

LO – Understand Compound Interest and Growth & Decay

(1) A basic family new car costs £20000 to buy. By working out 10% each time, find the value of a car if it depreciates at 10% p/a for 3 years.	
(2) State a reason(s) why using the method above is not suitable to find the cost (i) after 12 years (ii) after 100 years	
(3) Using a more refined model, calculate the projected value of the car after 7 years	
(4) Jim saves with Floyds Bank. They offer 8% compound interest on his account. If he deposits £3000 when he opens the account how much (a) will he have after 1 year and (b) after 10 years Extension – Draw an accurate graph to show the amount of money in his account over time	
* (5) Which would be worth more after 6 years? (i) A ring that appreciates at 5% p/a with a starting value of £2000 or (b) a bracelet that depreciates at 12% p/a with a starting value of £3000	
(6) A motorbike depreciates at a rate of 8% per quarter. How much would it be worth after 3 years if the starting value was £8000	
* (7) Fred has a budget of £40000. The car he wants is £50000 new. He knows the car depreciates at 18% p/a. Fred Starts looking for a car in the year 1991. (a) In which year was the first car that Fred can afford made? (b) Express this as an inequality	

LO – Understand Compound Interest and Growth & Decay

(1) A basic family new car costs £20000 to buy. By working out 10% each time, find the value of a car if it depreciates at 10% p/a for 3 years.	
(2) State a reason(s) why using the method above is not suitable to find the cost (i) after 12 years (ii) after 100 years	
(3) Using a more refined model, calculate the projected value of the car after 7 years	
(4) Jim saves with Floyds Bank. They offer 8% compound interest on his account. If he deposits £3000 when he opens the account how much (a) will he have after 1 year and (b) after 10 years Extension – Draw an accurate graph to show the amount of money in his account over time	
* (5) Which would be worth more after 6 years? (i) A ring that appreciates at 5% p/a with a starting value of £2000 or (b) a bracelet that depreciates at 12% p/a with a starting value of £3000	
(6) A motorbike depreciates at a rate of 8% per quarter. How much would it be worth after 3 years if the starting value was £8000	
* (7) Fred has a budget of £40000. The car he wants is £50000 new. He knows the car depreciates at 18% p/a. Fred Starts looking for a car in the year 1991. (a) In which year was the first car that Fred can afford made? (b) Express this as an inequality	

LO – Understand Compound Interest and Growth & Decay

(1) A basic family new car costs £20000 to buy. By working out 10% each time, find the value of a car if it depreciates at 10% p/a for 3 years.	
(2) State a reason(s) why using the method above is not suitable to find the cost (i) after 12 years (ii) after 100 years	
(3) Using a more refined model, calculate the projected value of the car after 7 years	
(4) Jim saves with Floyds Bank. They offer 8% compound interest on his account. If he deposits £3000 when he opens the account how much (a) will he have after 1 year and (b) after 10 years Extension – Draw an accurate graph to show the amount of money in his account over time	
* (5) Which would be worth more after 6 years? (i) A ring that appreciates at 5% p/a with a starting value of £2000 or (b) a bracelet that depreciates at 12% p/a with a starting value of £3000	
(6) A motorbike depreciates at a rate of 8% per quarter. How much would it be worth after 3 years if the starting value was £8000	
* (7) Fred has a budget of £40000. The car he wants is £50000 new. He knows the car depreciates at 18% p/a. Fred Starts looking for a car in the year 1991. (a) In which year was the first car that Fred can afford made? (b) Express this as an inequality	

LO – Understand Compound Interest and Growth & Decay

(1) A basic family new car costs £20000 to buy. By working out 10% each time, find the value of a car if it depreciates at 10% p/a for 3 years.	
(2) State a reason(s) why using the method above is not suitable to find the cost (i) after 12 years (ii) after 100 years	
(3) Using a more refined model, calculate the projected value of the car after 7 years	
(4) Jim saves with Floyds Bank. They offer 8% compound interest on his account. If he deposits £3000 when he opens the account how much (a) will he have after 1 year and (b) after 10 years Extension – Draw an accurate graph to show the amount of money in his account over time	
* (5) Which would be worth more after 6 years? (i) A ring that appreciates at 5% p/a with a starting value of £2000 or (b) a bracelet that depreciates at 12% p/a with a starting value of £3000	
(6) A motorbike depreciates at a rate of 8% per quarter. How much would it be worth after 3 years if the starting value was £8000	
* (7) Fred has a budget of £40000. The car he wants is £50000 new. He knows the car depreciates at 18% p/a. Fred Starts looking for a car in the year 1991. (a) In which year was the first car that Fred can afford made? (b) Express this as an inequality	