

ARITHMETIC (Q 1, PAPER 1)

LESSON NO. 7: INCOME TAX

2006

- 1 (c) The standard rate of income tax is 20% and the higher rate is 42%.
Colm has weekly tax credits of €50 and a standard-rate cut-off point of €240.
Until recently, Colm had a gross weekly income of €900.
- (i) Calculate the tax Colm paid each week.
- (ii) After getting a pay rise, Colm's weekly after-tax income increased by €20.30.
Calculate the increase in Colm's gross weekly income.

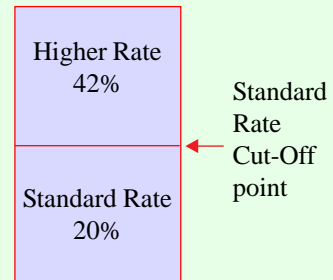
SOLUTION

$$\begin{aligned} \text{Net Tax} &= \text{Gross Tax} - \text{Tax Credits} \\ \text{Take home pay} &= \text{Gross Income} - \text{Net Tax} \end{aligned}$$

Gross Income: €900

(i) Gross Tax

$$\begin{aligned} \text{€240 at 20\%: } & \text{€240} \times 0.2 & = & \text{€48} \\ \text{€660 at 42\%: } & \text{€660} \times 0.42 & = & \text{€277.20} \\ \hline \text{Total Gross Tax} & & = & \text{€325.20} \end{aligned}$$



(ii) After tax rate = $100\% - 42\% = 58\%$

$$58\% = \text{€20.30}$$

$$1\% = \frac{\text{€20.30}}{58}$$

$$100\% = \frac{\text{€20.30}}{58} \times 100 = \text{€35}$$

2004

- 1 (b) The standard rate of income tax is 20% and the higher rate is 42%.
Orla has a gross income of €58 000 for the year and a standard-rate cut-off point of €35 000.
- (i) Calculate the amount of tax due at the standard rate.
- (ii) Calculate the total amount of gross tax due.
- (iii) Orla has tax credits of €3400 for the year.
After tax is paid, what is Orla's income for the year?

SOLUTION

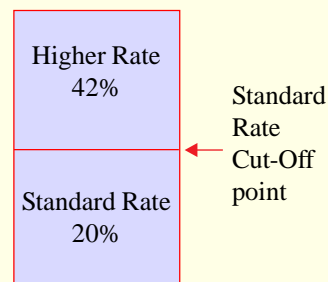
$$\begin{aligned} \text{Net Tax} &= \text{Gross Tax} - \text{Tax Credits} \\ \text{Take home pay} &= \text{Gross Income} - \text{Net Tax} \end{aligned}$$

- (i) Gross Tax

$$€35,000 \text{ at } 20\%: €35,000 \times 0.2 = €7,000$$

- (ii) €23,000 at 42%: $€23,000 \times 0.42 = €9,660$

$$\text{Total Gross Tax} = €16,660$$



- (iii) Net Tax = Gross Tax – Tax Credits = €16,660 – €3,400 = €13,260
Take home pay = Gross Income – Net Tax
= €58,000 – €13,260 = €44,740

2000

- 1 (c) A person has annual tax free allowances of IR£7400.
The person pays income tax at the rate of 24% on the first IR£12 400 of taxable income and at the rate of 46% on the remainder.
- (i) Calculate the amount of income tax paid on the first IR£12 400 of taxable income.
- (ii) Calculate the person's gross income if the total annual income tax paid is IR£5138.

SOLUTION

This is the old way tax used to be assessed. We will show you the method even though you do not need to know it.

- (i) IR£12,400 is taxed at 24%: $0.24 \times 12400 = £2,976$

- (ii) Total tax paid: £5,138

$$\text{Tax paid at higher rate: } £5,138 - £2,976 = £2,162$$

$$\text{Total amount taxed at higher rate: } \frac{£2,162}{0.46} = £4,700$$

$$\text{Gross income} = £4,700 + £12,400 + £7,400 = £24,500$$