

# Numerical Reasoning

## Test 7



### 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.

Total EU population (1 <sup>st</sup> Jan 2012) = 480 million					
	Belgium	Denmark	Ireland	Hungary	Greece
Total Population (millions)	10.4	5.4	4.1	10.1	10.8
Percentage of Population in Employment (by gender)					
- Female	37.4	34.6	41.4	39.5	36.8
- Male	35.6	58.2	38.8	38.4	34.4
Population Change Factors (per 1,000 population)					
- Increase from births	11.1	12	15.2	13.1	9.6
- Decrease from deaths	9.8	10.3	6.9	10.4	9.5
- Net migration inflow	3.4	0.9	11.8	1.8	3.1

**Q1** Which country has the largest number of males in employment?

- (A) Belgium
- (B) Denmark
- (C) Ireland
- (D) Hungary
- (E) Greece

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- Net migration inflow	3.4	0.9	11.8	1.8	3.1

**Q2** What percentage do the five countries shown represent of the total EU population?

- (A) 7.5%
- (B) 8.5%
- (C) 9.5%
- (D) 10.5%
- (E) 11.5%

Total EU population (1 <sup>st</sup> Jan 2012) = 480 million					
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- Net migration inflow	3.4	0.9	11.8	1.8	3.1

**Q3** Assuming that there are no other population factors than those shown in the table, what will be the annual population change of the five countries combined?

- (A) 143,900
- (B) 167,550
- (C) 225,340
- (D) 368,200
- (E) 44.7 million

Total EU population (1 <sup>st</sup> Jan 2012) = 480 million					
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Population Change Factors (per 1,000 population)					
- Increase from births	11.1	12	15.2	13.1	9.6
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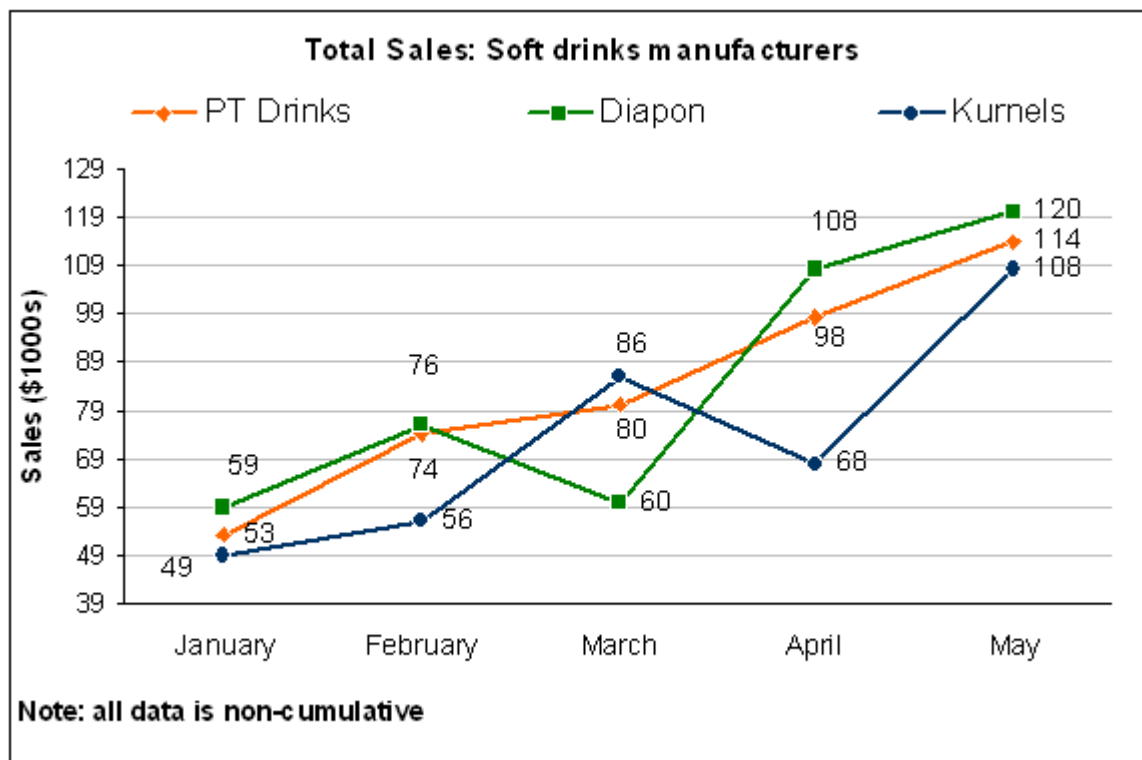
**Q4** If the population of Belgium increases at the same %age rate as shown for 2012, in what year will the population reach 10.6 million?

