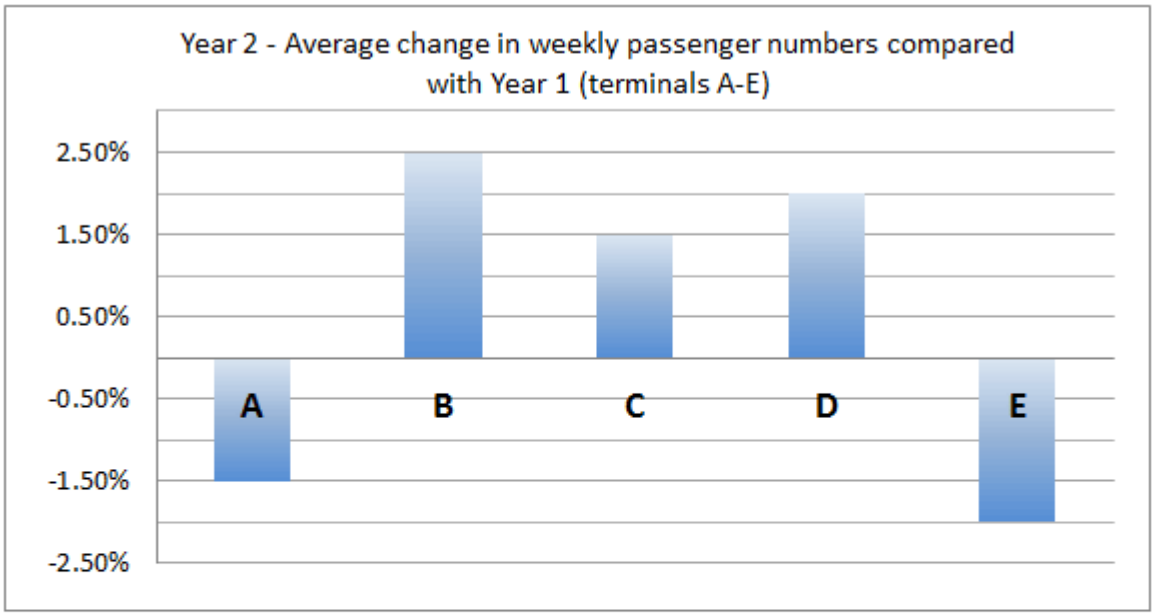
(A) 2,200 more males
(B) 1,200 more males
(C) 220 more females
(D) 140 more females
(E) 120 more males

The information that you need is shown in the table.

***Step 1** – Calculate the total difference between the weekly numbers of male and female passengers*
Total Male = 338.3
Total Female = 337.7
Difference (in 1,000s) = 0.6

***Step 2** – Calculate the average difference per terminal*
= 0.6 / 5 (1,000s)
= 0.12 (1,000s)
= 120 more male passengers

Thus the correct answer is (E) 120 more males



Year 1 - Average number of passengers per week (1,000s)

All Terminals	A	B	C	D	E
Male passengers	52.9	66.6	62.9	77.1	78.8
Female passengers	52.7	66.5	63.1	76.9	78.5

Q18 Terminals A and D serve domestic flights, whilst Terminals B, C and E serve international flights. Each week on average how many more passengers in Year 1 took international flights compared to domestic flights (to the nearest 10,000)?

