**Compound interest GREEN**

1. If £500 is invested for 3 years at a rate of compound interest of 4% per annum, how much will be in the account after 3 years?
2. Dave invests £3000 at a rate of interest of 6% a year. How much is in his account after 5 years?
3. Glenn invests £7000 at a rate of interest of 2% for 4 years.
   1. What is the total in his account after the 4 years?
   2. How much interest would he have gained?
   3. If he had invested the same amount of money in a different account at an interest rate of 4% for only three years would he have made more or less money? Show your working clearly.
4. Annie invests £1500 at a rate of compound interest of 2.5% for 6 years. How much is in her account after the six years?
5. Harry invests £1000 at a rate of interest of 5% a year. After how many years will he have doubled his investment?
6. Henry invests £4500 at a compound interest rate of 5% per annum.

At the end of *n* complete years the investment has grown to £5469.78.

Find the value of *n*.

A picture containing drawing

Description automatically generated**Depreciation GREEN**

1. John buys a house for £219000. The house depreciates in value at 6% each year. What is the value of the house after 7 years?
2. Sam bought his car 13 years ago for £14000. It has depreciated at 26% each year. How much is it now worth?
3. The value of a car depreciates by 15% each year. At the end of 2007, the value of the car was £8490. Work out the value of the car at the end of 2010.
4. Bob’s new machine for work cost him £6700. It will depreciate at 28% each year. After how many years will it be worth less than £1000?
5. Bill buys a new lawnmower.

The value of the lawnmower depreciates by 20% each year.

Bill says “after 5 years the lawnmower will have no value”

1. Bill is wrong. Explain why.

Bill wants to work out the value of the lawnmower after 2 years.

1. By what single number should Bill multiply the value of the lawnmower when new?
2. A car’s value of £12000 depreciates by 12% each year. After how many years will it be worth less than £8000?

**Compound interest AMBER**

1. If £500 is invested for 3 years at a rate of compound interest of 4% per annum, how much will be in the account after 3 years?
2. Dave invests £3000 at a rate of interest of 6% a year. How much is in his account after 5 years?
3. Glenn invests £7000 at a rate of interest of 2% for 4 years.
   1. What is the total in his account after the 4 years?
   2. How much interest would he have gained?
   3. If he had invested the same amount of money in a different account at an interest rate of 4% for only 3 years would he have made more or less money? Show your working clearly.
4. Annie invests £1500 at a rate of compound interest of 2.5% for 6 years. How much is in her account after the six years?
5. Harry invests £1000 at a rate of interest of 5% a year. After how many years will he have doubled his investment?
6. Henry invests £4500 at a compound interest rate of 5% per annum.

At the end of *n* complete years the investment has grown to £5469.78.

Find the value of *n*.

A picture containing drawing

Description automatically generated**Depreciation AMBER**

1. John buys a house for £219000. The house depreciates in value at 6% each year. What is the value of the house after 7 years?
2. Sam bought his car 13 years ago for £14000. It has depreciated at 26% each year. How much is it now worth?
3. The value of a car depreciates by 15% each year. At the end of 2007, the value of the car was £8490. Work out the value of the car at the end of 2010.
4. Bob’s new machine for work cost him £6700. It will depreciate at 28% each year. After how many years will it be worth less than £1000?
5. Bill buys a new lawnmower.

The value of the lawnmower depreciates by 20% each year.

Bill says “after 5 years the lawnmower will have no value”

1. Bill is wrong. Explain why.

Bill wants to work out the value of the lawnmower after 2 years.

1. By what single number should Bill multiply the value of the lawnmower when new?
2. A car’s value of £12000 depreciates by 12% each year. After how many years will it be worth less than £8000?

**Compound interest RED**

1. If £500 is invested for 3 years at a rate of compound interest of 4% per annum, how much will be in the account after 3 years?

1.04

1. Dave invests £3000 at a rate of interest of 6% a year. How much is in his account after 5 years?

1.06

1. Glenn invests £7000 at a rate of interest of 2% for 4 years.

1.02

* 1. What is the total in his account after the 4 years?

new amount – original amount

* 1. How much interest would he have gained?
  2. If he had invested the same amount of money in a different account at an interest rate of 4% for only 3 years would he have made more or less money? Show your working clearly.

1. Annie invests £1500 at a rate of compound interest of 2.5% for 6 years. How much is in her account after the six years?
2. Harry invests £1000 at a rate of interest of 5% a year. After how many years will he have doubled his investment?

£2000 or more!

1. Henry invests £4500 at a compound interest rate of 5% per annum.

At the end of *n* complete years the investment has grown to £5469.78.

Find the value of *n*.

A picture containing drawing

Description automatically generated**Depreciation RED**

1. John buys a house for £219000. The house depreciates in value at 6% each year. What is the value of the house after 7 years?

0.94

1. Sam bought his car 13 years ago for £14000. It has depreciated at 26% each year. How much is it now worth?

0.74

1. The value of a car depreciates by 15% each year. At the end of 2007, the value of the car was £8490. Work out the value of the car at the end of 2010.

0.85

1. Bob’s new machine for work cost him £6700. It will depreciate at 28% each year. After how many years will it be worth less than £1000?
2. Bill buys a new lawnmower.

The value of the lawnmower depreciates by 20% each year.

Bill says “after 5 years the lawnmower will have no value”

What mistake has Bill made?

1. Bill is wrong. Explain why.

Bill wants to work out the value of the lawnmower after 2 years.

1. By what single number should Bill multiply the value of the lawnmower when new?
2. A car’s value of £12000 depreciates by 12% each year. After how many years will it be worth less than £8000?