Name: _____

GCSE (1 – 9)

Reverse Percentages

Instructions

- Use **black** ink or ball-point pen.
- Answer all Questions.
- Answer the Questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The marks for each Question are shown in brackets
– *use this as a guide as to how much time to spend on each Question.*

Advice

- Read each Question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every Question.
- Check your answers if you have time at the end

1   The value of a house increased by 6%.
The house then had a value of £265 000

Work out the value of the house before the increase.

$$x \times 1.06 = 265\,000$$

$$x = \frac{265\,000}{1.06}$$

$$= 250000$$

OR

$$265000 = 106\%$$
$$\div 106 \qquad \div 106$$
$$2500 = 1\%$$
$$\times 100 \qquad \times 100$$
$$250000 = 100\%$$

£ 250 000

(Total for Question 1 is 2 marks)

2   In a sale, the normal price of a book is reduced by 20%.
The sale price of the book is £4.80

Work out the normal price of the book.

$$x \times 0.8 = 4.80$$

$$x = \frac{4.80}{0.8}$$

$$= 6$$

£ 6

(Total for Question 2 is 2 marks)

3   The value of a litre of petrol increased by 8%.
A litre of petrol then cost £1.62

Work out the price of a litre of petrol before the increase.

$$x \times 1.08 = 1.62$$

$$x = \frac{1.62}{1.08}$$

$$= £1.50$$

£ 1.50

(Total for Question 3 is 2 marks)

4 In a sale, normal prices are reduced by 25%.
The normal price of a coat is reduced by £12

Work out the normal price of the coat.

$$12 = 25\%$$
$$\times 4 \qquad \times 4$$
$$48 = 100\%$$

£ ___48___

(Total for Question 4 is 2 marks)

5 In a sale, the normal price of a TV is reduced by 20%.
The sale price of the TV is £660

Work out the normal price of the TV.

$$x \times 0.8 = 660$$
$$x = \frac{660}{0.8}$$
$$= 825$$

£ ___825___

(Total for Question 5 is 2 marks)

6 The cost of a council tax bill increased by 5%.
The council tax bill increased by £62.

Work out the cost of the council tax bill before the increase

$$62 = 5\%$$
$$\times 20 \qquad \times 20$$
$$1240 = 100\%$$

£ ___1240___

(Total for Question 6 is 2 marks)

7 The price of a train season ticket increased by 4%.
The price of the ticket increased by £152.20

Work out the price of the train ticket before the increase.

$$152.20 = 4\%$$
$$\times 25 \qquad \times 25$$
$$3805 = 100\%$$

£ _3805_

(Total for Question 7 is 2 marks)

8 In a sale, the normal price of a car is reduced by 30%.
The sale price of the car is £6300

Work out the normal price of the car.

$$6300 = 70\%$$
$$\div 7 \qquad \div 7$$
$$900 = 10\%$$
$$\times 10 \qquad \times 10$$
$$9000 = 100\%$$

£ _9000_

(Total for Question 8 is 2 marks)

9 In a sale, normal prices are reduced by 15%.
The normal price of a pen is reduced by £1.20

Work out the normal price of the pen.

$$1.20 = 15\%$$
$$\div 3 \qquad \div 3$$
$$0.40 = 5\%$$
$$\times 20 \qquad \times 20$$
$$8 = 100\%$$

£ _8_

(Total for Question 9 is 2 marks)