(A) 14,000
(B) 15,000
(C) 140,000
(D) 150,000
(E) 160,000

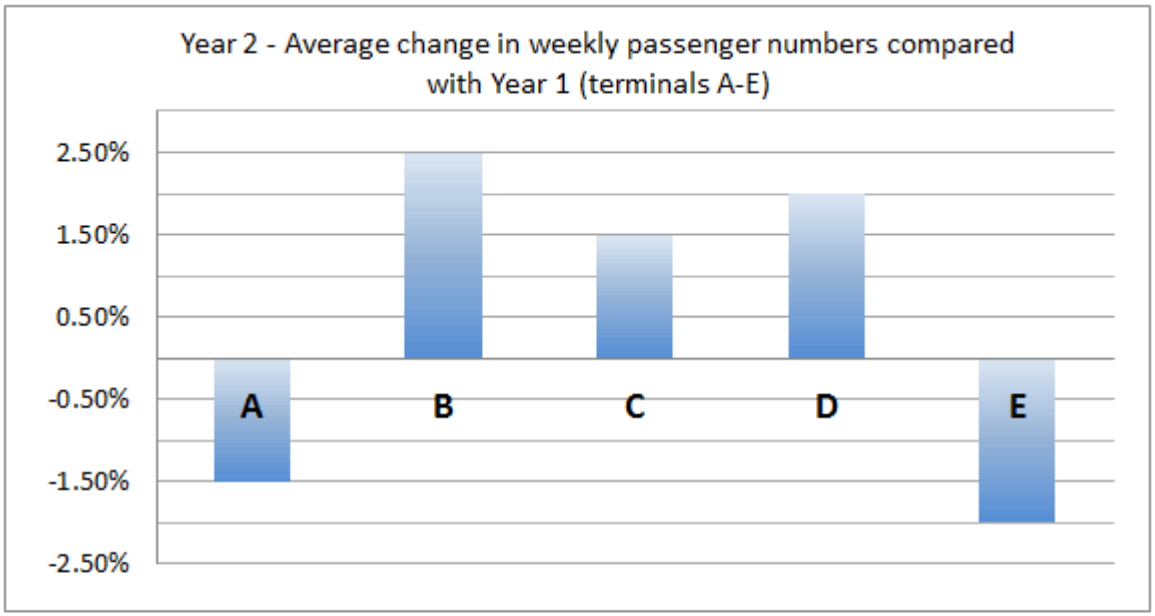
The information that you need is shown in the table.

Step 1 *– Calculate the total numbers of domestic flights and international flights*
Domestic flight total = 52.9 + 52.7 + 77.1 + 76.9 = 259.6
International flight total = 66.6 + 66.5 + 62.9 + 63.1 + 78.8 + 78.5 = 416.4

Step 2 *– Calculate the difference*
416.4 - 259.6 = 156.8 (1,000's)
= 156,800

Step 3 *- To the nearest 10,000*
160,000

Thus the correct answer is (E) 160,000



Year 1 - Average number of passengers per week (1,000s)

All Terminals	A	B	C	D	E
Male passengers	52.9	66.6	62.9	77.1	78.8
Female passengers	52.7	66.5	63.1	76.9	78.5

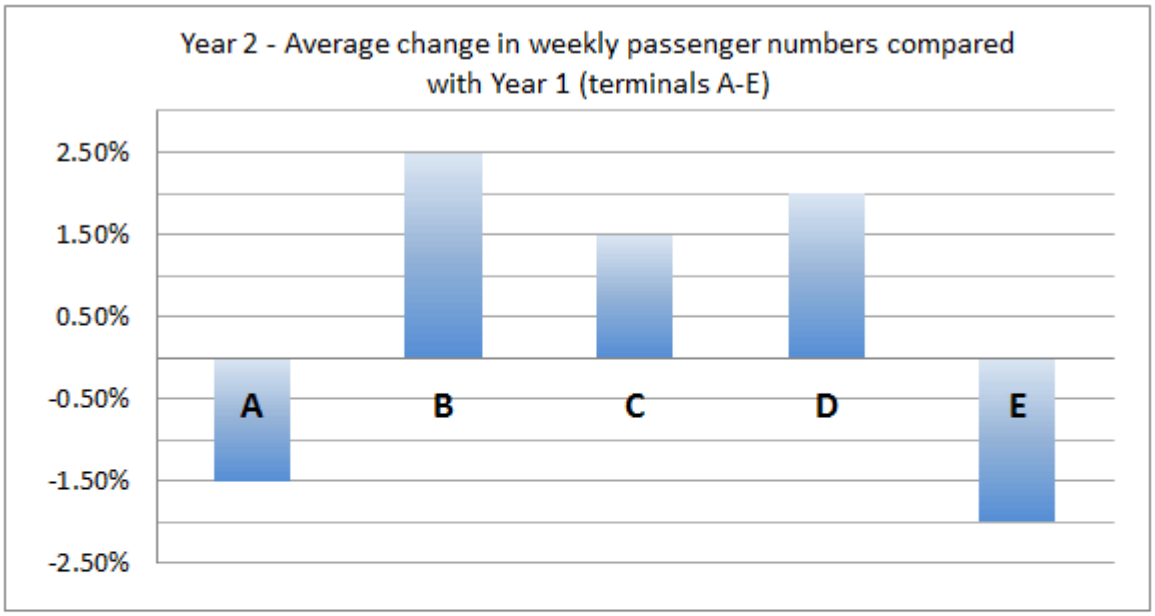
Q19 In Year 2 each passenger spends on average £4.25 in Terminal C's shops. How much is the average weekly revenue for Terminal C's shops in Year 2 (to the nearest £10,000)?

