

Numerical Reasoning

Test 3



Questions Booklet

Instructions

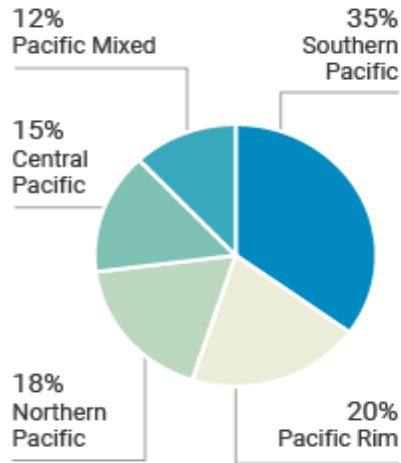
This practice test contains **30 questions**, and you will have **30 minutes** to answer them.

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

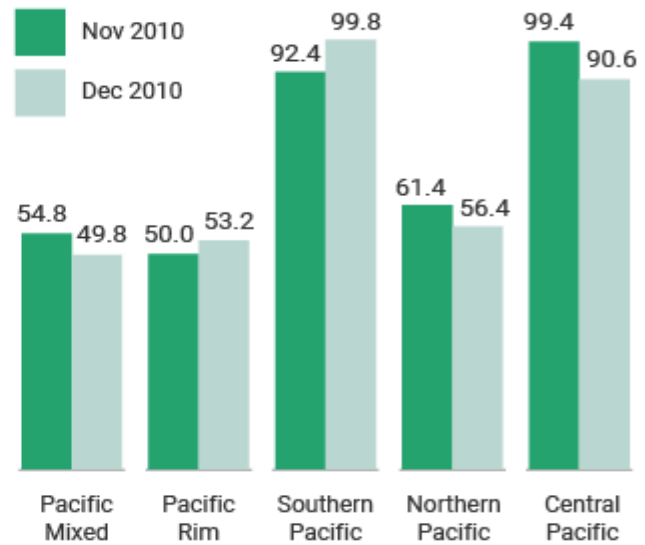
Calculators are permitted for this test. It's recommended to have some rough paper for your calculations. You will have to work quickly and accurately to perform well in this test. If you don't know the answer to a question, leave it and come back to it if you have time.

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.

October 2010 Fund holdings in Pacific Bond
(total value £37.5 million)



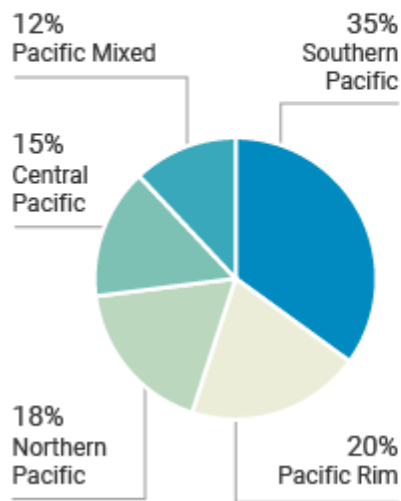
Monthly Value (£100,000s)



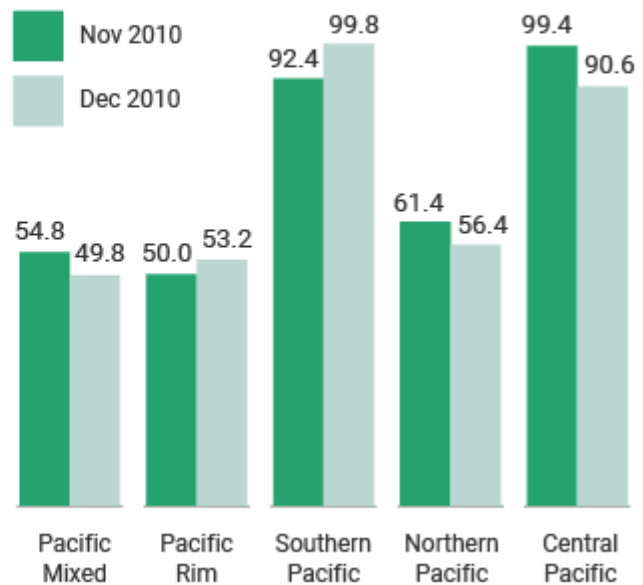
Q1 What was the 2010 percentage change in the value of the Pacific Rim holding between October and November (to the nearest percent)?

- (A) 41% less
- (B) 41% more
- (C) 36% less
- (D) 34% less
- (E) 33% less

October 2010 Fund holdings in Pacific Bond
(total value £37.5 million)



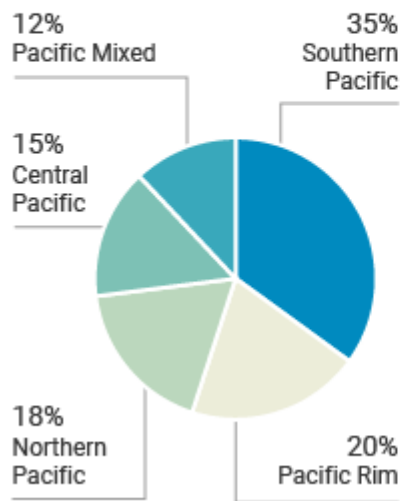
Monthly Value (£100,000s)



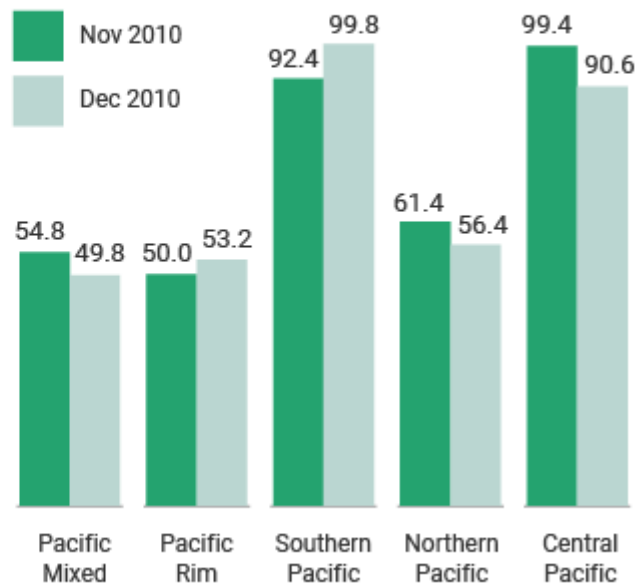
Q2 What was the ratio of Pacific Rim: Southern Pacific holdings in October 2010?

