

Interest and Growth & Decay – www.m4ths.com – Steve Blades ©

- (1) Fred invests £1800 in a bank paying 5% simple interest a year. Find the value of his investment after 8 years.
- (2) A car depreciates at a rate of 7% a year. A new car is £58000. Find the value of the car after 13 years. Give your answer to the nearest £
- (3) Tim invests £1200 in a bank. In the first year he is given 8% interest and 1.5% compound interest for all years after that. Find the value of his investment after 13 years.
- (4) A hat increases in value by 16% a year. If the hat was bought for £40, what is its value after 8 years?
- (5) The population of an island is decreasing by 14% a year. The initial population was 30'000. Find the population after 5 years to the nearest person.
- (6) A bank account pays 1.8% interest in the first year and 6.4% compound for all other years. Tom invests £500. Find out how much **interest** he will make in 10 years.
- (7) A house increases in value by 13.5% a year. The house starts with a value of £250'000. Is it worth more than £535000 after 6 years? Explain your answer.
- (8) A colony of rats is reducing at a rate of 6.5% an hour. Given there were 900 rats at 1pm, how many rats were there at 10pm?
- (9) A bottle is leaking at a rate of 3.4% an hour. The bottle has 1.3lts of water in at 7pm. How many ml will be left in the bottle at 1am the next day?
- (10) The population on an island is increasing by 120% a day. If the population is 40 to start with, what is the population after 2 weeks?