(A) £4,400,000
(B) £540,000
(C) £54,000
(D) £46,000
(E) £44,000

Step 1 *– Calculate Year 2 passenger total for Terminal C*
(62.9 + 63.1) x 101.5% = 127.89
In 1,000s this is = 127,890

Step 2 *– Calculate the average weekly revenue generated*
127,890 x £4.25 = £543,532.5 (£540,000 to the nearest £10,000)

Thus the correct answer is (B) £540,000



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All Terminals	A	B	C	D	E
Male passengers	52.9	66.6	62.9	77.1	78.8
Female passengers	52.7	66.5	63.1	76.9	78.5

Q20 A competitor airport operator called Vefy Flights operates a different airport with half the average Year 1 weekly number of passengers operating from 3 terminals. What is Vefy Flights's average weekly number of passengers per terminal (to the nearest 1,000)?

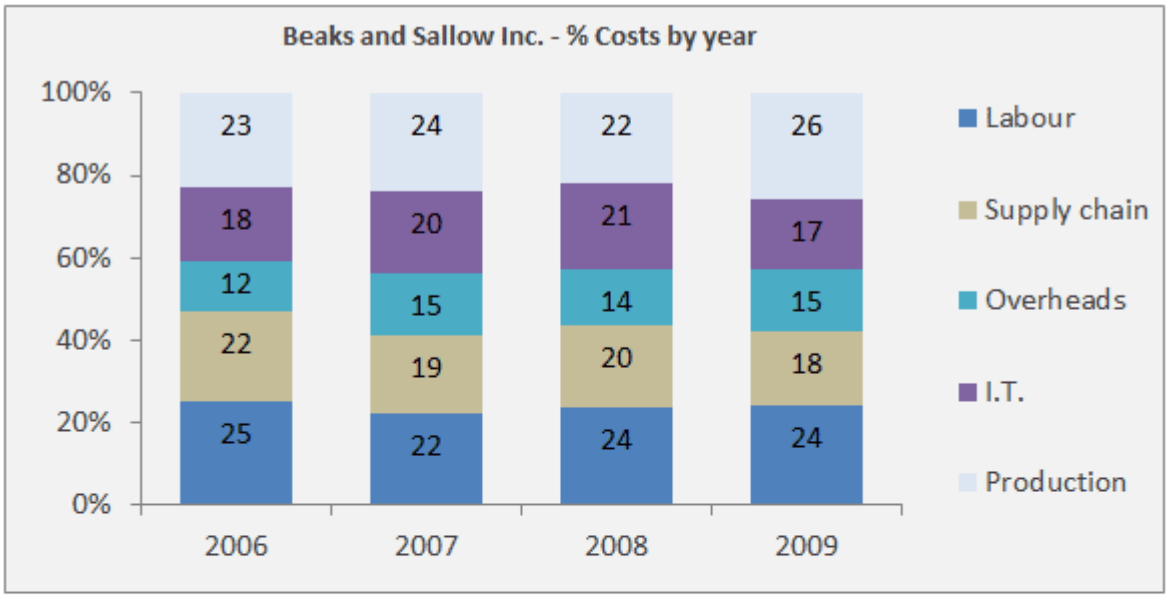
(A) 110,000
(B) 113,000
(C) 133,000
(D) 142,000
(E) 150,000

