Preliminary Material Core Maths 2023

AQA Paper 1 Finance

Have the preliminary Material to hand to answer these questions.

Student Loans

Q1)   For each person below, calculate how much their student loan repayment is per month.

Name	University Start date	Total loan amount	Current annual salary	Monthly repayment
Khadija	Sep 2011	£36 000	£26 000	
Aditya	Sep 2019	£27 750	£27 000	
Isra	Sep 2019	£27 750	£30 230	
Malika	Sep 2009	£18 000	£41 505	
Emil	Apr 2012	£27 000	£55 988	

Q2)   Harry started university in September 2011 and took out a student loan.

His annual salary is £35 000.

He says, "If I went to university one year later, my monthly student loan payments would be half as much."

Comment on Harry's claim.

Tax and National Insurance

Q3)   What is the take-home pay (after deducting Income Tax and National Insurance) for someone earning £44 300 per year?

Tax and National Insurance cont.

Q4) Verity is paid £6.83 per hour. What is the maximum number of hours she can work in a month without having to pay any National Insurance?

Q5) Caleb trained to be a Physics teacher, and got paid a bursary of £27 000.

He was also given a parents allowance of £1 710.

Both of these payments were Tax free and not subject to National Insurance.

During his teacher training, he did not have to pay back his Student Loan.

This means that during training, his monthly pay was effectively £2 392.50

In his first year of teaching, his salary is £29 800

After Income Tax, National Insurance and Student Loan payments (he started university in 2019) are deducted, work out how much **less** Caleb is being paid each month.

Q6) If you earn over £100 000 per year, your personal allowance reduces by £1 for each £2 you are over £100 000. How much Income Tax do each of the following people pay per year?

Name	Income	Personal Allowance	Taxable Income	Income Tax
Cara	£102 000			
Kaitlyn	£123 040			
Nino	£220 200			

Treat all of these with caution.

Q1)   For each person below, calculate how much their student loan repayment is per month.

Name	University Start date	Total loan amount	Current annual salary	Monthly repayment
Khadija	Sep 2011	£36 000	£26 000	£45.79
Aditya	Sep 2019	£27 750	£27 000	£0
Isra	Sep 2019	£27 750	£30 230	£22.01
Malika	Sep 2009	£18 000	£41 505	£162.08
Emil	Apr 2012	£27 000	£55 988	£215.20

Q2)   The two different repayments would be £113.29 and £57.79.

Harry's claim is justified.

Q3)   Gross annual is £44 300

Inc Tax

Taxable income = 44300-12570= 31730

20%   31730x0.20=6346

National Ins

(Their salary doesn't go into the 3.25% bit so don't need to worry about that)

44300-12570=31730

13.25%   31730x0.1325=4204.22 (NB: this gets rounded down but you'd be ok with 4204.23

Take-home

44300-6346-4204.22=£33 749.78

Treat all of these with caution.

Q4)   You can earn £1048 per month without having to pay NI.

$1048 \div 6.83 = 153.44$

So at this pay, Verity could work 153 hours a month without paying National Insurance

Q5)   Gross annual is £29 800

Inc Tax

Taxable income = 29800-12570= 17230

20%   17230x0.20=3446

National Ins

(Their salary doesn't go into the 3.25% bit so don't need to worry about that)

 29800-12570= 17230

13.25%   17230x0.1325=2282.97

Student Loan

Threshold is 27295

29800-27295=2505

0.09x2505=225.45

Annual Take-home

29800-3446-2282.97-225.45=£23 845.58

Monthly Take-Home

23845.58/12=1987.13

Answer

2392.50-1987.13=£405.37 worse off per month

Name	Income	Personal Allowance	Taxable Income	Income Tax
Cara	£102 000	£11 570	£90 430	7540 + 21092 = £28 632
Kaitlyn	£123 040	£1 050	£121 990	7540 + 33 716 = £41 256
Nino	£220 200	£0	£220 200	7540 + 44920 + 31590 = £84 050