- (A) 3:2
- (B) 2:3
- (C) 4:5
- (D) 5:4
- (E) 4:7

October 2010 Fund holdings in Pacific Bond
(total value £37.5 million)



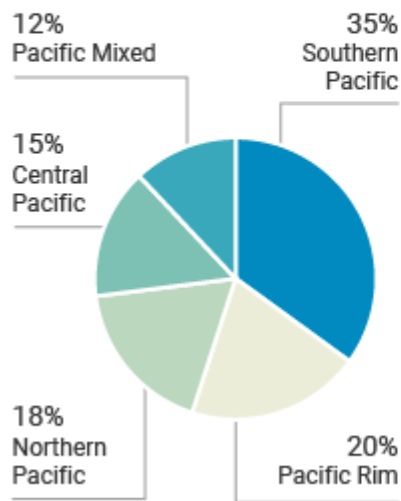
Monthly Value (£100,000s)



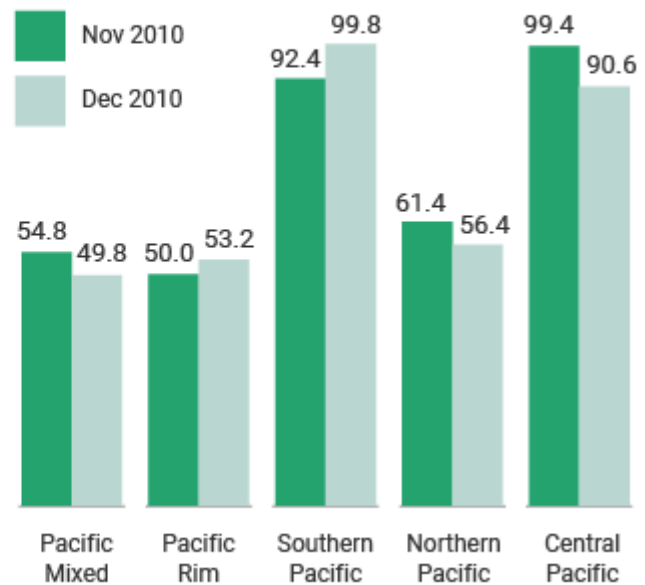
Q3 In October 2010 which two Pacific Bond fund holdings when combined had the same value as Southern Pacific holdings?

- (A) Northern Pacific and Central Pacific
- (B) Central Pacific and Pacific Rim
- (C) Pacific Mixed and Pacific Rim
- (D) Pacific Mixed and Northern Pacific
- (E) Pacific Rim and Northern Pacific

October 2010 Fund holdings in Pacific Bond
(total value £37.5 million)



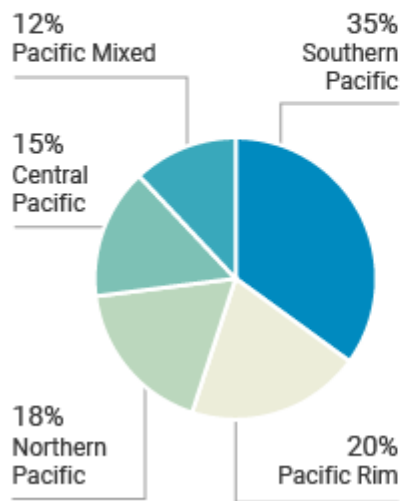
Monthly Value (£100,000s)



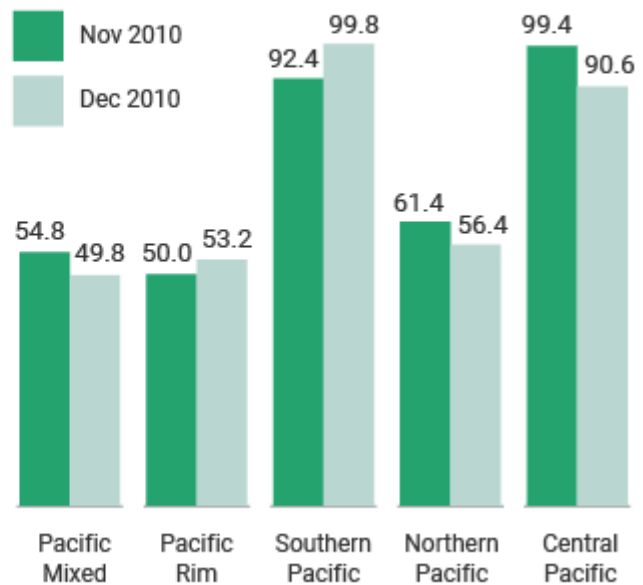
Q4 Which of the following represents the largest amount?

- (A) October's Pacific Mixed holding
- (B) Average November value of each of the 5 holdings
- (C) November value of holdings in Northern Pacific
- (D) 70% of November's value of holdings in Southern Pacific
- (E) Average December value of each of the 5 holdings

October 2010 Fund holdings in Pacific Bond
(total value £37.5 million)



Monthly Value (£100,000s)



Q5 In October 2010 what fraction of the total Pacific Bond did the Northern Pacific and Pacific Mixed fund holdings represent?

- (A) $\frac{1}{5}$
- (B) $\frac{1}{10}$
- (C) $\frac{1}{4}$
- (D) $\frac{3}{10}$
- (E) $\frac{2}{5}$

Western Region - Store location	Number of sales staff	Units sold					
		Week 1		Week 2		Week 3	
		Actual	Target	Actual	Target	Actual	Target
Redcliff	8	20	15	20	25	35	35
Ather	9	30	20	40	25	40	35
Wilkington	5	25	20	18	25	24	30
Trew	8	15	10	14	15	12	15
Tunston	6	5	10	6	15	9	15

Q6 For Weeks 1 and 3, across all 5 stores combined, what was the difference (in units) between Actual and Target sales volumes?

