JC Higher Arithmetic

Question 1

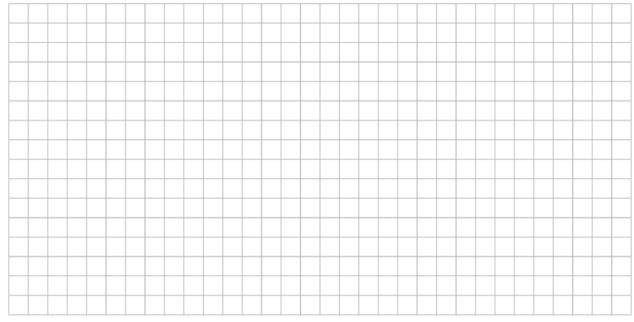
Question 4

(Suggested maximum time: 10 minutes)

studying is easier on **StudyClix.ie**

Dermot has \in 5000 and would like to invest it for two years. A special savings account is offering a rate of 3% for the first year and a higher rate for the second year, if the money is retained in the account. Tax of 41% will be deducted each year from the interest earned.

(a) How much will the investment be worth at the end of one year, after tax is deducted?



(b) Dermot calculates that, after tax has been deducted, his investment will be worth €5223.60 at the end of the second year. Calculate the rate of interest for the second year. Give your answer as a percentage, correct to one decimal place.



Question 2

Last year Elena had a gross income of €36 960.

She had to pay Universal Social Charge (USC) and income tax on her gross income. The rates and bands of USC are as follows.

Income band	Rate of USC
Up to €10 036	2%
Between €10 036 and €16 016	4%
Above €16 016	7%

(i) Find the amount of USC that was deducted from Elena's gross income last year.



 (ii) The standard rate of income tax was 20% and the higher rate was 41%. The standard rate cut-off point was €32 800. Elena paid a total of €4965.60 income tax last year.

Find Elena's tax credits for the year.



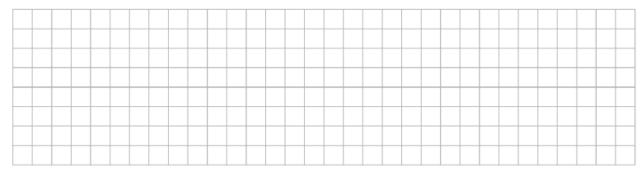
(iii) Find Elena's total deduction (USC and income tax) as a percentage of her gross income. Give your answer correct to the nearest percent.

Question 3

The minimum wage per hour for different categories of workers is shown in the table. By law the Under 18 minimum wage is set at 70% of the minimum wage for an experienced adult worker.

(a) Verify that this is true for the rates shown in the table on the right.

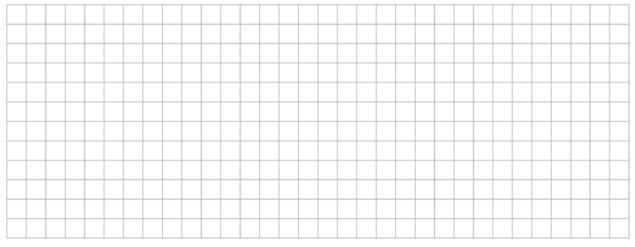
Category	Min. Wage per hour										
Experienced adult worker	€8.65										
Aged under 18	€6.06										
Over 18 in first year from date of first employment	€6.92										
Over 18 in second year of first employment	€7.79										
Source: www.citizensinformation.ie											



(b) The government has decided that it is going to reduce all minimum wage rates by 6%. Calculate the new minimum wage for an experienced adult worker, correct to two decimal places, after this reduction.



(c) John is an experienced adult worker. After the reduction he says "If the minimum wage were to be increased by 6% then I would be back earning €8.65 per hour." Is John's statement correct? Explain your answer.



Question 4

The value of one euro against other currencies on a particular day is shown in the table below.

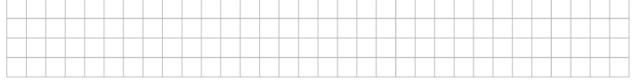
Currency	Rate (€)
US Dollar	1.4045
Pound Sterling	0.87315
Lithuanian Litas	3.4528
Latvian Lats	0.7093
Polish Zloty	4.0440

(a) Mary was going to America for a few months. She changed €1200 into US Dollars using the exchange rate in the table.

110	0	mai	ly u	ла	ວລເ	iou	iu a	sile	TUU	CIV	c ai	una	UNI	mai	ige.	race	14	 	 _	_		
-												_				_	-		 			-
_					-							-		-		-	-		 -		-	-
_	_			_							_	_			_	_	_		 		_	-
_				-				_				_				_	-		 	_		-
-				_													-		 			-
_	_			_							_	_			_	_			 		_	
-												_					-		 			-
		1			1.00	,											-					-
							Image: 1 minipage with the sector of the	Image: set of the set of	Image: Constraint of the sector of the se													The bank charged 3% commission on the transaction. How many dollars did she

(i) How many dollars should she receive at this exchange rate?

(ii) The bank charged 3% commission on the transaction. How many dollars did she receive?



(b) On returning to Ireland Mary had \$3060. She changed this amount into euro. The bank again charged her 3% commission on the transaction. She received €2047. Find the exchange rate on that day, correct to two decimal places.

0	· · ·	•

(c) David changed a certain amount of sterling into euro at the exchange rate in the table above. A few days later he again changed the same amount of sterling into euro at a different exchange rate. He received fewer euro this time. No commission was charged on these transactions. Write down one possible value for the exchange rate for the second transaction.

£1 = €																					