Step 1 *– Calculate the total number of Terminal A-E passengers.*
Total number of Terminal A-E passengers = 676.

Step 2 *- Calculate Vefy Flights's average weekly number of passengers*
676 x 0.5 = 338

Step 3 *– Calculate Vefy Flights's average weekly number of passengers per terminal*
338 / 3 = 112.667 (1,000's)
= 112,667
= 113,000 (to the nearest 1,000)

Thus the correct answer is (B) 113,000



2010 Total Costs (£10,000s)	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Overheads	104	105	102	101
Supply chain	186	174	162	166
Labour	248	245	319	265
I.T.	149	138	140	191
Production	227	253	291	287

Q21 If the total 2010 costs represent a 5% increase on the total 2009 costs, what were the total 2009 costs (to the nearest £million)?

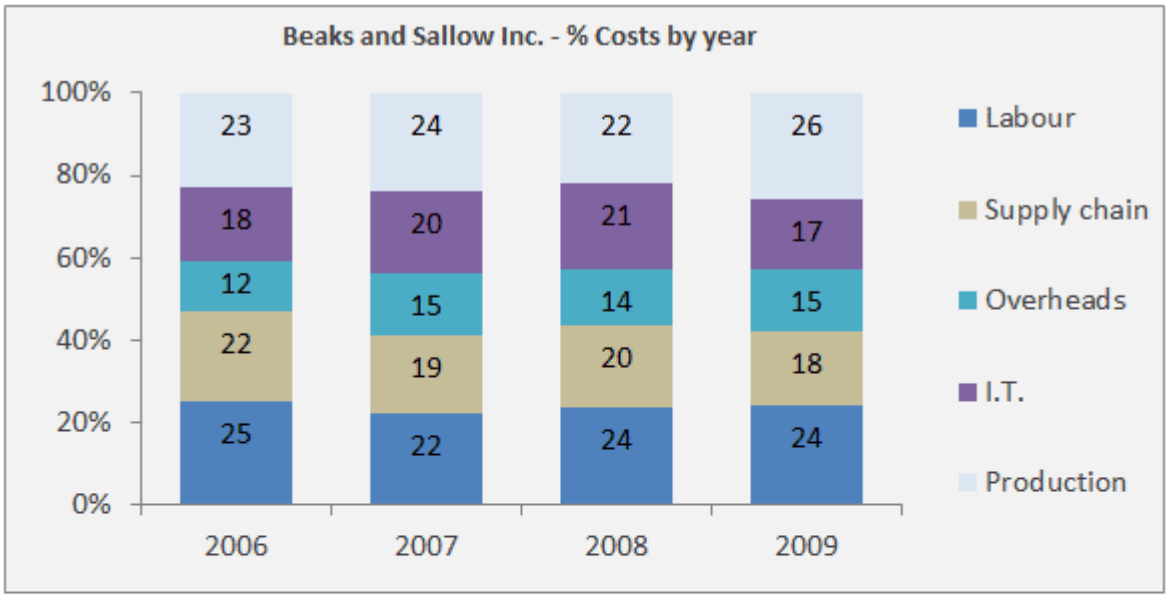
(A) £3 million
(B) £4 million
(C) £36 million
(D) £37 million
(E) £38 million

The information for 2010 that you need is shown in the table.
Step 1 *– Calculate the total costs for 2010*
Q1 total = 914
Q2 total = 915
Q3 total = 1,014
Q4 total = 1,010
Total = 3,853

