Percentages IGCSE Higher Tier Exam Questions

June 2011 4H Paper

1. In a sale, normal prices are reduced by 15%.
The normal price of a television was $640
Work out the sale price of the television.

Jan 2012 3H Paper

1. In January 2007 the population of Canada was 32 million.
7 million of these Canadian people spoke French as their first language.

(a) Express 7 million as a percentage of 32 million.
Give your answer correct to 1 decimal place.

Between January 2007 and January 2009 the population of Canada increased by 4%.

(b) Increase 32 million by 4%.
Give your answer correct to the nearest million.

May 2012 3H Paper

8. On 9th May, 2009, there were 3440 people in the world with swine flu.
Of these people, 1639 were in the USA.

(a) Express 1639 as a percentage of 3440
Give your answer correct to 1 decimal place.

The 3440 people who had swine flu on 9th May was an increase of 37.6% on the number of people who had swine flu on 8th May.

(b) Calculate the number of people who had swine flu on 8th May.
Percentages IGCSE Higher Tier Exam Questions

May 2012 3H Paper

16 The population of India increased by 20% between 1989 and 1999.
The population of India increased by a further 17% between 1999 and 2009.

Calculate the percentage by which the population of India increased between 1989 and 2009.

Jan 2013 4H Paper

24 On Monday, Nalim made a journey.
On Tuesday, she made the same journey.
Her average speed on Tuesday was 25% greater than her average speed on Monday.

Calculate the percentage reduction in the time her journey took on Tuesday compared with Monday.

May 2013 3H Paper

6 An airline increases the prices of its flights by 8%.

(a) Before the increase, the price of a flight to Cairo was £475

Work out the price of a flight to Cairo after the increase.

(b) The increase in price of a flight to Mumbai was £48

Work out the price of a flight to Mumbai after the increase.
5 A shop, *Furniture 4U*, had a sale.

(a) In the sale, normal prices were reduced by 15%.

(i) The normal price of a table was $280

Work out the sale price of the table.

(ii) The normal price of a chair was reduced in the sale by $24

Work out the normal price of the chair.

(b) Ruth, Suha and Yasmin went to the sale.
The amounts of money spent by Ruth, Suha and Yasmin were in the ratios 2:3:7
Ruth and Suha spent a total of $320 in the sale.

Work out the amount of money Yasmin spent in the sale.

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10 Serena bought a car that had a value of $16 000
At the end of each year, the value of her car had depreciated by 15%.
Calculate the value of her car at the end of 3 years.
Percentages IGCSE Higher Tier Exam Questions

Jan 2014 3HR Paper

6 (a) Dilip buys a painting for $675
Later, he sells it and makes a percentage profit of 12%.
Work out the price for which Dilip sells the painting.

(b) Renuka sells her car.
She makes a loss of $2162
Her percentage loss is 23%.
Work out the price for which Renuka sells her car.

May 2014 3H Paper

10 Zara must take 5 tests.
Each test is out of 100
After 4 tests, her mean score is 64%.
What score must Zara get in her 5th test to increase her mean score in all 5 tests to 70%?

May 2013 3H Paper

12 (a) Helen’s savings increased from £155 to £167.40
Work out the percentage increase in Helen’s savings.

(b) Joe’s savings increased by 4.5%.
His savings are now £125.40
What were his savings before the increase?
Percentages IGCSE Higher Tier Exam Questions

May 2014 3HR Paper

7 The table gives some information about the average price of a litre of petrol in England.

<table>
<thead>
<tr>
<th></th>
<th>January 2007</th>
<th>January 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average price of a litre of petrol (pence)</td>
<td>87.3</td>
<td>133.3</td>
</tr>
</tbody>
</table>

(a) Work out the percentage increase in the average price of a litre of petrol in England between January 2007 and January 2012.
Give your answer correct to 3 significant figures.

The average price of a litre of petrol in England increased by 20% from January 2010 to January 2012.

(b) Work out the average price of a litre of petrol in England in January 2010.
Give your answer in pence, correct to 1 decimal place.