- (A) 10 over target (Week 1); 10 under target (Week 3)
- (B) 10 over target (Week 1); 15 under target (Week 3)
- (C) 15 over target (Week 1); 10 under target (Week 3)
- (D) 15 over target (Week 1); 15 under target (Week 3)
- (E) 20 over target (Week 1); 10 under target (Week 3)

Western Region - Store location	Number of sales staff	Units sold					
		Week 1		Week 2		Week 3	
		Actual	Target	Actual	Target	Actual	Target
Redcliff	8	20	15	20	25	35	35
Ather	9	30	20	40	25	40	35
Wilkington	5	25	20	18	25	24	30
Trew	8	15	10	14	15	12	15
Tunston	6	5	10	6	15	9	15

Q7 Over the three week period, which Store achieved the highest sales per sales staff member?

- (A) Redcliff
- (B) Ather
- (C) Wilkington
- (D) Trew
- (E) Tunston

Western Region - Store location	Number of sales staff	Units sold					
		Week 1		Week 2		Week 3	
		Actual	Target	Actual	Target	Actual	Target
Redcliff	8	20	15	20	25	35	35
Ather	9	30	20	40	25	40	35
Wilkington	5	25	20	18	25	24	30
Trew	8	15	10	14	15	12	15
Tunston	6	5	10	6	15	9	15

Q8 Next year staff numbers are to be reduced by 1 at stores with 6 or less staff, and by 2 staff at all other stores. What will be the average monthly target per staff member across all 5 stores if the regional target (across the 5 stores) is £168,000?

- (A) £5,000
- (B) £6,000
- (C) £7,000
- (D) £8,000
- (E) £9,000

Western Region - Store location	Number of sales staff	Units sold					
		Week 1		Week 2		Week 3	
		Actual	Target	Actual	Target	Actual	Target
Redcliff	8	20	15	20	25	35	35
Ather	9	30	20	40	25	40	35
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Trew	8	15	10	14	15	12	15
Tunston	6	5	10	6	15	9	15

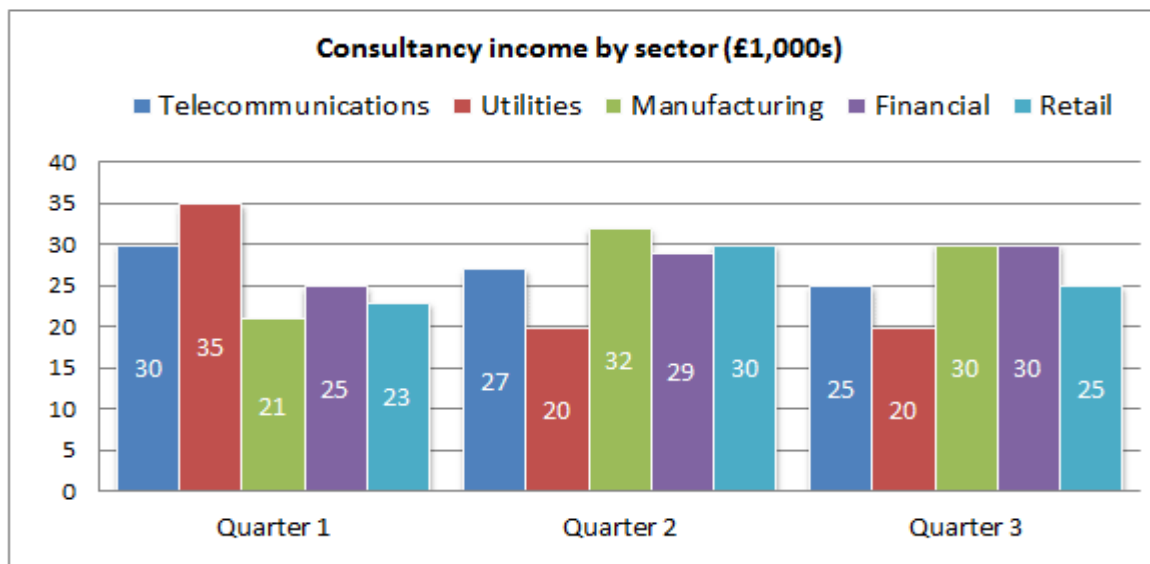
Q9 The Western Region's overall sales (£120,000) were in a ratio of 3:2 to the Eastern Region's sales which itself had half the sales of the Northern and Southern Regions combined. What were the total sales of all 4 Regions?

- (A) £180,000
- (B) £200,000
- (C) £220,000
- (D) £240,000
- (E) £360,000

Western Region - Store location	Number of sales staff	Units sold					
		Week 1		Week 2		Week 3	
		Actual	Target	Actual	Target	Actual	Target
Redcliff	8	20	15	20	25	35	35
Ather	9	30	20	40	25	40	35
Wilkington	5	25	20	18	25	24	30
Trew	8	15	10	14	15	12	15
Tunston	6	5	10	6	15	9	15

Q10 All sales in the three week period were based on an average £9.50 reduction in the sales price of the units sold. What was the total saving made by customers who bought units over the 3 week period (to the nearest £100)?