Step 2 *– Calculate the total costs for 2009*
3,853 = 105% x (2009 total costs)
2009 total costs = 3,853 / 1.05 = 3,669

Step 3 *- To the nearest £million*
3,669 (£10,000s) = £37 million

Thus the correct answer is (D) £37 million



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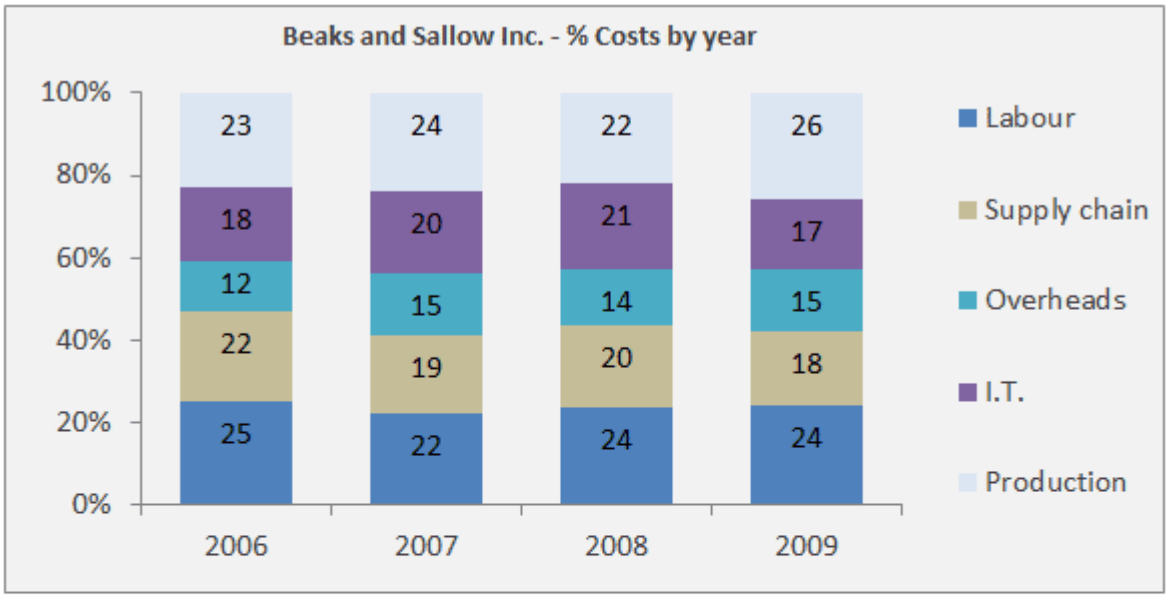
Q22 Which cost or costs on their own represented more than 17% of the total costs in 2010?

(A) Labour and Production
(B) Supply chain and I.T.
(C) Labour and Supply chain
(D) Supply chain, Labour and Production
(E) Supply chain, Labour, Production and I.T.

The information that you need is shown in the table.
***Step 1** – Calculate the total cost across the 4 quarters for 2010*
Q1 total = 914
Q2 total = 915
Q3 total = 1,014
Q4 total = 1,010
2010 Total costs = 3,853

***Step 2** – Calculate the % that each individual cost represented*
Overheads = (104 + 105 + 102 + 101) / 3,853 = 10.7%
Supply chain = (186 + 174 + 162 + 166) / 3,853 = 17.9%
Labour = (248 + 245 + 319 + 265) / 3,853 = 28.0%
I.T. = (149 + 138 + 140 + 191) / 3,853 = 16.0%
Production = (227 + 253 + 291 + 287) / 3,853 = 27.4%

