

# Schoolworkout Maths

## GCSE Statistics – Index Numbers Assessment

<b>Your Name:</b>	<b>Tutor Group:</b>
<b>End of GCSE target grade:</b>	<b>Grade achieved:</b>

GCSE Statistics objectives	☺	☹	☹
• I can understand and calculate index numbers, chain base index numbers and weighted index numbers			
• I can calculate and use a geometric mean			

1. The table shows how the cost of gold (in US dollars per ounce) has changed over the years 2003 to 2005.

Year	2003	2004	2005
Price (\$/oz)	363.38	409.72	444.74

Take 2003 as the base year with an index of 100.

- (a) (i) Express the price in 2004 as an index number.  
Give your answer to the nearest whole number.

Answer ..... [2]

- (ii) Write down the percentage increase in the cost of gold between 2003 and 2004.

Answer ..... [1]

- (b) Calculate the percentage increase in the cost of gold between 2004 and 2005.

Answer ..... [2]

- (c) The index value for the cost of gold in 2006 is 166.  
Work out the cost of gold in 2006.

Answer .....\$/oz [2]

2. The table shows the cost of Hira's household insurance over the past few years.

Year	2002	2003	2004	2005	2006
Annual cost (£)	£281	£297	£291	£308	£320

- a) Use the **chain base method** to calculate index numbers for the years 2003 to 2006 inclusive.  
Give each answer to 1 decimal place.

2003.....

2004.....

2005 .....

2006..... [4]

- b) Calculate the **geometric mean** of the chain base index numbers found in (a).

..... [2]

- c) Interpret the answer to part (b).

[2]

3. The table shows the running costs of an office over two years.

	2006 index	2007 index	Weighting
Salaries	100	104	64
Rent	100	112	24
Electricity	100	117	12

Calculate a weighted index number for the overall running costs for the office in 2007.

[3]

.....

**Teacher feedback:**

In order to get to the next grade (or in order to improve the quality of your work) you should...

The following aspect of your work was particularly good ...