


Compound Interest


1. In each example below find the amount owed at the end of the term
 - (a) £3500 loan at 6% interest p.a. over 4 years
 - (b) £12500 loan at 4% interest p.a. over 6 years
 - (c) £1500 loan at 6.5% interest p.a. over 2 years
 - (d) £3700 loan at 3.5% interest p.a. over 5 years

2. A car is bought for £16500 and depreciates by 12% p.a. for the first two years. How much will it be worth at the end of the second year?

3. A house increased in value by 3% p.a. for 3 years. It was bought for £75000. How much is it worth now?



4.



The number of tadpoles in a pond is 34714.
The population of tadpoles drops by 15% per week.
How many tadpoles would be left after 6 weeks?

5. Calculate the value of a car when
 - (a) the original value is £14000 and it drops 15% in the first two years and 11% in the third.
 - (b) the original value is £11500 and it drops 12% in the year 1 and 9% in the next three years.
 - (c) the original price is £6700 and it fell by 7% in the first three years and 6% in the next two.

6. The amount of a drug in a hospital patients system decreases by 35% per hour. Initially 60mg of a drug were given to the patient.
 - (a) How much would be left over after 3 hours?
 - (b) The patient needs to maintain a minimum of 10mg. When will they need more?

7. The length of a stalagmite increases by 1.5% per year. The current height is 65cm. How long will it takes the stalagmite to reach 70cm?

8. (PP) There are 964 pupils on the roll of Aberleven High School. It is forecast that the roll will decrease by 15% per year. What will be the expected roll after 3 years? Give your answer to the nearest ten.

9. (PP) Alistair buys an antique chair for £600. It is expected to increase in value at the rate of 4.5% each year. How much is it expected to be worth in 3 years?