Thus the correct answer is (D) Supply chain, Labour and Production



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Production	227	253	291	287

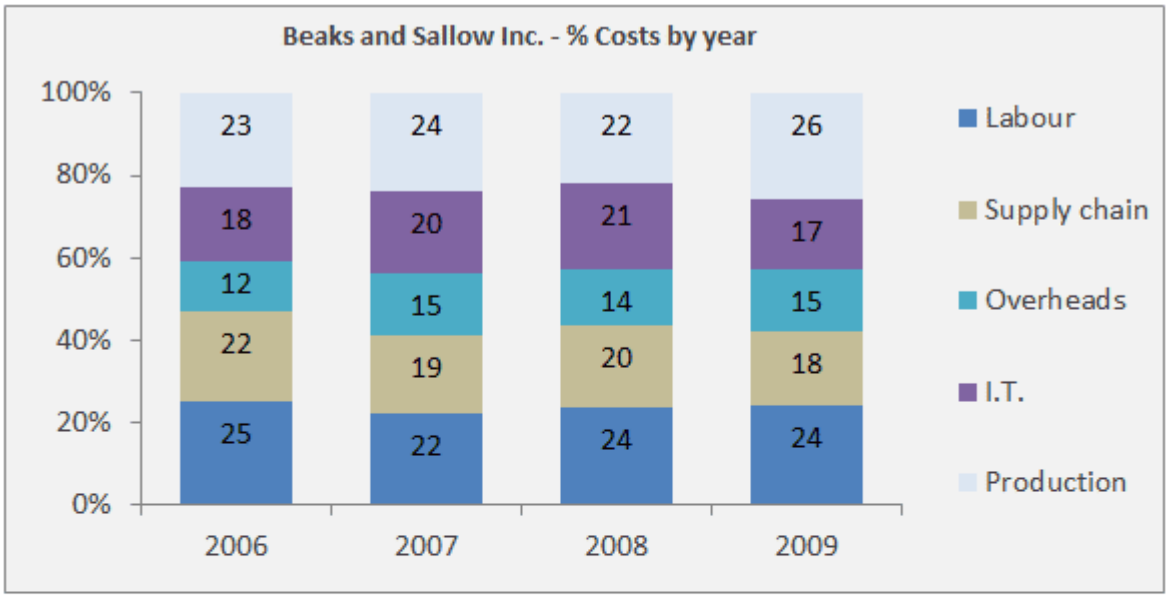
Q23 In which of the years shown was there a 3:2 ratio of IT to Overheads costs?

(A) Cannot Say
(B) 2006 and 2007
(C) 2006, 2008 & 2010
(D) 2007, 2008 & 2010
(E) 2008 and 2009

The information that you need is shown in the graph and table.

***Step 1** - Calculate the ratio of IT: Overheads costs for each of the 5 years shown:*
2006: 18%:12% = 3:2
2007: 20%:15% = 4:3
2008: 21%:14% = 3:2
2009: 17%:15% = 1.13
2010: 618: 412 = 3:2

Thus the correct answer is (C) 2006, 2008 & 2010



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Labour	248	245	319	265
I.T.	149	138	140	191
Production	227	253	291	287