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May 2014 4H Paper

4 In a sale, all normal prices are reduced by 15%.

(a) The normal price of a washing machine is 270 dollars.
Work out the sale price of the washing machine.

(b) The normal price of a food processor is reduced by 13.50 dollars.
Work out the normal price of the food processor.
Percentages IGCSE Higher Tier Exam Questions

May 2014 4HR Paper

6 Kim bought 12 boxes of drinks.
   He paid $15 for each box.
   There were 12 drinks in each box.

   Kim sold \( \frac{3}{4} \) of the drinks for $1.50 each.

   He sold all of the other drinks at a reduced price.

   He made an overall profit of 15%.

   Work out how much Kim sold each reduced price drink for.

Jan 2015 3H Paper

7 Eloy’s height was 125 cm when his age was 7 years.
   His height was 153 cm when his age was 12 years.

   (a) Work out the percentage increase in Eloy’s height between the ages of 7 and 12 years.

   Eloy’s height at the age of 12 years was 85% of his height at the age of 20 years.

   (b) Work out Eloy’s height when his age was 20 years.
8 Lisa sees a dress in a sale.
   The normal price of the dress is $45
   The price of the dress is reduced by 12% in the sale.

   (a) Work out the price of the dress in the sale.

   Lisa’s weekly pay increases from $525 to $546

   (b) Calculate her percentage pay increase.

May 2015 4H Paper

12 The value of a boat depreciates by 16% each year.
   At the end of 2012, the value of the boat is £65 000

   Work out the value of the boat at the end of 2015
8 In 1981, the population of India was 683 million.
Between 1981 and 1991, the population of India increased by 163 million.

(a) Express 163 million as a percentage of 683 million.
Give your answer correct to 3 significant figures.

In 2001, the population of India was 1028 million.
Between 2001 and 2011, the population of India increased by 17.6%

(b) Increase 1028 million by 17.6%
Give your answer to the nearest million.

In 2001, the population of India was 1028 million.
Between 1971 and 2001, the population of India increased by 87.6%

(c) Work out the population of India in 1971.
Give your answer correct to the nearest million.
Percentages IGCSE Higher Tier Exam Questions

Jan 2016 4H Paper

7 A clothes shop has a sale.
   
   In the sale, normal prices are reduced by 12%
   The normal price of a shirt is £30
   
   (a) Work out the sale price of the shirt.
   
   The price of a coat is reduced by £9 in the sale.
   
   (b) Work out the normal price of the coat.

May 2016 3HR Paper

5 In a sale, normal prices are reduced by 8%
   
   (a) The normal price of a jacket is £28
   Work out the price of the jacket in the sale.
   
   (b) In the sale, the price of a shirt decreases by £3
   Work out the normal price of the shirt.
Percentages IGCSE Higher Tier Exam Questions

May 2016 4H Paper

3. In a sale, all normal prices are reduced by 20%
   (a) The normal price of a television set is 485 euros.
       Work out the sale price of the television set.
   
   (b) In the sale, the normal price of a tablet computer is reduced by 79 euros.
       Work out the normal price of the tablet computer.

Nov 2010 4H Paper

11. Tom buys a painting for $1350
    He sells it for $1269

   (a) Work out his percentage loss.

Kelly bought a boat.
Later, she sold the boat for $9519
She made a profit of 14%.

   (b) Work out the original price of the boat.

May 2010 3H Paper

8. Jade has tax deducted from her income at the rate of 24%.
    Last month, after tax had been deducted, $1786 of her income remained.
    Calculate her income last month before the tax was deducted.
9. The depth of water in a reservoir increases from 14 m to 15.75 m. Work out the percentage increase.

Nov 2009 3H Paper

15. Jothi bought a car.
Later, Jothi sold the car for £2125
He made a loss of 15%.
Work out the original price of the car.

May 2009 3H Paper

6. Brett’s weekly pay is $760
He spends $266 on rent.

(a) Express $266 as a percentage of $760

Kazia spends $204 a week on rent.
$204 is 30% of her weekly pay.

(b) Work out her weekly pay.
5. In a sale, normal prices were reduced by 35%.
   (a) The normal price of a camera was £180
       Work out the sale price of the camera.