- (A) 2015
- (B) 2016
- (C) 2017
- (D) 2018
- (E) 2019

Total EU population (1 <sup>st</sup> Jan 2012) = 480 million					
	Belgium	Denmark	Ireland	Hungary	Greece
Total Population (millions)	10.4	5.4	4.1	10.1	10.8
Percentage of Population in Employment (by gender)					
- Female	37.4	34.6	41.4	39.5	36.8
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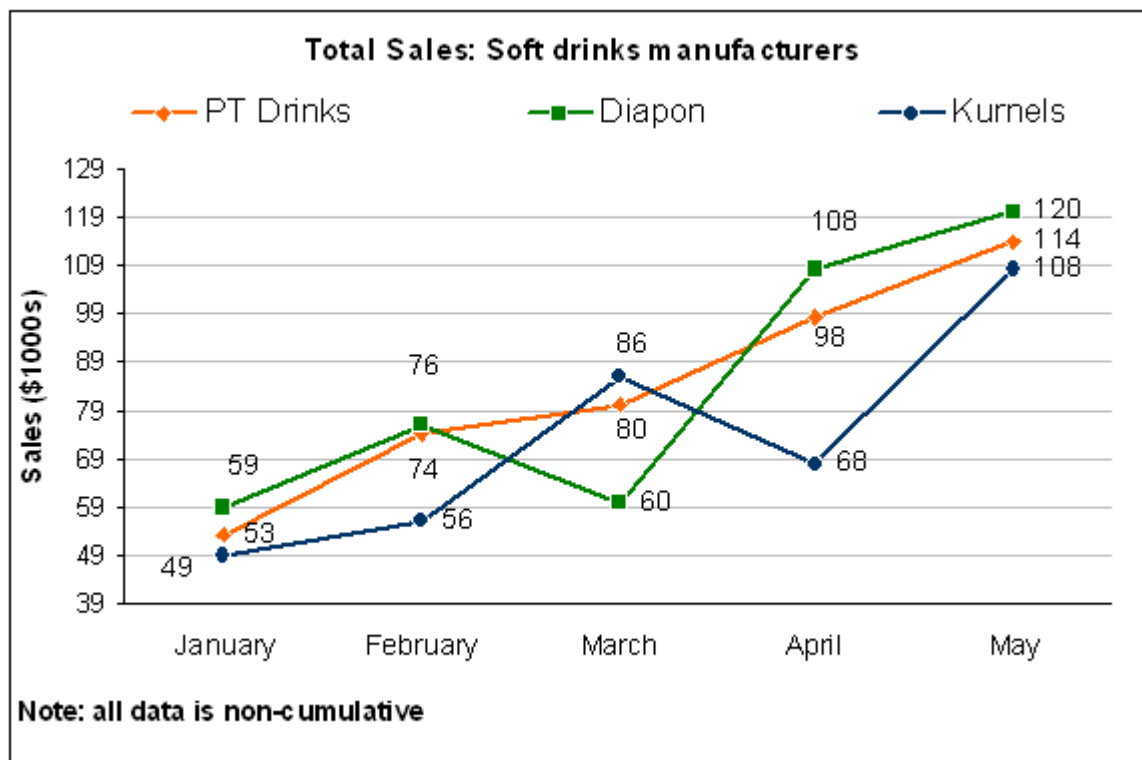
**Q5** Which country has the largest absolute difference in the number of people dying compared to the number of people being born?

- (A) Belgium
- (B) Denmark
- (C) Ireland
- (D) Hungary
- (E) Greece



**Q6** In which month were PT Drinks sales one-third that of total sales?

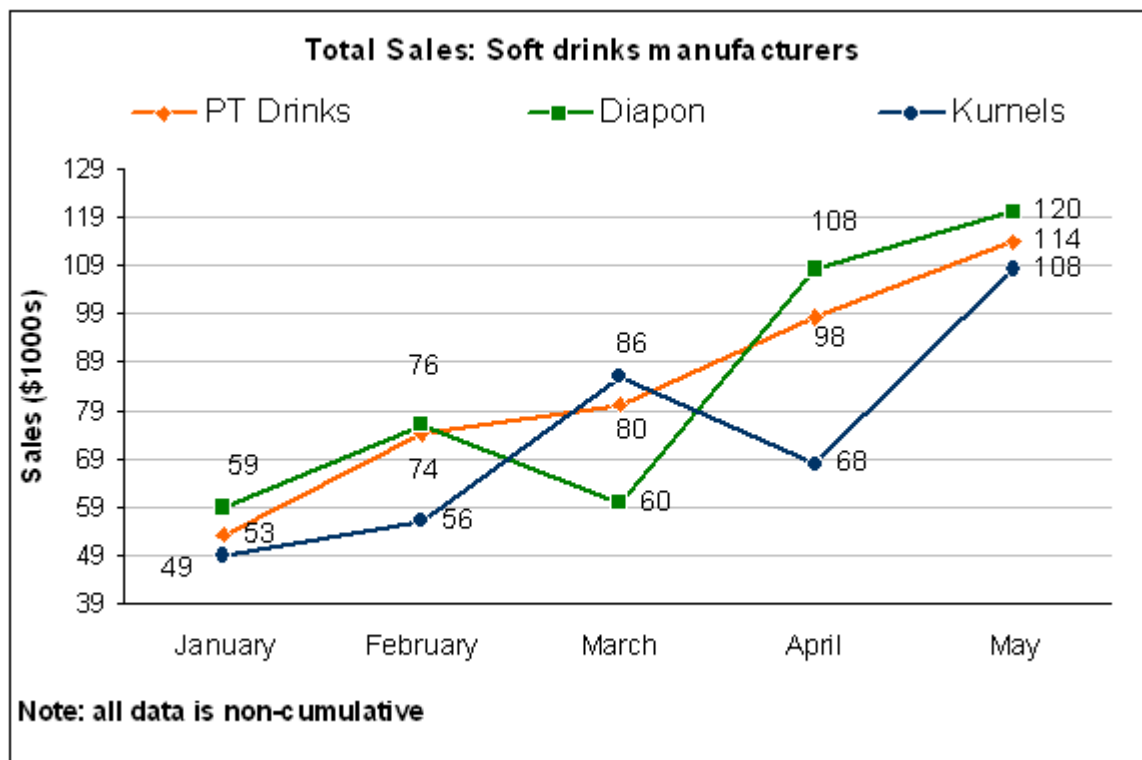
- (A) January
- (B) February
- (C) March
- (D) April
- (E) May



**Q7** If Kurnels continued to increase its sales at the same percentage rate as between April and May, what would Kurnels' sales be in August (to the nearest \$1,000)?