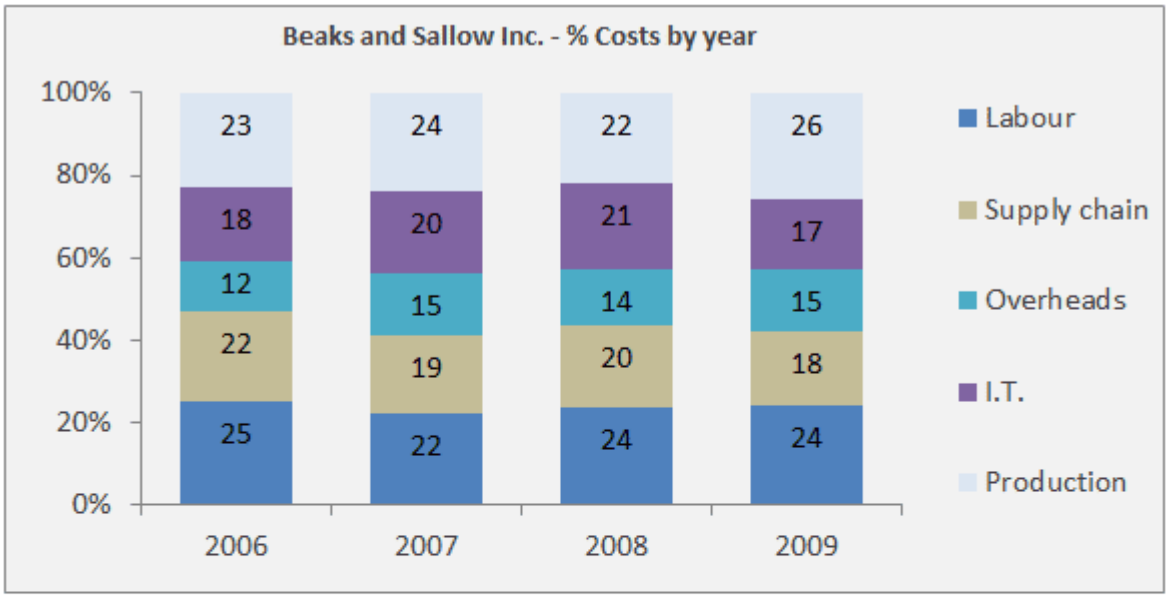
Q24 If 2009's total costs were £250,000, what were the Production costs?

(A) £80,000
(B) £75,000
(C) £70,000
(D) £65,000
(E) £60,000

The information that you need is shown in the graph.

***Step 1** - Production costs = 26% = £250,000 x 26% = £65,000*

Thus the correct answer is (D) £65,000



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Supply chain	186	174	162	166
Labour	248	245	319	265
I.T.	149	138	140	191
Production	227	253	291	287

Q25 If the costs are put into order of decreasing size, in which two years is the order the same?

(A) 2006 and 2007
(B) 2006 and 2008
(C) 2006 and 2010
(D) 2007 and 2008
(E) 2007 and 2009

Step 1 *- Put each year's costs into size order:*

2006 = Labour, Production, Supply Chain, IT, Overheads
2007 = Production, Labour, IT, Supply Chain, Overheads
2008 = Labour, Production, IT, Supply Chain, Overheads
2009 = Production, Labour, Supply Chain, IT, Overheads

Tip: *at this stage you could see that none of the years match so given that there is no "none of these" option you could gamble that 2010 will have the same order as one of the others, and thus go for answer (C).*

Step 2 *- Carrying on for the remaining year:*
2010 = Labour (1,077), Production (1,058), Supply Chain (688), IT (618), Overheads (412)

Thus the correct answer is (C) 2006 and 2010

UK Tourist data				
Country of origin	Annual Number of Tourists (1000s)	Total Spending (million)	Average Family Length of Stay (days)	Average Family Spend (£ per day)
Australia	2,200	435	5.2	236
Spain	1,300	410	2.8	116
Germany	660	380	4.6	148
U.S.A.	830	350	6.2	244
Italy	550	283	3.8	164

Q26 On average, families from which country of origin spend the most during a typical stay?

(A) Australia
(B) Spain
(C) Germany
(D) U.S.A.
(E) Italy

Step 1 *- Multiply each country of origin's Average Family Length of Stay by Average Family Spend*

Australia = 5.2 x 236 = 1,227.2
Spain = 2.8 x 116 = 324.8
Germany = 4.6 x 148 = 680.8
U.S.A = 6.2 x 244 = 1,512.8
Italy = 3.8 x 164 = 623.2

Thus the correct answer is (D) U.S.A.

UK Tourist data				
Country of origin	Annual Number of Tourists (1000s)	Total Spending (million)	Average Family Length of Stay (days)	Average Family Spend (£ per day)
Australia	2,200	435	5.2	236
Spain	1,300	410	2.8	116
Germany	660	380	4.6	148
U.S.A.	830	350	6.2	244
Italy	550	283	3.8	164

Q27 On average, families from which of the countries shown spend the most and the least per typical stay?

