LO: To calculate interest (bronze).

Can you work out how much compound interest you will pay on this 20 year mortgage.

Remember you will pay compound interest on your mortgage so you will need to work out the added interest for each year to find out the total cost.

BARCLAYS

3 % over 20 years

Amount borrowed	£100,000	Year 7		Year 14	
Year 1 (£100,000 x 1.03)	£103,000	Year 8		Year 15	
Year 2 (£103,000 x 1.03)	£106,090	Year 9		Year 16	
Year 3 (£106,090 x 1.03)		Year 10		Year 17	
Year 4		Year 11		Year 18	
Year 5		Year 12		Year 19	
Year 6		Year 13		Year 20	

Final amount to be paid to bank = £_____

Amount of interest paid = £_____

LO: To calculate interest (silver).

These three banks are all offering different deals and compound interest rates on their savings accounts. Work out how much interest you could earn at each of the banks over a 3-year period, on savings of £500. Complete the table below for the amounts listed. Then decide which one is best to save your money with and explain why. Is it the bank you expected?

SAVING BANK
5% APR IN THE FIRST YEAR
2% APR IN FUTURE YEARS

INSTANT BANK
6% IN THE FIRST YEAR
1% IN YEARS TWO AND THREE

STEADY BANK 3% PER YEAR

	Saving Bank	Instant Bank	Steady Bank
Starting amount	£500	£500	£500
Amount at end of year 1			
Amount at end of year 2			
Amount at end of year 3			
Interest earned over 3 years (i.e. amount at end of year 3 minus starting amount)			

Which bank is actually offering the best deal? Which of these banks should you save your money with and why? Was this what you expected?

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Interesting Earnings

Since the year 2000 Lego sets have been a better investment than either stocks or shares or gold, with the value of sets increasing on average 12%. The best performing set – The Ultimate Collector's Millennium Falcon – has increased in value from £342.49 to £2712. Sometimes, people invest their savings in places other than banks because they might get more money. This is however risky, and sometimes people don't make as much money as they would have done in interest from the bank. Some investments actually end up losing money!

You have won **£1,000,000** in the Lottery! Choose one of the six investment schemes below and see how your money will grow over **ten years**. Was the one you chose the best investment? How can you check?

Property Investment	High Risk Investment	Savings Account
Your money doubles every 2 and a half years.	Toss a coin for the end of each of the 10 years – if it is heads double your money. If it is tails, lose half of it.	Earn 5% each year in compound interest.
Start a Business Choose how much to invest and then roll a dice. 1 = double your investment 2 = lose it all 3 = triple your investment 4 = get your money back 5 = get half your money back 6 = get your money back plus 50%	**Stock Market Investment** For 5 years earn nothing, for the other 5 years earn 10%. This can happen in any order you like!	**Hide Your Money Under Your Mattress** Amount doesn't change!

Show your working out

Can you work out how much compound interest you will pay on this 20 year mortgage.

Remember you will pay compound interest on your mortgage so you will need to work out the added interest for each year to find out the total cost.

BARCLAYS

3 % over 20 years

Amount borrowed	£100,000	Year 7	£122,987.39	Year 14	£151,258.97
Year 1 (£100,000 x 1.03)	£103,000	Year 8	£126,677.01	Year 15	£155,796.74
Year 2 (£103,000 x 1.03)	£106,090	Year 9	£130,477.32	Year 16	£160,470.64
Year 3 (£106,090 x 1.03)	£109,272.70	Year 10	£134,391.64	Year 17	£165,284.76
Year 4	£112,550.88	Year 11	£138,423.387	Year 18	£170,243.31
Year 5	£115,927.41	Year 12	£142,576.09	Year 19	£175,350.61
Year 6	£119.405.23	Year 13	£146,853.371	Year 20	£180,611.12

Final amount to be paid to bank = <u>£180,611.12</u>

Amount of interest paid = <u>£80,611.12</u>

LO: To calculate interest (silver) - answers.

These three banks are all offering different deals and compound interest rates on their savings accounts. Work out how much interest you could earn at each of the banks over a 3-year period, on savings of £500. Complete the table below for the amounts listed. Then decide which one is best to save your money with and explain why. Is it the bank you expected?

SAVING BANK
5% APR IN THE FIRST YEAR
2% APR IN FUTURE YEARS

INSTANT BANK
6% IN THE FIRST YEAR
1% IN YEARS TWO AND THREE

STEADY BANK 3% PER YEAR

	Saving Bank	Instant Bank	Steady Bank
Starting amount	£500	£500	£500
Amount at end of year 1	£525	£530	£515
Amount at end of year 2	£535.50	£535.30	£530.45
Amount at end of year 3	£546.21	£540.65	£546.36
Interest earned over 3 years (i.e. amount at end of year 3 minus starting amount)	£46.21	£40.65	£46.36

Which bank is actually offering the best deal? Which of these banks should you save your money with and why? Was this what you expected?

_____
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_____
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_____

Interesting Earnings

Since the year 2000 Lego sets have been a better investment than either stocks or shares or gold, with the value of sets increasing on average 12%. The best performing set – The Ultimate Collector's Millennium Falcon – has increased in value from £342.49 to £2712. Sometimes, people invest their savings in places other than banks because they might get more money. This is however risky, and sometimes people don't make as much money as they would have done in interest from the bank. Some investments actually end up losing money!

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Start a Business Choose how much to invest and then roll a dice (if you don't have a dice write 1-6 on pieces of paper to choose from) 1 = double your investment 2 = lose it all 3 = triple your investment 4 = get your money back 5 = get half your money back 6 = get your money back plus 50%	**Stock Market Investment** For 5 years earn nothing, for the other 5 years earn 10%. This can happen in any order you like!	**Hide Your Money Under Your Mattress** Amount doesn't change!

Show your working out

Answers will vary