

Unit 5 *Tax and National Insurance*

Text Answers

5.1 Income Tax

1. Yearly income tax = $0.2 \times £26\,000 = £5\,200$ so average monthly take-home pay
 $= (£36\,000 - £5\,200) \div 12$
 $\approx £2\,567$
2. Yearly income tax = $0.2 \times £31\,865 + 0.4 \times (£75\,000 - £31\,865)$
 $= £23\,627$
 Percentage of salary $\approx 28\%$
3. (a) Earns £10 400, so tax paid = $0.2 \times £400 = £80$
 Average weekly take-home pay = $20 \times £10 - \frac{1}{52} £80$
 $\approx £198.46$
 (b) Chris now earns, per week, $8 \times £15 + 12 \times £10 = £240$
 so in a year, $52 \times £240 = £12\,480$
 Tax paid = $0.2 \times £2480$
 $= £496$
 and weekly tax paid = $\frac{£496}{52} \approx £9.54$
 So Chris' weekly take-home pay is now $£240 - £9.54 = £230.46$
4. (a) (i) Her tax = $0.2 \times £31\,865 + 0.4 \times (£150\,000 - £31\,866)$
 $+ 0.45 \times (£205\,000 - £150\,000)$
 $\approx £78\,377$
 (ii) Percentage of salary $\approx 36.5\%$
 (b) Deduction as tax will be $0.45 \times £50\,000 = £22\,500$ and tax as a percentage of salary is now
 $\frac{100\,877}{265\,000} \times 100 \approx 38.1\%$

5.2 National Insurance

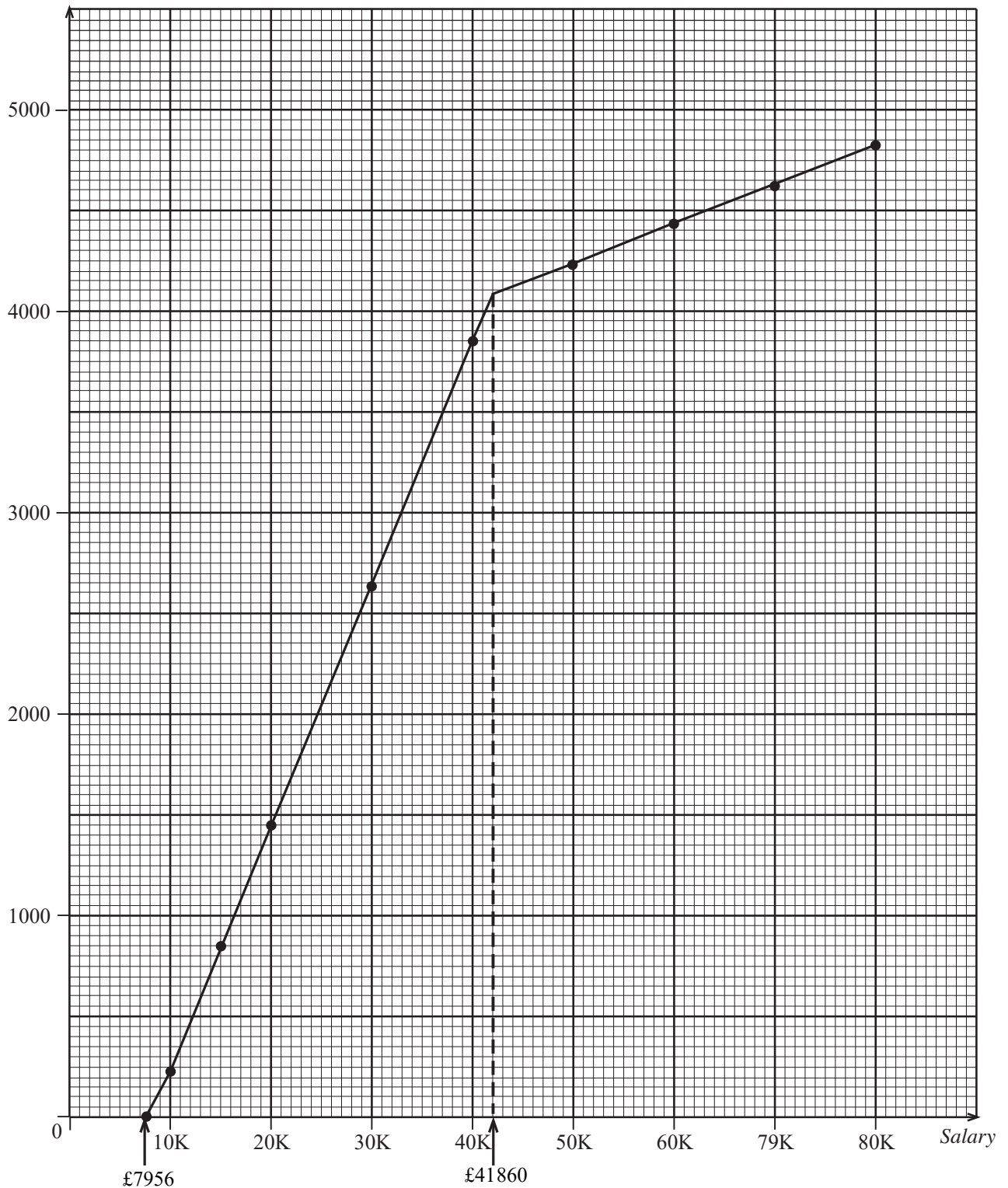
1. (a) $0.12 \times (£380 - £153) = £27.24$ per week
 (b) Her payments are reduced by
 $(0.12 - 0.106) \times (£28\,000 - £7\,956)$
 $= 0.014 \times £20\,044$
 $= £280.62$
 (c) $0.12 \times (£2\,500 - £663) = £220.44$ per month
 (d) Earns $£7.50 \times 25 = £187.50$ and so pays
 $0.12 \times (£187.50 - £153) = £4.14$ per week