(A) Can't tell from the data
(B) U.S.A. (most); Italy (least)
(C) U.S.A. (most); Spain (least)
(D) Australia (most); Italy (least)
(E) Australia (most); Spain (least)

Step 1 *– For each country of origin, calculate the amount spent per family by multiplying the Average Family Length of Stay by Average Family Spending. This question is very similar to the previous question so you can use those workings if you still have them.*

Australia = 5.2 x 236 = £1,227.20
Spain = 2.8 x 116 = £324.80
Germany = 4.6 x 148 = £680.80
U.S.A = 6.2 x 244 = £1,512.80
Italy = 3.8 x 164 = £623.20

Thus the correct answer is (C) U.S.A. (most); Spain (least)

UK Tourist data				
Country of origin	Annual Number of Tourists (1000s)	Total Spending (million)	Average Family Length of Stay (days)	Average Family Spend (£ per day)
Australia	2,200	435	5.2	236
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U.S.A.	830	350	6.2	244
Italy	550	283	3.8	164

Q28 Which of the following statements is True?

(A) The ratio of German:Spanish tourists is 1:2
(B) There are fewer Spanish tourists than German and Italian tourists combined
(C) German families have the longest average length of stay
(D) Total German tourist spending is more than 92% of Total Spanish tourist spending
(E) There are over 4 times as many Australian tourists as Italian tourists

Step 1 *- Go through each answer option to determine if it is True, as follows*

The ratio of German:Spanish tourists is 1:2:
660:1300 = 33:65
So False

There are less Spanish tourists than German and Italian tourists combined:
1,300 (Spanish tourists) > 660 + 550 (German and Italian tourists combined)
So False

German families have the longest average length of stay:
Longest average length of stay = 6.2 (U.S.A)
So False

Total German tourist spending is more than 92% of Total Spanish tourist spending:
92% of Spanish tourist spending = 92% x 410 = 377.2 (< 380)
So True

There are over 4 times as many Australian tourists as Italian tourists:
4 x 550 = 2200 (but not more than 2,200)
So False

Thus the correct answer is (D), Total German tourist spending is more than 92% of Total Spanish tourist spending

UK Tourist data				
Country of origin	Annual Number of Tourists (1000s)	Total Spending (million)	Average Family Length of Stay (days)	Average Family Spend (£ per day)
Australia	2,200	435	5.2	236
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Germany	660	380	4.6	148
U.S.A.	830	350	6.2	244
Italy	550	283	3.8	164

Q29 On average which of the following tour parties would spend the most per day?

(A) 2 Australian families
(B) 2 Spanish families
(C) 3 German families
(D) 3 U.S.A. families
(E) 3 Italian families

Step 1 *- Calculate the cost for each of the options:*
2 Australian families = 2 x £236 = £472
2 Spanish families = 2 x £116 = £232
3 German families = 3 x £148 = £444
3 U.S.A. families = 3 x £244 = £732
3 Italian families = 3 x £164 = £492

Thus the correct answer is (D) 3 USA families

UK Tourist data				
Country of origin	Annual Number of Tourists (1000s)	Total Spending (million)	Average Family Length of Stay (days)	Average Family Spend (£ per day)
Australia	2,200	435	5.2	236
Spain	1,300	410	2.8	116
Germany	660	380	4.6	148
U.S.A.	830	350	6.2	244
Italy	550	283	3.8	164

Q30 Approximately, what's the average daily spend per family for the 5 countries of origin shown?

(A) £170
(B) £180
(C) £190
(D) £200
(E) Cannot tell from data

Step 1 *- Whilst it might be tempting to calculate (236 + 116 + 148 + 244 + 164) / 5 = £180, this is not quite correct.*

To be able to calculate the average spend per family, we would need to know how many families from each country there are. For example there might be a lot more families from one country which would distort the overall average.

Thus the correct answer is (E) Cannot tell from data

-- End of Test --