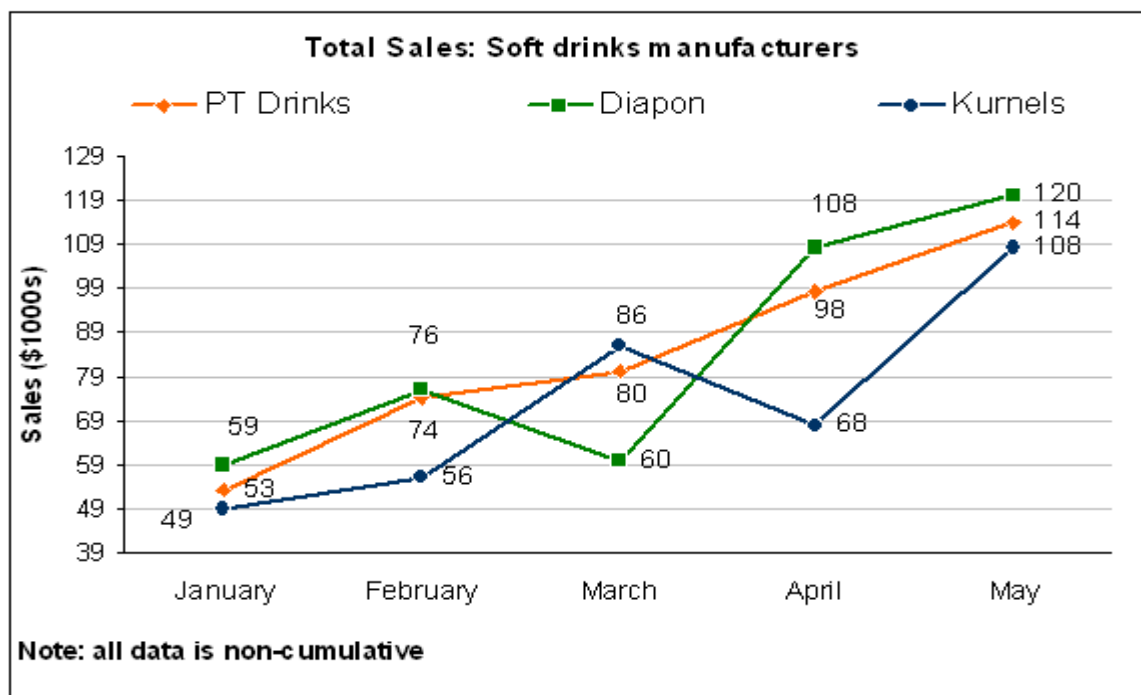
- (A) \$272,000
- (B) \$372,000
- (C) \$432,000
- (D) \$2,720,000
- (E) \$4,320,000





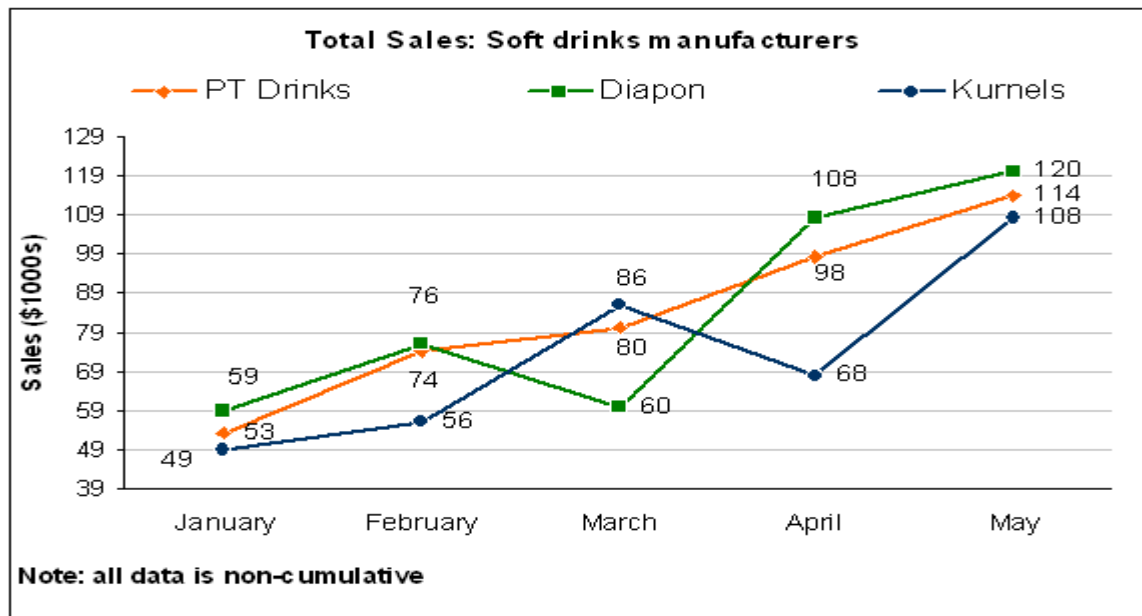
**Q8** What was the difference between the total sales of Kurnels and those of Diapon between February-May?

- (A) Kurnels smaller by \$46,000
- (B) Kurnels smaller by \$36,000
- (C) Kurnels greater by \$26,000
- (D) Kurnels greater by \$36,000
- (E) Kurnels greater by \$46,000



**Q9** Between which months did Kurnels show the greatest change in its proportion of total sales?

- (A) January - February
- (B) February - March
- (C) March - April
- (D) April - May
- (E) Can't tell from the data



**Q10** If the three soft drinks manufacturers experience the same proportional increases in sales between May-June as between April-May, what will be the combined sales for the three soft drinks manufacturers in June (to the nearest \$1,000)?