- (A) £3,000
- (B) £3,500
- (C) £4,000
- (D) £4,500
- (E) £5,000

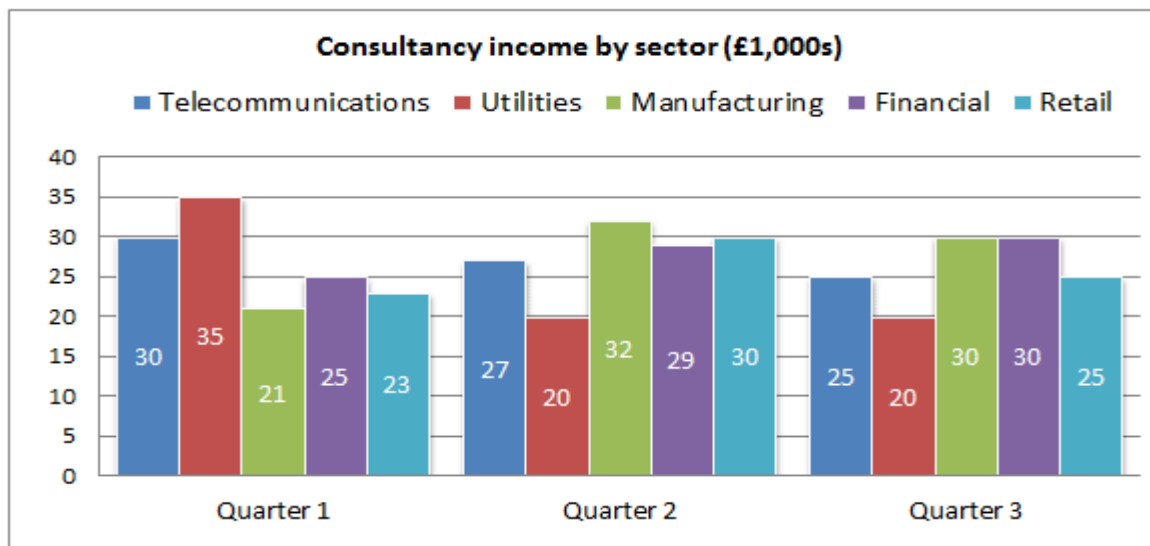


Manufacturing sector - Consultancy income by consultant

Consultant	Quarter 1	Quarter 2	Quarter 3	Quarter 4
David	4,000	3,500	5,000	4,000
Peter	6,000	6,500	7,000	10,500
Sarah	6,000	9,000	5,500	3,000
Jane	4,000	4,500	7,500	4,500
Harry	1,000	4,500	5,000	6,500

Q11 Which sector experienced the highest sales for Quarters 1, 2 and 3 combined?

- (A) Telecommunications
- (B) Utilities
- (C) Manufacturing
- (D) Financial
- (E) Retail

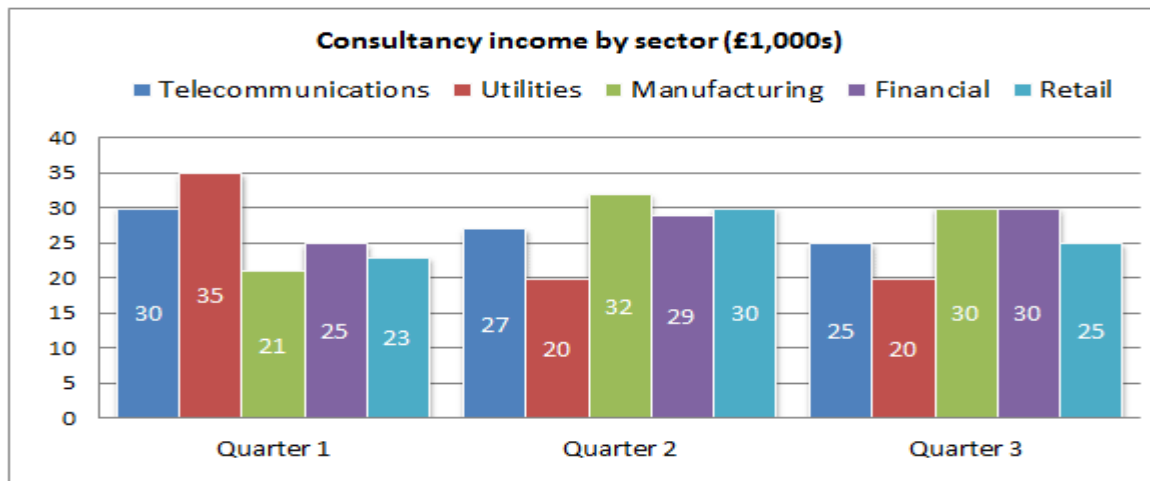


Manufacturing sector - Consultancy income by consultant

Consultant	Quarter 1	Quarter 2	Quarter 3	Quarter 4
David	4,000	3,500	5,000	4,000
Peter	6,000	6,500	7,000	10,500
Sarah	6,000	9,000	5,500	3,000
Jane	4,000	4,500	7,500	4,500
Harry	1,000	4,500	5,000	6,500

Q12 Quarter 4's income per sector is in the same ratio as Quarter 3, and the consultancy income from the Financial sector is £33,000. What is the consultancy income from the Utilities sector?

- (A) Can't tell from the data provided
- (B) £12,000
- (C) £22,000
- (D) £25,000
- (E) £45,000

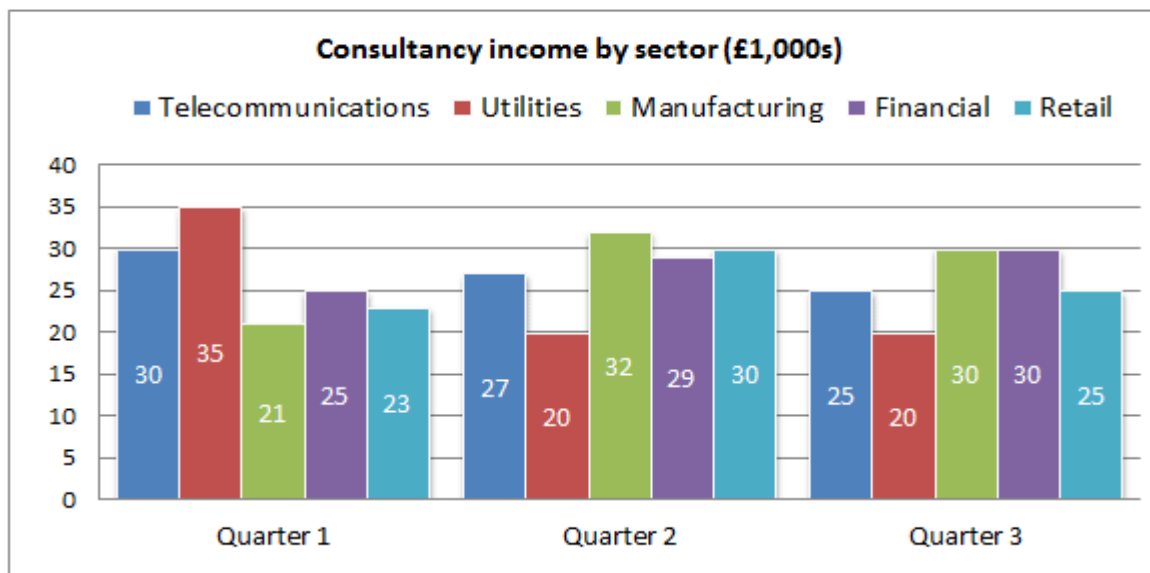


Manufacturing sector - Consultancy income by consultant

Consultant	Quarter 1	Quarter 2	Quarter 3	Quarter 4
David	4,000	3,500	5,000	4,000
Peter	6,000	6,500	7,000	10,500
Sarah	6,000	9,000	5,500	3,000
Jane	4,000	4,500	7,500	4,500
Harry	1,000	4,500	5,000	6,500

Q13 For Quarters 1 and 3 combined, which two Manufacturing sector consultants had incomes in the ratio 2:3?

