FUNCTIONAL SKILLS MATHEMATICS

AQA | Edexcel | City & Guilds | Open Awards | NCFE | Highfield

Level 2

Interest and Compound Interest

Materials
- You **cannot** use a calculator for **questions** with this symbol.

Instructions
- Answer **all** questions.
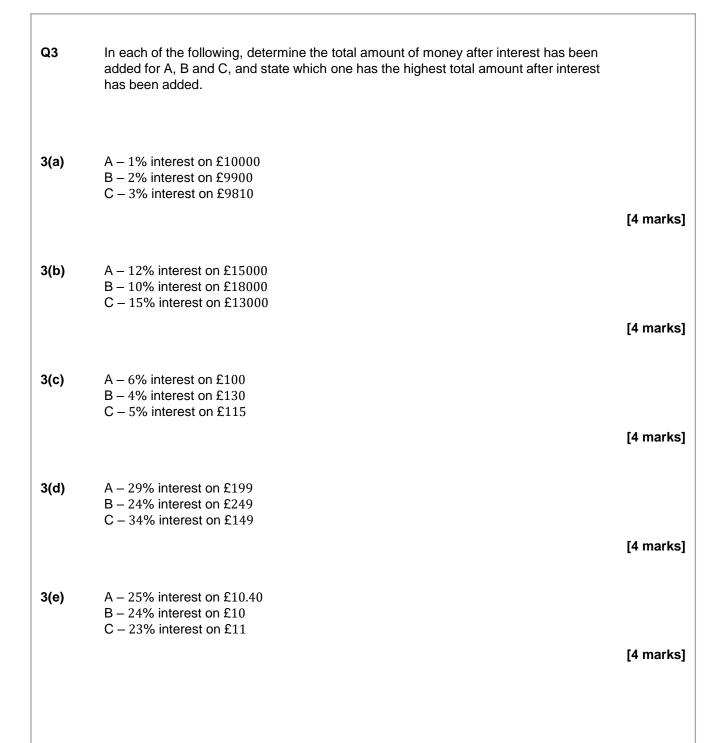- Answer questions on separate paper.

Information and Advice
- The marks for each question are shown in brackets – use this as a guide on how long to spend on each question.
- Read each question carefully before you answer it.
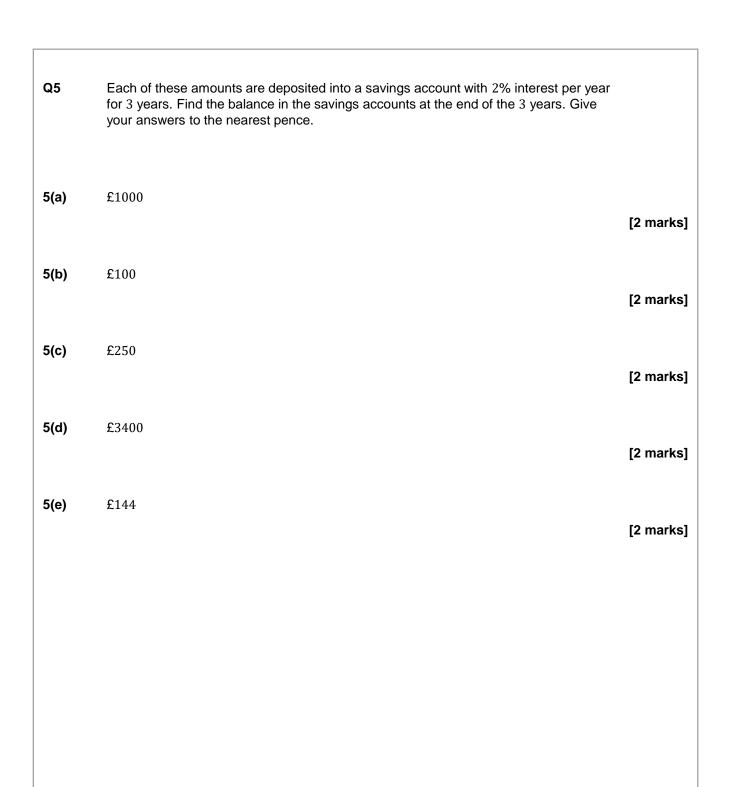- Check you answers.

Q1   Increase these amounts by the specified interest.

1(a)   7% interest on £100

[2 marks]

1(b)   1% interest on £15000

[2 marks]

1(c)   4% interest on £50

[2 marks]

1(d)   18% interest on £350

[2 marks]

1(e)   3% interest on £31

[2 marks]

1(f)   49% interest on £116

[2 marks]

1(g)   2% interest on £25.50

[2 marks]

1(h)   28% interest on £16384

[2 marks]

1(i)   112% interest on £65

[2 marks]

1(j)   6% interest on £998.50

[2 marks]

20

Turn over ►

Q2   Alice is looking at savings accounts offered by different banks. These have a maximum amount that can be placed into them, which Alice intends to do in all cases.
A – 5% interest, maximum £1000
B – 2% interest, maximum £4000
C – 10% interest, maximum £750
D – 1% interest, maximum £10000

2(a)   How much interest will Alice earn in account A? What will her total balance be after interest?