- (A) \$133,000
- (B) \$171,000
- (C) \$410,000
- (D) \$437,000
- (E) Can't tell from the data

Share Price (£)	Yesterday's price	Today's Price	Highest Price (Figures for this month)	Lowest Price	Highest Price (Figures this year)	Lowest Price
LPC Ltd	2.6	2.4	3.14	2.42	3.15	2.3
Hydro Tools	1.62	1.5	1.68	1.42	1.95	1.37
Gyromanic	3.1	3.28	3.99	2.59	4.52	2.51
Flyer Travel	2.27	2.5	3.43	2.1	3.96	2.05
Gel Products	1.9	1.72	2.1	1.6	2.28	1.45

**Q11** A trader bought 150,000 shares in Hydro Tools at this month's low and 250,000 shares in Gel Products at this month's high. What is the trader's profit or loss if he sells all the shares at today's prices? (Assume that there are no dealing charges).

- (A) £655,000 loss
- (B) £120,500 loss
- (C) £83,000 loss
- (D) £120,500 profit
- (E) £655,000 profit

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Flyer Travel	2.27	2.5	3.43	2.1	3.96	2.05
Gel Products	1.9	1.72	2.1	1.6	2.28	1.45

**Q12** Yesterday, which share was the furthest from its yearly low in absolute terms?

- (A) LPC Ltd
- (B) Hydro Tools
- (C) Gyromanic
- (D) Flyer Travel
- (E) Gel Products

Share Price (£)	Yesterday's price	Today's Price	Highest Price (Figures for this month)	Lowest Price	Highest Price (Figures this year)	Lowest Price
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Flyer Travel	2.27	2.5	3.43	2.1	3.96	2.05
Gel Products	1.9	1.72	2.1	1.6	2.28	1.45

**Q13** How many shares of LPC Ltd and Flyer Travel Ltd can a trader buy today who spends £2.1 million and splits the value of the shares in the ratio of 2:5 respectively (ignoring any other taxes or charges incurred)?

- (A) 350,000 shares (LPC Ltd), 500,000 shares (Flyer Travel Ltd)
- (B) 300,000 shares (LPC Ltd), 504,000 shares (Flyer Travel Ltd)
- (C) 250,000 shares (LPC Ltd), 600,000 shares (Flyer Travel Ltd)
- (D) 200,000 shares (LPC Ltd), 500,000 shares (Flyer Travel Ltd)
- (E) 150,000 shares (LPC Ltd), 600,000 shares (Flyer Travel Ltd)

Share Price (£)	Yesterday's price	Today's Price	Highest Price (Figures for this month)	Lowest Price	Highest Price (Figures this year)	Lowest Price
LPC Ltd	2.6	2.4	3.14	2.42	3.15	2.3
Hydro Tools	1.62	1.5	1.68	1.42	1.95	1.37
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Flyer Travel	2.27	2.5	3.43	2.1	3.96	2.05
Gel Products	1.9	1.72	2.1	1.6	2.28	1.45

**Q14** How much would the loss be from buying 125,000 Gyromanic shares at this month's high, then selling all the shares at this month's low?

- (A) £63,750
- (B) £175,000
- (C) £225,750
- (D) £251,250
- (E) None of these

Share Price (£)	Yesterday's price	Today's Price	Highest Price (Figures for this month)	Lowest Price	Highest Price (Figures this year)	Lowest Price
LPC Ltd	2.6	2.4	3.14	2.42	3.15	2.3
Hydro Tools	1.62	1.5	1.68	1.42	1.95	1.37
Gyromanic	3.1	3.28	3.99	2.59	4.52	2.51
Flyer Travel	2.27	2.5	3.43	2.1	3.96	2.05
Gel Products	1.9	1.72	2.1	1.6	2.28	1.45

**Q15** Yesterday, Trader A spent £650,000 purchasing LPC Ltd shares and Trader B spent the same amount on Flyer Travel shares. If Trader A and Trader B each sold their entire shareholding today, how much more profit would Trader B make than Trader A?

- (A) £11,692
- (B) £115,859
- (C) £39,796
- (D) £139,796
- (E) £65,859





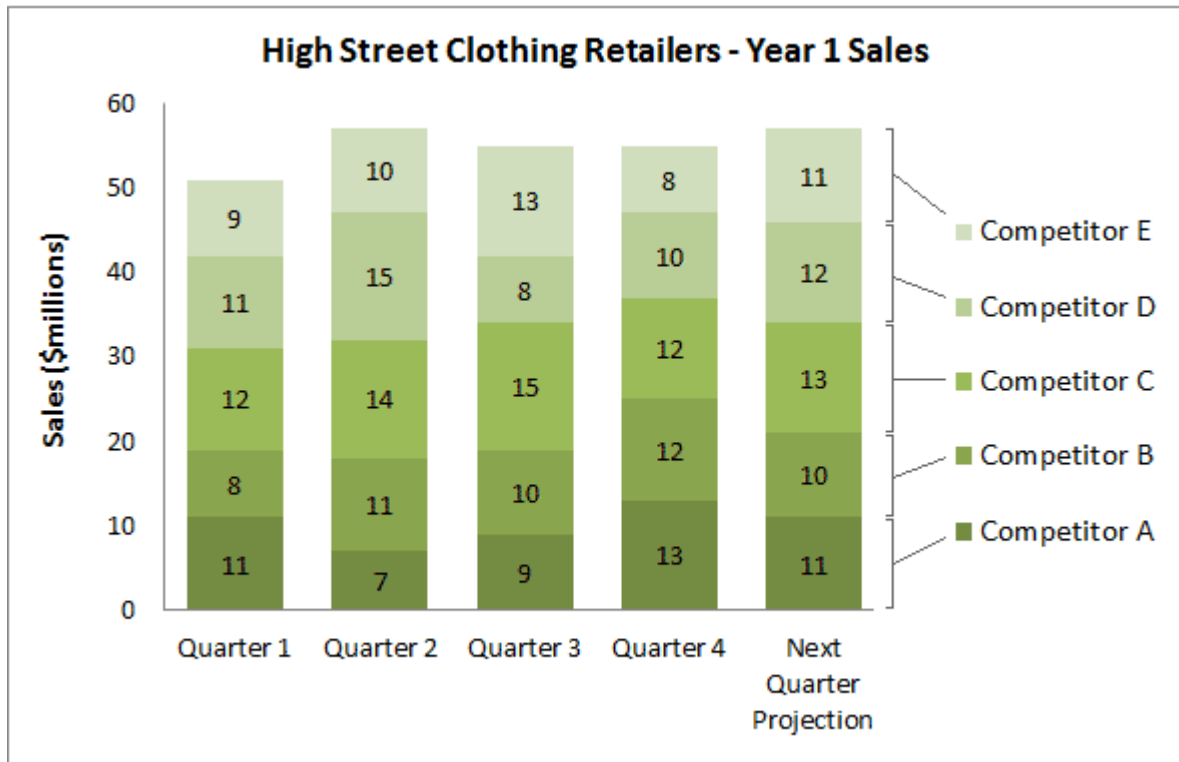
**Q16** Which competitor, or competitors, are predicted in the Next Quarter to achieve sales of less than its average over Quarters 1-4?

