**1.** The table gives information about the cost of the same basket of groceries in 2010, in 2011 and in 2012.

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **2010** | **2011** | **2012** |
| **Index number (base year 2009)** | 102.1 | 103.5 | 105.8 |

In 2009, the cost of the basket of groceries was £25.99.

(*a*) Work out the cost of the basket of groceries in 2012.

£..........................................

**(Total for Question 1 is 2 marks)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2.** The table gives information about the annual cost of gas for households in the UK in  
2009, 2010, 2011 and 2012.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **2009** | **2010** | **2011** | **2012** |
| **Annual Cost (£)** | 980 | 1120 | 1080 | 1260 |

(*a*) Using 2009 as the base year, complete the table by calculating the index number for  
the year 2012.

Give your answer correct to one decimal place.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **2009** | **2010** | **2011** | **2012** |
| **Index number** | 100 | 114.3 | 110.2 | ........................ |

**(Total for Question 2 is 2 marks)**

**3.** The table gives information about the average selling price of a new car over a period of   
five months.

The table also gives some of the chain base index numbers, correct to 1 decimal place,   
for this information.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **April** | **May** | **June** | **July** | **August** |
| **Average price (£)** | 28 624 | 28 777 | 28 860 | 28 973 | 29 132 |
| **Chain base index number** |  | 100.5 | 100.3 |  |  |

(*a*) Explain what the value 100.3 in the table represents.

......................................................................................................................................................

......................................................................................................................................................

**(1)**

(*b*) Calculate, to 1 decimal place, the chain base index numbers for July and August, and write them in the table.

**(2)**

**(Total for Question 3 is 3 marks)**

**4.** The table gives information about the cost of stationery for a company each year from  
2012 to 2014.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **2011** | **2012** | **2013** | **2014** |
| **Chain base index number** |  | 104.1 | 105.2 | 103.9 |

The cost of stationery in 2011 was £670.

(*a*) Work out the cost of stationery

(i) in 2012,

£..........................................

(ii) in 2013.

£..........................................

**(3)**

**(Total for Question 4 is 3 marks)**

**5.** The table gives information about the cost per ounce, in £, of gold in January 2012,  
in January 2013, in January 2014 and in January 2015.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **2012** | **2013** | **2014** | **2015** |
| **Cost per ounce (£)** | 910 | 1020 | 1170 | 1540 |
| **Chain base index number** |  |  |  |  |

(*a*) Calculate the chain base index numbers for the years 2013, 2014 and 2015 and write them in the table.

Give each value correct to one decimal place.

**(3)**

(*b*) Calculate the geometric mean of the chain base for the years 2013, 2014 and 2015

Give your answer correct to one decimal place.

..........................................

**(2)**

(*c*) Give an interpretation of your answer to part (b).

......................................................................................................................................................

......................................................................................................................................................

**(2)**

**(Total for Question 5 is 7 marks)**

**6** The value of jewellery changes every year.

The table shows the value, in pounds, of a ring for the years 2009 to 2012.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **2009** | **2010** | **2011** | **2012** |
| **Value** | £105 | £120 | £125 | £140 |

(*a*) Calculate the chain base index number for 2010, 2011 and 2012.

Give each value correct to 3 significant figures.

......................................... ......................................... .........................................

**(2)**

**(Total for Question 6 is 2 marks)**

**7.** James insures his house in January each year.

The table gives the cost to insure his house in 2010 and in 2011.

|  |  |  |
| --- | --- | --- |
| **Year** | **2010** | **2011** |
| **Cost (£)** | 236 | 278 |

Using 2010 as the base year, work out the index number for the cost of the house insurance in 2011.

Give your answer correct to 1 decimal place.

..........................................

**(Total for Question 7 is 2 marks)**

**8.** The following table shows the value of a house in Ockendon for the years 1990 and 1991.

**Ockendon**

|  |  |  |
| --- | --- | --- |
| **Year** | **1990** | **1991** |
| **Value (£)** | £80 000 | £88 000 |

(*a*) Taking 1990 as the base year, work out the value of the house in Ockendon in 1991   
as an index number.

..........................................

**(2)**

Using 1990 as the base year, the value of a house in Tilbury in 1991 as an index number   
is 108.5.

(*b*) Interpret and compare the index numbers for Ockendon and Tilbury in 1991.

......................................................................................................................................................

......................................................................................................................................................

**(2)**

**(Total for Question 8 is 4 marks)**

**9.** The following table shows the share price, in pence, of Mathcom in 2012 in 2013.

|  |  |  |
| --- | --- | --- |
| **Year** | **2012** | **2013** |
| **Share Price (in pence)** | 1196 | 1263 |

(*a*) Taking 2012 as the base year, work out the index number for the share price of  
Mathcom in 2013.

Give your answer correct to 1 decimal place.

..........................................

**(2)**

Using 2012 as the base year, the index number for the share price of Statcom  
in 2013 is 109.3.

(*b*) Interpret and compare the index numbers for Mathcom and Statcom in 2013.

......................................................................................................................................................

......................................................................................................................................................

......................................................................................................................................................

**(2)**

**(Total for Question 9 is 4 marks)**