- (A) Harry and David
- (B) Sarah and Jane
- (C) Harry and Jane
- (D) David and Peter
- (E) David and Sarah

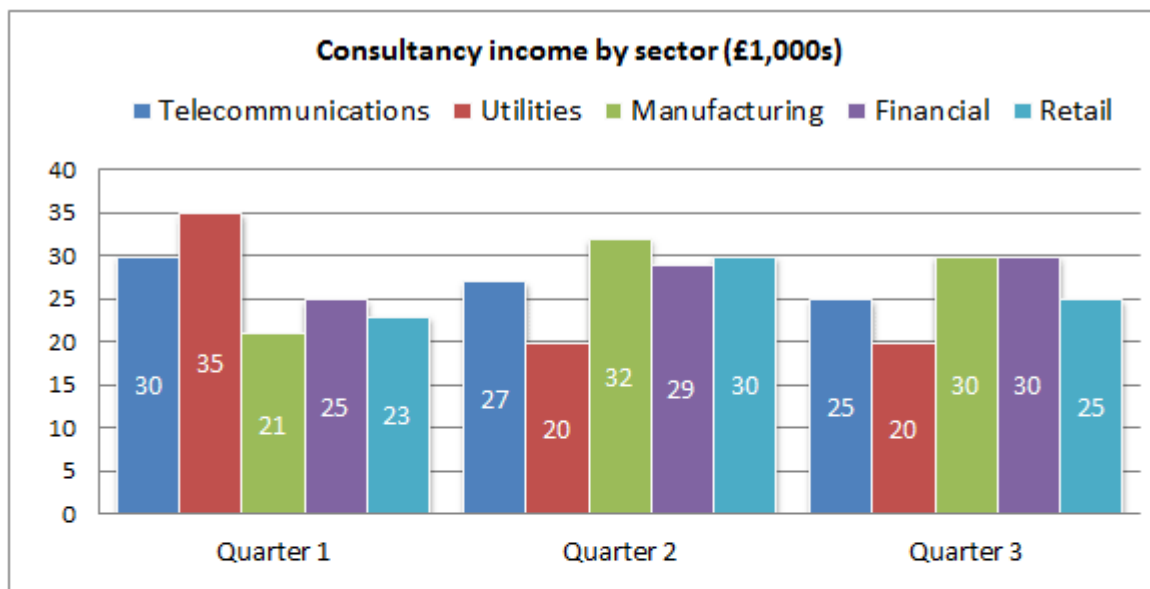


Manufacturing sector - Consultancy income by consultant

Consultant	Quarter 1	Quarter 2	Quarter 3	Quarter 4
David	4,000	3,500	5,000	4,000
Peter	6,000	6,500	7,000	10,500
Sarah	6,000	9,000	5,500	3,000
Jane	4,000	4,500	7,500	4,500
Harry	1,000	4,500	5,000	6,500

Q14 The Manufacturing sector income from the five consultants is supplemented by the work of an associate consultant. What was the associate consultant's income from the Manufacturing sector across Quarters 1 to 3?

- (A) £3,000
- (B) £4,000
- (C) £6,000
- (D) £8,000
- (E) £9,000



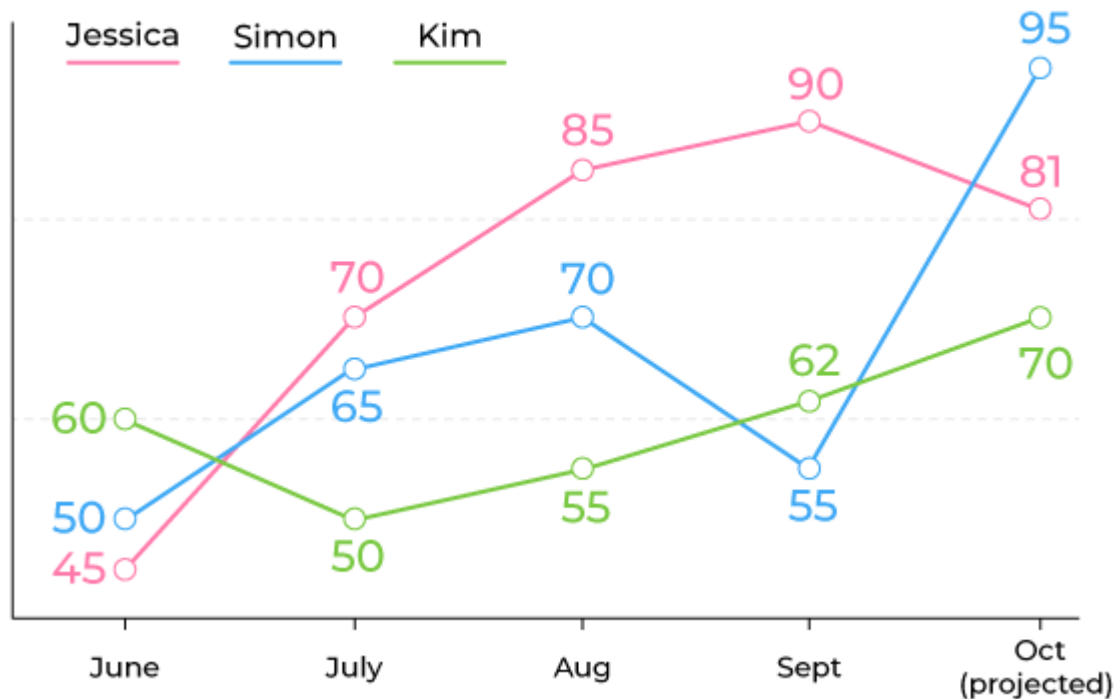
Manufacturing sector - Consultancy income by consultant

Consultant	Quarter 1	Quarter 2	Quarter 3	Quarter 4
David	4,000	3,500	5,000	4,000
Peter	6,000	6,500	7,000	10,500
Sarah	6,000	9,000	5,500	3,000
Jane	4,000	4,500	7,500	4,500
Harry	1,000	4,500	5,000	6,500

Q15 The total quarterly income target, starting with £115,000 for Quarter 1, increased by 20% for each subsequent Quarter. In Quarter 3 what was the difference between actual income and the target?