- (A) Competitor B
- (B) Competitors B and C
- (C) Competitors A and C
- (D) Competitors C and D
- (E) Competitor D



**Q17** Assuming that the Next Quarter's projection is accurate, but that in all subsequent Quarters sales drop by 5% each quarter, by how much will Competitor D's sales in Year 2 exceed those of Year 1 (to the nearest \$10,000)?

- (A) \$520,000
- (B) \$620,000
- (C) \$720,000
- (D) \$820,000
- (E) \$920,000



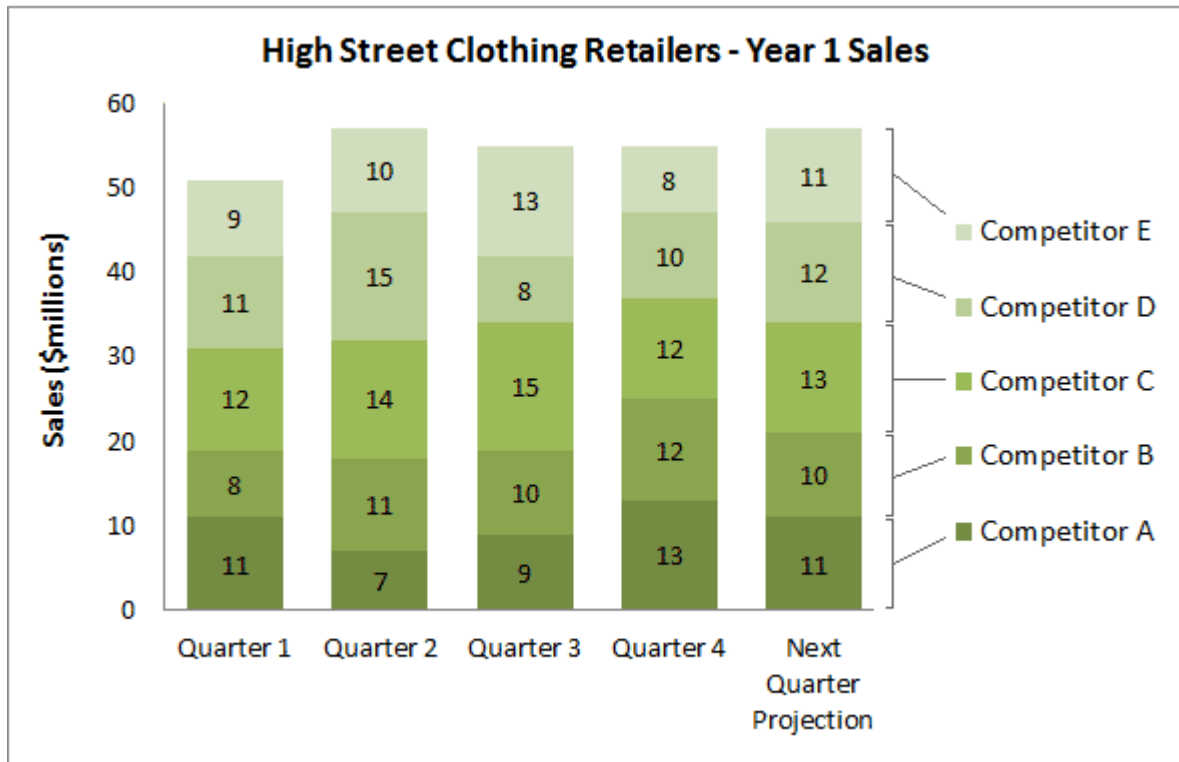
**Q18** Competitor C operates 18 stores compared to Competitor E's 15 stores. How much more sales revenue would Competitor E have needed to make to match Competitor C's average sales per store in Quarter 1?

- (A) \$1 million
- (B) \$2 million
- (C) \$3 million
- (D) \$4 million
- (E) \$5 million



**Q19** In the Next Quarter Competitors A and B merge their sales operations, and in response Competitors C and D decide to operate together. Competitors A and B exceed their projected quarterly sales by  $\frac{2}{9}$ ths. Next Quarter's sales for Competitors C and D are in line with their averages over the previous 4 quarters. What is the value of the combined sales of Competitors A-E for the Next Quarter, to the nearest \$million ? (Assume that Competitor E's projected sales for the next quarter are correct).

