Arithmetic (Q 1, Paper 1)

Lesson No. 3: More Percentages

2005

1 (b) (i) The approximation 50×80 was used for the calculation 51×79.
Find the percentage error, correct to one decimal place.

1 (c) At the start of the year 2000 the population of a particular town was P.
During the year 2000, the population of the town increased by 10%.
(i) Express, in terms of P, the population of the town at the end of the year 2000.

(ii) During the year 2001 the population of the town increased by 4%.
During the year 2002 the population increased by 2%.
Find the total percentage increase in the population of the town over the three years.

(iii) The actual increase in the population was 8344. Find the value of P.

2003

1 (c) (i) When using a calculator to add 1.7 and 2.2, a student strikes the multiplication key instead of the addition key.
Calculate the percentage error in the result, correct to one decimal place.

2002

1 (b) Four telephone calls cost €3.85, €7.45, €8.40 and €11.55.
(i) John estimates the total cost of the four calls by ignoring the cent part in the cost of each call. Calculate the percentage error in his estimate.

(ii) Anne estimates the total cost of the four calls by rounding the cost of each call to the nearest euro. Calculate the percentage error in her estimate.

2001

1 (b) (i) The answer to 3.58 + 2.47 was given as 6.50.
What was the percentage error correct to one decimal place?

1996

1 (c) (ii) Calculate the percentage error if 5 is taken as an approximation for 4.95.
Give your answer correct to two places of decimals.

ANSWERS

2005	1	(b) (i) 0.7		
		(c) (i) 1.1*P*	(ii) 16.688	(iii) 50,000
2003	1	(c)	(i) 4.1%	
2002	1	(b)	(i) 7.2%	(ii) 0.8%
2001	1	(b)	(i) 7.4%	
1996	1	(c)	(ii) 1.01%	