

ARITHMETIC (Q 1, PAPER 1)

LESSON NO. 4: MONEY PROBLEMS INCLUDING VAT

2007

1 (c) The table shows the hours Alan worked over four days.

Day	Thursday	Friday	Saturday	Sunday
Hours worked	9	9	9.5	h

Alan's basic rate of pay is €15.60 per hour.

He is paid one and a half times the basic rate for work on Saturday and Sunday.

(i) Calculate Alan's total pay for Thursday, Friday and Saturday.

(ii) Alan was paid a total of €702 for the four days' work.
Find h , the number of hours Alan worked on Sunday.

2006

1 (b) Aoife pays a fixed monthly charge of €15 for her mobile phone. This charge includes 100 free text messages and 50 minutes free call time each month. Further call time costs 28 cent per minute and additional text messages cost 11 cent each.

In one month Aoife sends 140 text messages and her call time is 2 hours.

(i) Find the total cost of her fixed charge, text messages and call time.

(ii) VAT is added to this cost at the rate of 21%.
Find the amount paid, including VAT.

2004

1 (c) A faulty petrol pump actually delivers 1.02 litres of petrol for every 1 litre that the pump registers. During one day the pump registers 2650 litres.

(i) What was the actual volume of petrol delivered?

(ii) Customers paid 85 cent for every litre of petrol registered.
Find the total amount paid for the petrol.

(iii) If the pump had registered the correct volume delivered, how much more would have been paid?

2003

- 1 (b) The present reading on the electricity meter in John's house is 63792 units. The previous reading was 62942 units.
- (i) How many units of electricity were used since the previous reading?
- (ii) What is the cost of the electricity used, if electricity costs 9.52 cent per unit?
- (iii) A standing charge of €7.00 is added and VAT is then charged on the full amount. If John's total bill is €98.91, calculate the rate at which VAT is charged.

2002

- 1 (c) A raffle to raise money for a charity is being held. The first prize is €100, the second is €85, the third is €65 and the fourth is €50. The cost of printing tickets is €42 for the first 500 tickets and €6 for each additional 100 tickets. The smallest number of tickets that can be printed is 500. Tickets are being sold at €1.50 each.
- (i) What is the minimum possible cost of holding the raffle?
- (ii) If 500 tickets are printed, how many tickets must be sold in order to avoid a loss?
- (iii) If 1000 tickets are printed and 65% of the tickets are sold, how much money will be raised for the charity?

1999

- 1 (c) A holiday complex consists of three different types of chalet.

Chalet Type	No. of Chalets	No. of people per chalet	Weekly rent per chalet
Type A	12	5	IR£300
Type B	20	6	IR£350
Type C	14	8	IR£450

During one week in July all chalets are fully occupied.

- (i) Calculate the number of people staying in the chalets at the holiday complex that week.
- (ii) Calculate the total amount of rent paid for that week.

In the last week of September, a 35% discount is offered on the weekly rent of a type C chalet. Calculate the weekly rent on a type C chalet for the last week in September.

1997

- 1 (c) (ii) Tea served in a canteen is made from a mixture of two different types of tea, type A and type B. Type A costs IR£4.05 per kg. Type B costs IR£4.30 per kg. The mixture costs IR£4.20 per kg. If the mixture contains 7 kg of type A, how many kilograms of type B does it contain?

1996

- 1 (b) A tanker delivered heating oil to a school. Before the delivery the meter reading showed 11,360 litres of oil in the tanker. After the delivery, the meter reading was 7160 litres.
Calculate the cost of the oil delivered if 1 litre of oil cost 20.5p.
When VAT was added to the cost of the oil delivered, the bill to the school amounted to IR£1041.81.
Calculate the rate of VAT added.

ANSWERS

- 2007** 1 (c) (i) €503.10 (ii) 8.5 hours
2006 1 (b) (i) €39 (ii) €47.19
2004 1 (c) (i) 2704 litres (ii) €2252.50 (iii) €45.05
2003 1 (b) (i) 850 (ii) €80.92 (iii) 12.5%
2002 1 (c) (i) €342 (ii) 228 (iii) €603
1999 1 (c) (i) 292 (ii) £16,900; £292.50
1997 1 (c) (ii) 10.5 kg
1996 1 (b) £861.00, 21%