- (A) \$11 million
- (B) \$16 million
- (C) \$26 million
- (D) \$61 million
- (E) Can't tell from data



**Q20** Which competitor has a ratio of 4:5 Quarter 4 : Quarter 3 sales?

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

PRODUCT CODE	BEC 1A	BEC 5C	FLAC 3X	FLAC 9Y	FLAC 4T
Number of units sold	6,500	4,800	3,500	5,500	4,500
Number of units produced	9,000	6,500	5,200	6,800	6,000
<b>PRODUCTION COSTS (£ per 100 units produced)</b>					
Labour cost	180	172	160	150	164
Design cost	84	92	74	101	105
Misc costs	62	74	94	108	94
Sales price - per unit sold (£)	4.25	4.15	4.8	4.65	4.95

*All Data Shown is for January*

**Q21** What was the difference in the value of FLAC product sales compared to BEC product sales?

- (A) £14,650
- (B) £17,105
- (C) £27,545
- (D) £47,545
- (E) £64,650

PRODUCT CODE	BEC 1A	BEC 5C	FLAC 3X	FLAC 9Y	FLAC 4T
Number of units sold	6,500	4,800	3,500	5,500	4,500
Number of units produced	9,000	6,500	5,200	6,800	6,000
<b>PRODUCTION COSTS (£ per 100 units produced)</b>					
Labour cost	180	172	160	150	164
Design cost	84	92	74	101	105
Misc costs	62	74	94	108	94
<b>Sales price - per unit sold (£)</b>	4.25	4.15	4.8	4.65	4.95

*All Data Shown is for January*

**Q22** Which product code has the highest profit margin? (Assume Profit margin = Sales price – Production costs).

- (A) BEC 1A
- (B) BEC 5C
- (C) FLAC 3X
- (D) FLAC 9Y
- (E) FLAC 4T

PRODUCT CODE	BEC 1A	BEC 5C	FLAC 3X	FLAC 9Y	FLAC 4T
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Design cost	84	92	74	101	105
Misc costs	62	74	94	108	94
Sales price - per unit sold (£)	4.25	4.15	4.8	4.65	4.95

*All Data Shown is for January*

**Q23** What would have been the additional sales revenue on BEC 5C units if all those that had been produced in January were sold?

- (A) £27,625
- (B) £25,428
- (C) £15,655
- (D) £11,700
- (E) £7,055



PRODUCT CODE	BEC 1A	BEC 5C	FLAC 3X	FLAC 9Y	FLAC 4T
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Number of units produced	9,000	6,500	5,200	6,800	6,000
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*All Data Shown is for January*

**Q24** If the labour, design and misc costs for producing the FLAC 9Y decrease by 5%, 7.5% and 12.5% respectively, what will be the profit when selling 25,000 FLAC 9Y units?

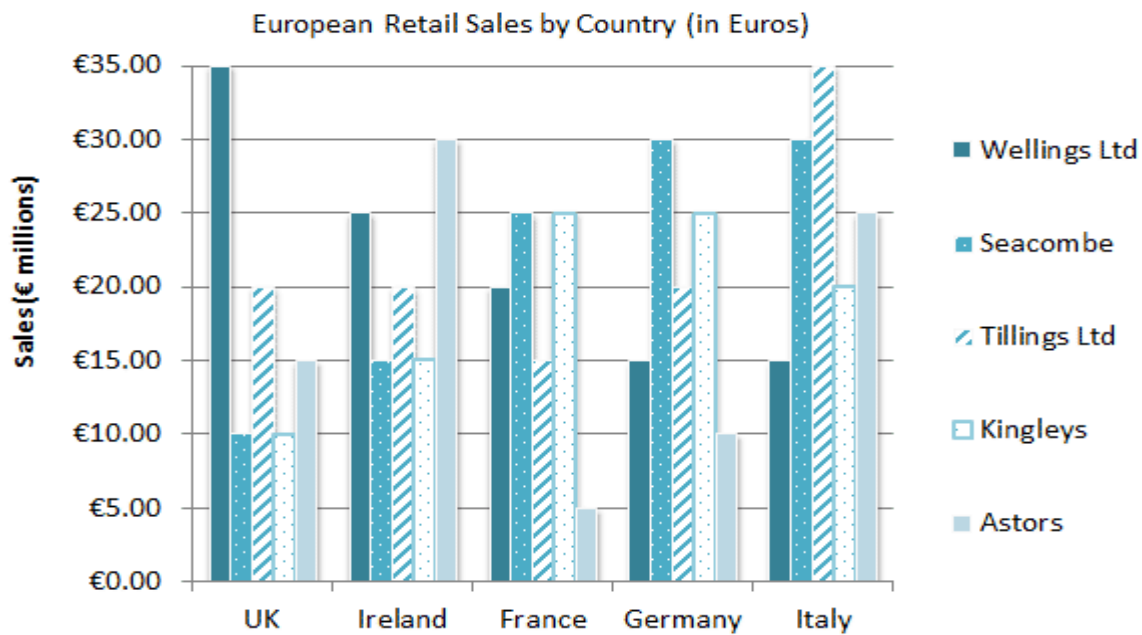
- (A) £116,250.50
- (B) £85,442.00
- (C) £48,296.25
- (D) £33,642.50
- (E) £19,450.50

PRODUCT CODE	BEC 1A	BEC 5C	FLAC 3X	FLAC 9Y	FLAC 4T
Number of units sold	6,500	4,800	3,500	5,500	4,500
Number of units produced	9,000	6,500	5,200	6,800	6,000
<b>PRODUCTION COSTS (£ per 100 units produced)</b>					
Labour cost	180	172	160	150	164
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Sales price - per unit sold (£)	4.25	4.15	4.8	4.65	4.95

*All Data Shown is for January*

**Q25** An order valued at £14,350 is placed for FLAC 4T units at a sales price that is £0.85 below the norm. What is the profit on this order?