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5.2

2. NI contribution



- Main features:
- no NI payable up to about £8000
 - steep constant increase from £8000 to about £42 000
 - much slower constant increase for income above £42 000

This raises the question of why higher income earners pay proportionally less NI than lower earners.

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5.3 Combining Tax and National Insurance

1. (a) (i) Income tax paid = $0.2 \times £25\,000 = £5000$ per year
NI contributions = $0.106 \times (£35\,000 - £7956) = £2866.66$ per year
Hence take-home pay per month = $£(35\,000 - 5000 - 2866.66) \div 12$
 $= £2261.11$
(ii) Percentage of income taken home $\approx \frac{2261.11}{2916.67} \times 100 \approx 77.52\%$
- (b) (i) Taxable income is now $£42\,500 - £10\,000 = £32\,500$
So income tax paid = $0.2 \times £31\,865 + 0.4 \times (£32\,500 - 31\,865) = £6627$
(ii) Percentage of income taken home = $\frac{(42\,500 - 6627 - 3632.10)}{42\,500} \times 100 = 75.86\%$
2. (a) *Income tax*: Sara earns $£12.50 \times 15 \times 52 = £9750$ per year
 $= < £10\,000$
Hence Sara pays no income tax.
- (b) *NI contributions*: Yes: Sara pays $0.12 \times (£9750 - 7956) = £215.28$ per year
3. (a) Steve is paid $0.8 \times £64\,000 = £51\,200$ and so pays income tax on £41 200, giving
 $0.2 \times £31\,865 + 0.4 \times (£41\,200 - 31\,865) = £10\,107$
and his NI contributions are $0.12 \times (£41\,860 - 7965) + 0.02 \times (£51\,200 - 41\,860)$
 $= £4255.28$
Take-home pay per month = $£(51200 - 10107 - 4255.28) \div 12$
 $\approx £3069.81$
- (b) $\frac{14\,362.28}{51\,200} \times 100 \approx 28.05\%$ Steve pays approximately 28% of his salary in tax and NI contributions
4. Ben's maximum yearly income before he has to pay income tax is £10 000, but he also needs to earn no more than £7956 to avoid paying NI contributions.
So if he earns £7956, he will work
 $\frac{7956}{6}$ hours = 1326 hours per year,
giving $\frac{1326}{52} = 25\frac{1}{2}$ hours per week.