- (A) £8,000 under-performance
- (B) £18,400 under-performance
- (C) £31,000 over-performance
- (D) £31,000 under-performance
- (E) £35,600 under-performance

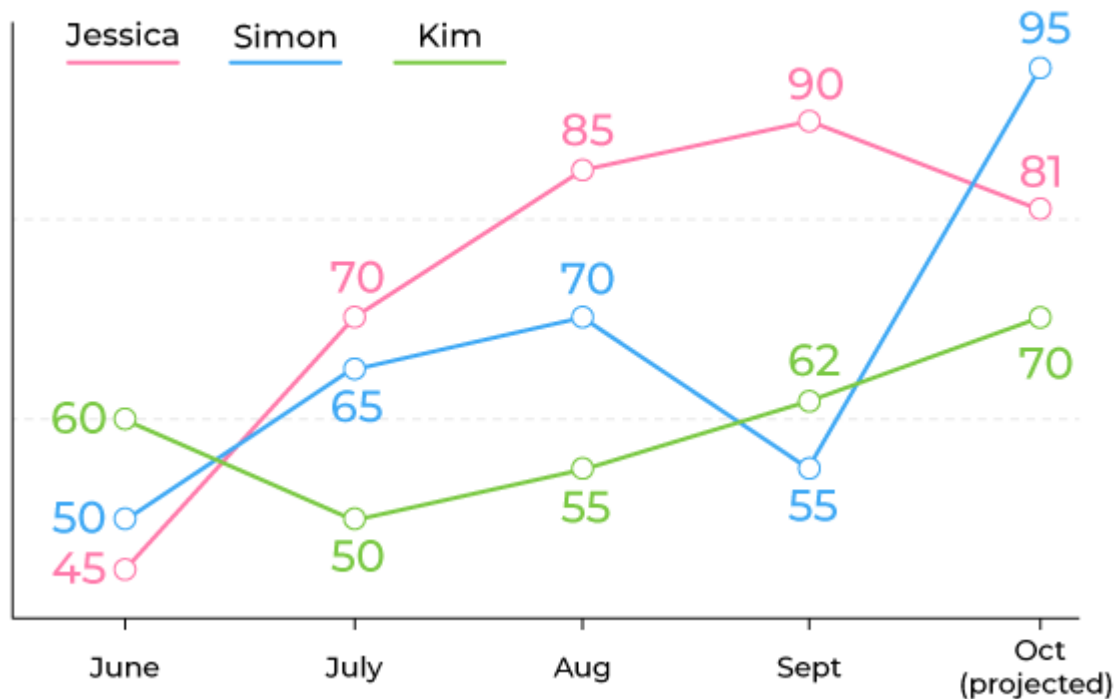
Client Visits (per month) by Sales Managers



Q16 Simon and Jessica have travel allowances of 60p and 44p per mile respectively. Simon and Jessica each travel on average 25 miles and 30 miles respectively per sales visit. How much travel allowance is claimed in total by these 2 Sales Managers in August?

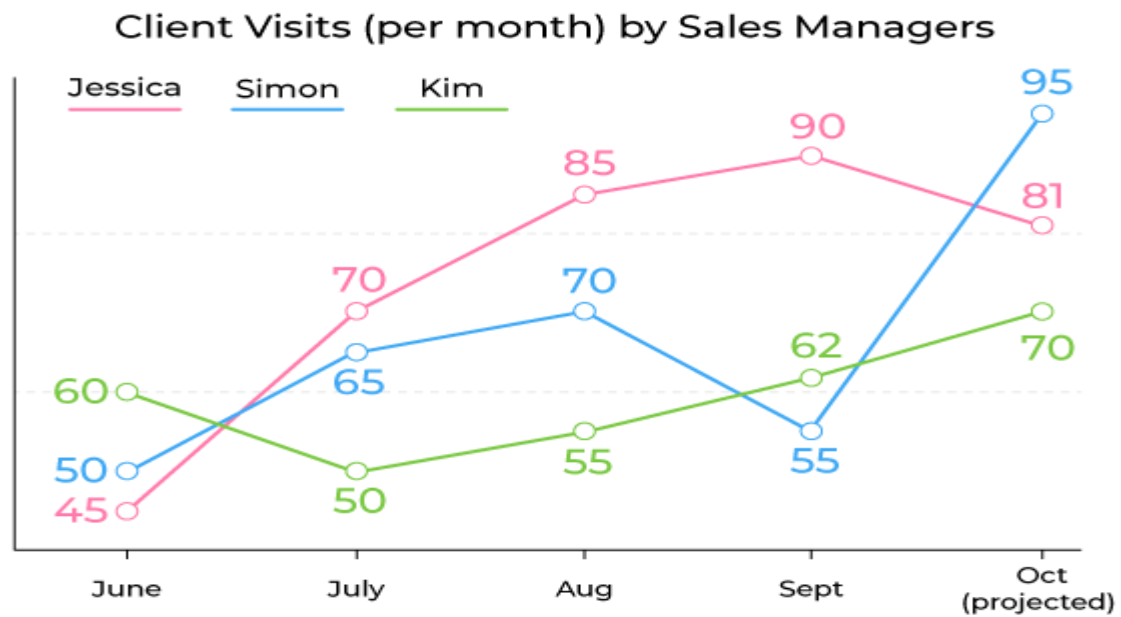
- (A) £1,050
- (B) £1,122
- (C) £2,122
- (D) £2,172
- (E) £2,272

Client Visits (per month) by Sales Managers



Q17 If the percentage change in sales visits between September and October (projected) continues for November, what will Jessica and Kim's number of complete sales visits be in November?