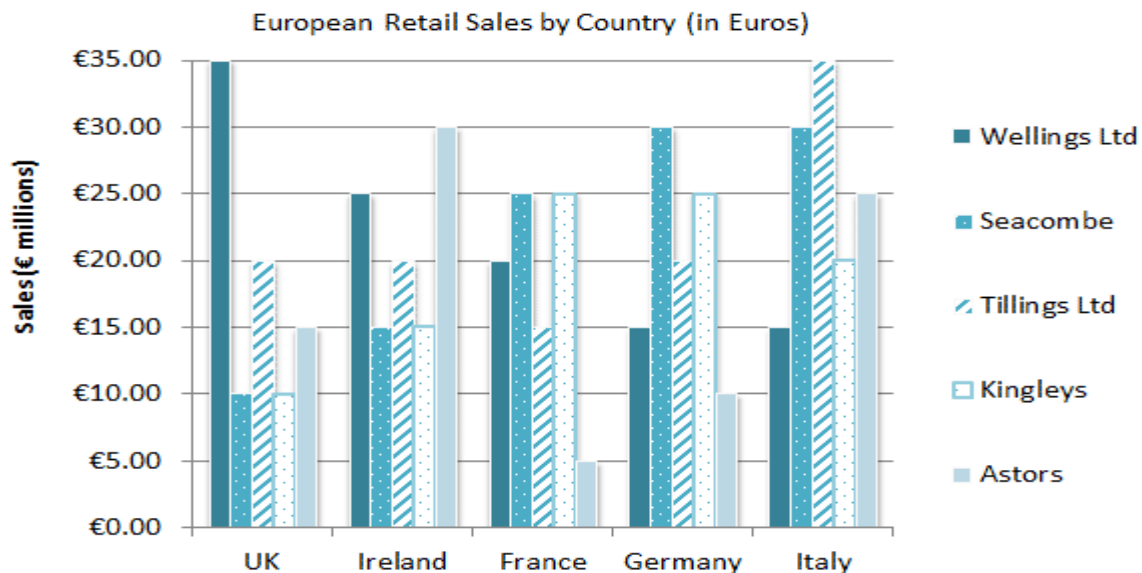
- (A) £1,945
- (B) £1,845
- (C) £1,645
- (D) £1,745
- (E) Can't tell from data



Number of Stores by Country	UK	Ireland	France	Germany	Italy
Wellings Ltd	5	4	3	4	3
Seacombe	7	6	6	5	5
Tillings Ltd	6	5	3	6	4
Kingleys	8	8	5	10	6
Astors	12	16	11	12	9

**Q26** For the company which achieved the highest sales per number of their stores in France, what was their sales value across the five countries combined?

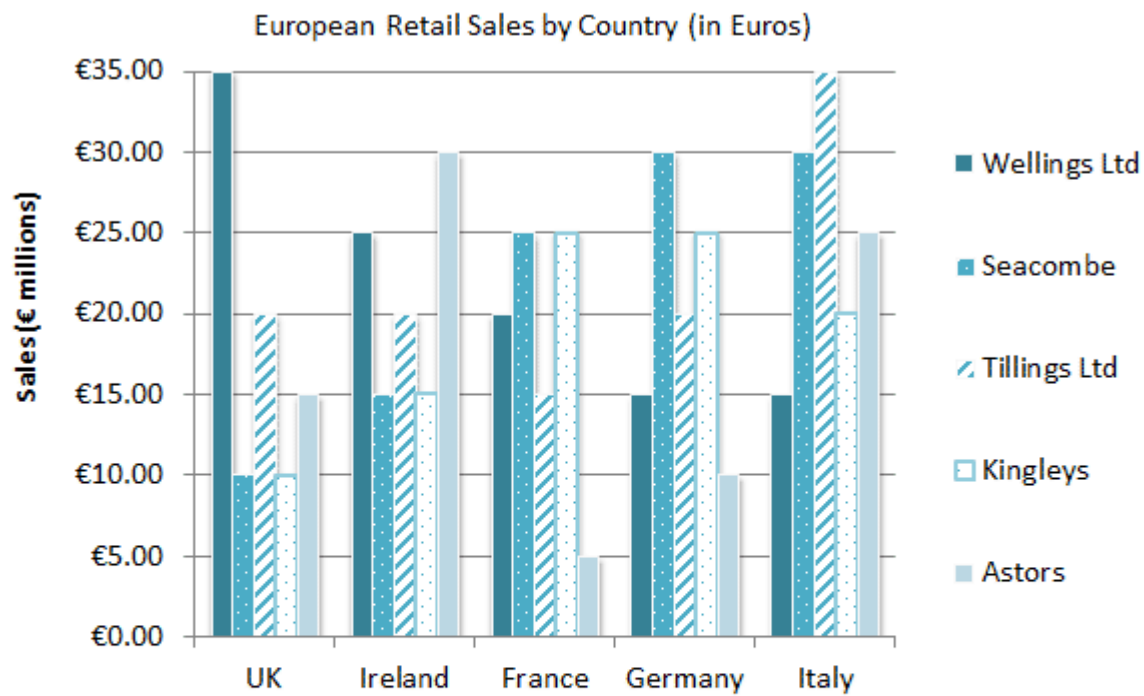
- (A) €40 million
- (B) €85 million
- (C) €110 million
- (D) €140 million
- (E) €155 million



Number of Stores by Country	UK	Ireland	France	Germany	Italy
Wellings Ltd	5	4	3	4	3
Seacombe	7	6	6	5	5
Tillings Ltd	6	5	3	6	4
Kingleys	8	8	5	10	6
Astors	12	16	11	12	9

**Q27** The economic recession is predicted to decrease the total retail sales in Germany, Ireland and Italy by 7.2%, 9% and 4.6% respectively. What total sales value is predicted in Germany, Ireland and Italy combined?