   (b) The normal price of a clock was reduced by £84
       Work out the normal price of the clock.

   (c) The sale price of a computer was £442
       Work out the normal price of the computer.

June 2008 3H Paper

10. Cara’s salary was increased from $28 250 to $29 832
    (a) Work out the percentage increase in Cara’s salary.

Pedro’s salary was increased by 5.2%.
After the increase, his salary was $28 141
(b) Work out his salary before the increase.
Percentages IGCSE Higher Tier Exam Questions

Nov 2007 3H Paper

4. The total number of students in Denton College is 280
   160 of the students in Denton College are in Year 1
   Express 160 as a percentage of 280
   Give your answer correct to 2 significant figures.

Nov 2007 4H Paper

11. 56% of the students in a school are girls.
    There are 420 girl students in the school.

    Work out the number of students in the school.

Nov 2007 4H Paper

13. The distance Jamila drove in 2006 was 14% more than the distance she drove in 2005
    She drove 20 805 km in 2006
    Calculate the distance she drove in 2005

Nov 2006 3H Paper

5. The number of workers in a factory decreases from 60 to 48
   Work out the percentage decrease in the number of workers.
1. The surface area of the Earth is 510 million km$^2$. The surface area of the Pacific Ocean is 180 million km$^2$.

   (a) Express 180 million as a percentage of 510 million. Give your answer correct to 2 significant figures.

   The surface area of the Arctic Ocean is 14 million km$^2$. The surface area of the Southern Ocean is 35 million km$^2$.

   (b) Find the ratio of the surface area of the Arctic Ocean to the surface area of the Southern Ocean. Give your ratio in the form 1 : $n$.

10. A mobile phone company makes a special offer. Usually one minute of call time costs 5 cents. For the special offer, this call time is increased by 20%.

   (a) Calculate the call time which costs 5 cents during the special offer. Give your answer in seconds.

   (b) Calculate the cost per minute for the special offer.

   (c) Calculate the percentage decrease in the cost per minute for the special offer.
10. Pat drops a ball onto a wooden floor.
The ball bounces to a height which is 26% less than the height from which it is dropped.

(a) Pat drops the ball from a height of 85 cm.
Calculate the height to which it first bounces.

(b) Pat drops the ball from a different height.
It first bounces to a height of 48.1 cm.
Calculate the height from which he dropped it.

May 2005 3H Paper

8. In a sale at Bargain Buys, all the normal prices are reduced by 15%.
The normal price of a printer is £240

(a) Work out the sale price of the printer.

In the same sale, the sale price of a laptop computer is £663

(b) Work out the normal price of the laptop computer.
2. Krishnan used 611 units of electricity.
The first 182 units cost £0.0821 per unit.
The remaining units cost £0.0704 per unit.
Tax is added at 5% of the total amount.

Complete Krishnan’s bill.

<table>
<thead>
<tr>
<th>Units</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>182 units</td>
<td>£0.0821</td>
<td>£150.97</td>
</tr>
<tr>
<td>Remaining units</td>
<td>£0.0704</td>
<td>£345.09</td>
</tr>
<tr>
<td><strong>Total amount</strong></td>
<td></td>
<td><strong>£500.06</strong></td>
</tr>
<tr>
<td><strong>Tax at 5% of the total amount</strong></td>
<td></td>
<td>£25.00</td>
</tr>
<tr>
<td><strong>Amount to pay</strong></td>
<td></td>
<td>£525.06</td>
</tr>
</tbody>
</table>

Nov 2004 3H Paper

4. Toni buys a car for £2500 and sells it for £2775. Calculate her percentage profit.
7. Paul got 68 out of 80 in a science test.

   (a) Work out 68 out of 80 as a percentage.

Paul got 72 marks in a maths test.
72 is 60% of the total number of marks.

   (b) Work out the total number of marks.

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1. In July 2002, the population of Egypt was 69 million.
   By July 2003, the population of Egypt had increased by 2%.

   Work out the population of Egypt in July 2003.

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15. In a sale, normal prices are reduced by 12%.
   The sale price of a computer is £726

   Work out the normal price of the computer.