[2 marks]

2(b)   How much interest will Alice earn in account B? What will her total balance be after interest?

[2 marks]

2(c)   How much interest will Alice earn in account C? What will her total balance be after interest?

[2 marks]

2(d)   How much interest will Alice earn in account D? What will her total balance be after interest?

[2 marks]

Turn over ►

Q3 In each of the following, determine the total amount of money after interest has been added for A, B and C, and state which one has the highest total amount after interest has been added.

3(a) A – 1% interest on £10000
B – 2% interest on £9900
C – 3% interest on £9810

[4 marks]

3(b) A – 12% interest on £15000
B – 10% interest on £18000
C – 15% interest on £13000

[4 marks]

3(c) A – 6% interest on £100
B – 4% interest on £130
C – 5% interest on £115

[4 marks]

3(d) A – 29% interest on £199
B – 24% interest on £249
C – 34% interest on £149

[4 marks]

3(e) A – 25% interest on £10.40
B – 24% interest on £10
C – 23% interest on £11

[4 marks]

Q4   Alice, Bob and Chloe have these amounts of money in a bank account with these interest rates:
Alice - £15000 at 1%
Bob - £9000 at 3%
Chloe - £10000 at 2%

4(a)   How much interest does Alice earn? What is her total balance after interest?

[2 marks]

4(b)   How much interest does Bob earn? What is his total balance after interest?

[2 marks]

4(c)   How much interest does Chloe earn? What is her total balance after interest?

[2 marks]

4(d)   Who earns the most interest? Who has the most money at the end?

[1 mark]

Q5 Each of these amounts are deposited into a savings account with 2% interest per year for 3 years. Find the balance in the savings accounts at the end of the 3 years. Give your answers to the nearest pence.

5(a) £1000

[2 marks]

5(b) £100

[2 marks]

5(c) £250

[2 marks]

5(d) £3400

[2 marks]

5(e) £144

[2 marks]

Q6   The interest on Alice, Bob and Chloe's savings accounts are yearly, and all of them keep their money in for 3 years, at the same rates as previously.
Alice - £15000 at 1% per year
Bob - £9000 at 3% per year
Chloe - £10000 at 2.1% per year

6(a)   How much interest does Alice earn? What is her total balance after interest?

[4 marks]

6(b)   How much interest does Bob earn? What is his total balance after interest?

[4 marks]

6(c)   How much interest does Chloe earn? What is her total balance after interest?

[4 marks]

6(d)   Who earns the most interest? Who has the most money at the end?

[2 marks]

14

Turn over ▶

Q7 In each of the following, determine how much money A, B and C produce, and state which one produces the most.

7(a) A – 1% interest on £10000 for 2 years
B – 8% interest on £9800 for 2 years
C – 5% interest on £9640 for 3 years

[5 marks]

7(b) A – 19% interest on £110000 for 2 years
B – 18% interest on £130000 for 3 years
C – 10% interest on £199000 for 3 years

[5 marks]

7(c) A – 6% interest on £10 for 3 years
B – 4% interest on £13 for 2 years
C – 5% interest on £11.50 for 3 years

[5 marks]

15

Turn over ▶

Q8   Courtney's household budget looks like this:
Rent – £875 per month
Water – £220 per year
Energy – £45 per month
Phone contract – £30 per month
Internet – £28 per month
Food – £24 per week
Clothes – £20 per month
Entertainment – £15 per week
Miscellaneous – £10 per week
Savings – £100 per month

8(a)   Find her total budget per year.

[4 marks]

8(b)   If her take home pay (after tax) is £18000 per year, is she earning enough money?

[1 mark]

8(c)   If she contributed 3% of her take home pay (after tax) to a pension scheme, how
much money would she be left with per year?

[2 marks]

8(d)   If her take home pay is now £25000 per year (after tax and the pension scheme), how
much extra money does she have per month, compared to her previous pay after tax
and the pension scheme?

[3 marks]

10

Q9   Andy earns £28000 before tax.
Belle earns £55000 before tax.
Carl earns £10500 before tax.

9(a)   In the UK, income tax is not paid on salaries below £12570. Which person pays no income tax?

[1 mark]

9(b)   Earnings between £12570 and £50270 are taxed at 20% (in a marginal form, i.e. no tax is paid on the first £12570 of earnings no matter how much someone earns). How much tax does Andy pay?

[3 marks]

9(c)   Earnings above £50271 are taxed at 40% (again in a marginal form). How much tax does Belle pay?

[4 marks]