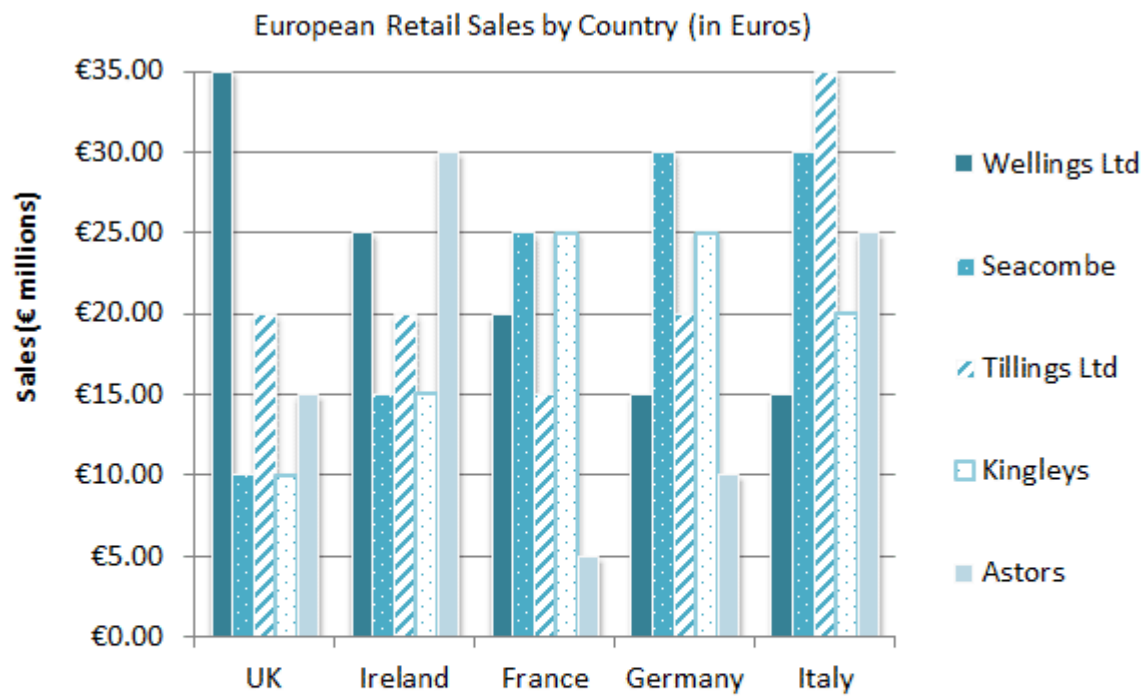
- (A) €302.5 million
- (B) €307.6 million
- (C) €310.4 million
- (D) €322.4 million
- (E) €330.6 million



Number of Stores by Country	UK	Ireland	France	Germany	Italy
Wellings Ltd	5	4	3	4	3
Seacombe	7	6	6	5	5
Tillings Ltd	6	5	3	6	4
Kingleys	8	8	5	10	6
Astors	12	16	11	12	9

**Q28** Which two countries have the same average sales across the five retail companies?

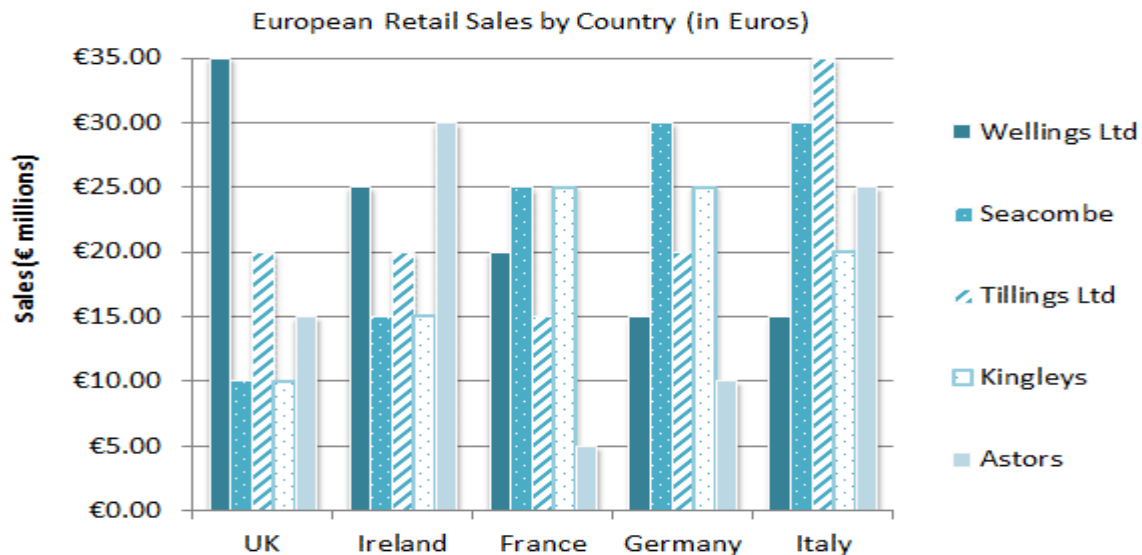
- (A) UK, Ireland
- (B) Ireland, France
- (C) Italy, Germany
- (D) Germany, UK
- (E) France, UK



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Wellings Ltd	5	4	3	4	3
Seacombe	7	6	6	5	5
Tillings Ltd	6	5	3	6	4
Kingleys	8	8	5	10	6
Astors	12	16	11	12	9

**Q29** What would be the value of the UK and the French sales in £ (assume an exchange rate of €1.25 to the £)?

- (A) £144 million
- (B) £112.5 million
- (C) £80 million
- (D) £72 million
- (E) £60 million



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Seacombe	7	6	6	5	5
Tillings Ltd	6	5	3	6	4
Kingleys	8	8	5	10	6
Astors	12	16	11	12	9

**Q30** Wellings Ltd sells off its Italian stores and then takes over Seacombe's stores except those in Ireland. The merged Wellings Seacombe Ltd sets a target to increase total sales across the European stores by 20% a year for the next three years. What will the total sales be in three years' time (to the nearest million)?

- (A) €33 million
- (B) €190 million
- (C) €290 million
- (D) €328 million
- (E) €382 million

**End of test**