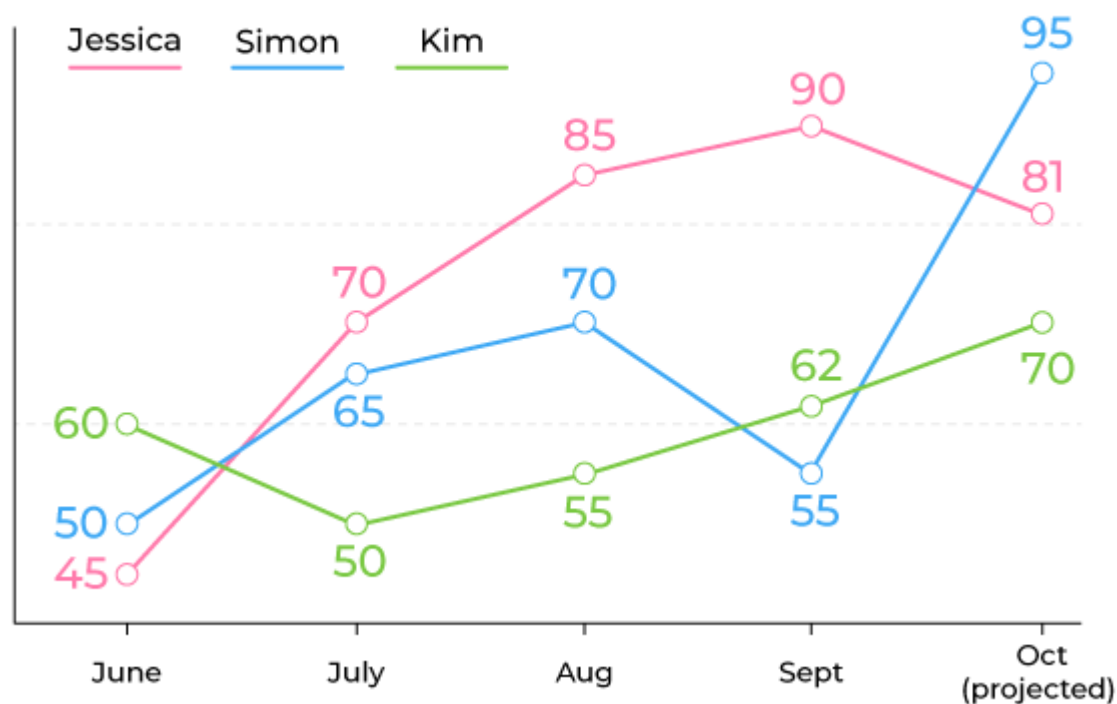
- (A) 71 visits (Jessica); 77 visits (Kim)
- (B) 71 visits (Jessica); 78 visits (Kim)
- (C) 72 visits (Jessica); 78 visits (Kim)
- (D) 72 visits (Jessica); 79 visits (Kim)
- (E) 73 visits (Jessica); 79 visits (Kim)



Q18 If the margin of error on October's projected client visits is $\pm 15\%$, what are the ranges for each Sales Manager (rounded to the nearest whole visit)?

- (A) 90–100 (Simon); 77–85 (Jessica); 66–74 (Kim)
- (B) 90– 107 (Simon); 74–87 (Jessica); 64–76 (Kim)
- (C) 81–109 (Simon); 73–89 (Jessica); 63–77 (Kim)
- (D) 81–109 (Simon); 69–93 (Jessica); 60–81 (Kim)
- (E) 76–104 (Simon); 64–89 (Jessica); 56–76 (Kim)

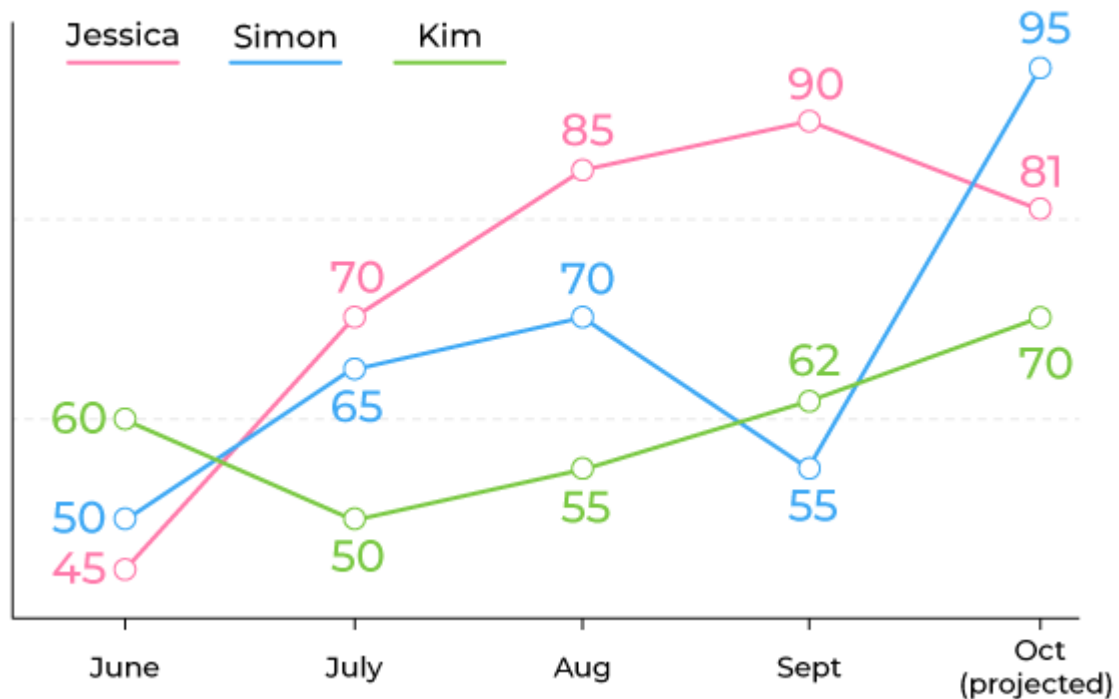
Client Visits (per month) by Sales Managers



Q19 Jessica, who travelled 3,500 miles in July, travelled an extra 10 miles per client visit compared to Simon. What was the total number of miles Simon travelled in July?

- (A) 2,400
- (B) 2,600
- (C) 2,800
- (D) 3,000
- (E) 3,200

Client Visits (per month) by Sales Managers



Q20 The average order value per client visit is £145, £135 and £125 for Simon, Jessica and Kim respectively. Which Sales Managers generate the highest and lowest order values in June?

- (A) Kim (most); Jessica (least)
- (B) Simon (most); Jessica (least)
- (C) Jessica (most); Kim (least)
- (D) Jessica (most); Simon (least)
- (E) Kim (most); Simon (least)

US OPERATIONS YEAR 1	Subsidiary 1	Subsidiary 2	Subsidiary 3	Subsidiary 4	Subsidiary 5
Sales	1,124	3,334	2,250	24,300	14,450
Salary payroll for all staff *	127	409	289	570	4,355
Number of staff	555	1,722	1,343	2,824	13,292
Dividends per share (cents):					
1. Interim dividend paid	6.2	8.5	9	15	11
2. Final proposed dividend	15.8	10.5	46	10	25
Number of shares (millions)	3	3.5	12	2.6	20

* in \$100,000s

Q21 Which subsidiary will pay the lowest amount in dividends (interim and final dividends combined)?

