

# Tutor notes for Module 2:

## Money-related number problems



### Module 2: Money-related number problems, Section A, Challenge 2

<b>Challenge title</b>	Savings		
<b>Challenge</b>	You have £1000 to put into a bank account and keep for five years. Look at <b>three</b> different bank accounts and compare how much money you would have after five years.		
<b>Aim</b>	<ul style="list-style-type: none"><li>• To understand how to make basic percentage calculations and apply them to contextual problems</li><li>• To understand the effects of compounding interest in terms of savings</li></ul>		
<b>Challenge ref.</b>	2A2	<b>Session time</b>	approx. 2 hours
<b>Skills</b>	Calculating compound percentage; Calculating percentages; Constructing arguments; Financial literacy; Interpreting problems; Planning and organisation; Planning solutions; Reasoning.		

#### Suggested approach

Example bank accounts are provided in the e-portfolio system for students to use. The **comparing bank accounts** resource can be used to support this part of the challenge. To further challenge students they could investigate real bank accounts and find their own examples to compare.

It is important that students find different sorts of deals to practise simple and compound interest. Actual published bank account offers can be hard to unpick to get at the actual calculations required. Savings accounts often use APR for comparison purposes and some bank accounts will have variable interest rates, in which case students should assume the rate is the same each year.

The more straightforward way to approach the challenge is to use the three examples provided in the resource (via the e-portfolio system), or students could use a combination of these examples and real-life examples. When using the examples provided, make sure students understand they need to multiply the monthly account fee for account 2 by 12 so that they are working on the annual fee.

Students may have come across the compound interest formula:

$$A = P \left(1 + \frac{r}{n}\right)^{nt}$$

Where:

- A = amount
- P = principal
- r = interest rate (decimal)
- n = number of times interest is compounded per year
- t = time in years

This will only work for bank account 1 and the formula can be replaced with simple manual calculations. Students will find the manual calculations easier to follow, but over long periods the formula is quicker; students should understand how to use both.

When students write up their challenge they will need to explain each step in their working out and reasoning, setting this out in a short and concise way. Each step in the calculation needs to have a brief explanation of what is being done, before drawing their final conclusion (eg account 1 is the best deal because...).

#### Suggested resources

The following learner resources are provided for this challenge:

- Challenge walkthrough 2A2
- Comparing bank accounts (p34–36 of the learner workbook)