- (A) Subsidiary 1
- (B) Subsidiary 2
- (C) Subsidiary 3
- (D) Subsidiary 4
- (E) Subsidiary 5

US OPERATIONS YEAR 1	Subsidiary 1	Subsidiary 2	Subsidiary 3	Subsidiary 4	Subsidiary 5
Sales	1,124	3,334	2,250	24,300	14,450
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Number of shares (millions)	3	3.5	12	2.6	20

* in \$100,000s

Q22 Which 2 or 3 subsidiaries had combined sales of 18,908?

- (A) Subsidiaries 1 and 5
- (B) Subsidiaries 2 and 5
- (C) Subsidiaries 1, 2 and 5
- (D) Subsidiaries 3 and 5
- (E) Subsidiaries 1, 3 and 5

US OPERATIONS YEAR 1	Subsidiary 1	Subsidiary 2	Subsidiary 3	Subsidiary 4	Subsidiary 5
Sales	1,124	3,334	2,250	24,300	14,450
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Number of shares (millions)	3	3.5	12	2.6	20

* in \$100,000s

Q23 Over the next year, Subsidiary 5's Sales are expected to drop by a fifth whilst its number of staff is expected to increase by 15%. What will be the percentage change in the Sales per member of staff from Year 1 to the next?

- (A) 25%
- (B) 26%
- (C) 29%
- (D) 30%
- (E) 44%

US OPERATIONS YEAR 1	Subsidiary 1	Subsidiary 2	Subsidiary 3	Subsidiary 4	Subsidiary 5
Sales	1,124	3,334	2,250	24,300	14,450
Salary payroll for all staff *	127	409	289	570	4,355
Number of staff	555	1,722	1,343	2,824	13,292
Dividends per share (cents):					
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Number of shares (millions)	3	3.5	12	2.6	20

* in \$100,000s

Q24 What is the ratio of Subsidiary 4's interim dividend per share compared to Subsidiary 5's final dividend per share?

- (A) 2:3
- (B) 5:2
- (C) 2:5
- (D) 3:5
- (E) 5:3

US OPERATIONS YEAR 1	Subsidiary 1	Subsidiary 2	Subsidiary 3	Subsidiary 4	Subsidiary 5
Sales	1,124	3,334	2,250	24,300	14,450
Salary payroll for all staff *	127	409	289	570	4,355
Number of staff	555	1,722	1,343	2,824	13,292
Dividends per share (cents):					
1. Interim dividend paid	6.2	8.5	9	15	11
2. Final proposed dividend	15.8	10.5	46	10	25
Number of shares (millions)	3	3.5	12	2.6	20

* in \$100,000s

Q25 What is the lowest average payroll per member of staff (across the 5 subsidiaries)?

- (A) \$23,751
- (B) \$22,883
- (C) \$21,519
- (D) \$20,764
- (E) \$20,184

Consolidated Income Statements (£millions)	Competitor A	Competitor B	Competitor C
Revenue	580	632	600
Gross profit	128	148	147
Operational profit	108	128	131
Profit before tax	90	112	117
Corporation tax*	-27	-33.6	-35.1
Profit after tax	63	78.4	81.9

*Tax = 30%

Q26 If Profit before tax increases by 15% for Competitor B and decreases by 8% for Competitor A, what is the difference between Competitor A and Competitor B's corporation tax payments (to the nearest £million)?

- (A) £10 million
- (B) £12 million
- (C) £14 million
- (D) £16 million
- (E) £18 million

Consolidated Income Statements (£millions)	Competitor A	Competitor B	Competitor C
Revenue	580	632	600
Gross profit	128	148	147
Operational profit	108	128	131
Profit before tax	90	112	117
Corporation tax*	-27	-33.6	-35.1
Profit after tax	63	78.4	81.9

*Tax = 30%

Q27 Competitor B and Competitor C choose to declare their Revenues in \$ and Euros respectively. What are these figures? (Use the exchange rates 1£ = \$1.66; 1£ = €1.15).

- (A) \$1,043 million (Competitor B); €708 million (Competitor C)
- (B) \$1,049 million (Competitor B); €690 million (Competitor C)
- (C) \$1,049 million (Competitor B); €720 million (Competitor C)
- (D) \$720 million (Competitor B); €1,055 million (Competitor C)
- (E) Can't tell from the data provided

Consolidated Income Statements (£millions)	Competitor A	Competitor B	Competitor C
Revenue	580	632	600
Gross profit	128	148	147
Operational profit	108	128	131
Profit before tax	90	112	117
Corporation tax*	-27	-33.6	-35.1
Profit after tax	63	78.4	81.9

*Tax = 30%

Q28 What would be the difference in Euros if Competitor A used an exchange rate of 1£ = €1.20, rather than 1£ = €1.15, when calculating its Profit after tax?

- (A) €0.05 million
- (B) €1.15 million
- (C) €2.05 million
- (D) €3.05 million
- (E) €3.15 million

Consolidated Income Statements (£millions)	Competitor A	Competitor B	Competitor C
Revenue	580	632	600
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Operational profit	108	128	131
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Corporation tax*	-27	-33.6	-35.1
Profit after tax	63	78.4	81.9

*Tax = 30%

Q29 What was the average Gross profit across the 3 competitors (to the nearest £10million)?

- (A) £140 million
- (B) £141 million
- (C) £142 million
- (D) £143 million
- (E) £144 million

Consolidated Income Statements (£millions)	Competitor A	Competitor B	Competitor C
Revenue	580	632	600
Gross profit	128	148	147
Operational profit	108	128	131
Profit before tax	90	112	117
Corporation tax*	-27	-33.6	-35.1
Profit after tax	63	78.4	81.9

*Tax = 30%

Q30 Competitor C moves to a country charging 15% corporation tax and corporation tax falls to 22% for Competitors A and B. What is the total corporation tax payable for the 3 competitors (based upon the Profit before tax figures shown)?

- (A) £62 million
- (B) £46 million
- (C) £26 million
- (D) £25 million
- (E) Can't tell from data

End of test