Solutions by
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# GCSE (9-1) Grade 5 Reverse Percentages

**Instructions**

Use **black** ink or ball-point pen.
**Fill in the boxes** at the top of this page with your name.
Answer **all** questions.
Answer the questions in the spaces provided
– there may be more space than you need.
**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.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed

**Advice**

Read each question carefully before you start to answer it
Attempt every question
Check your answers if you have time at the end

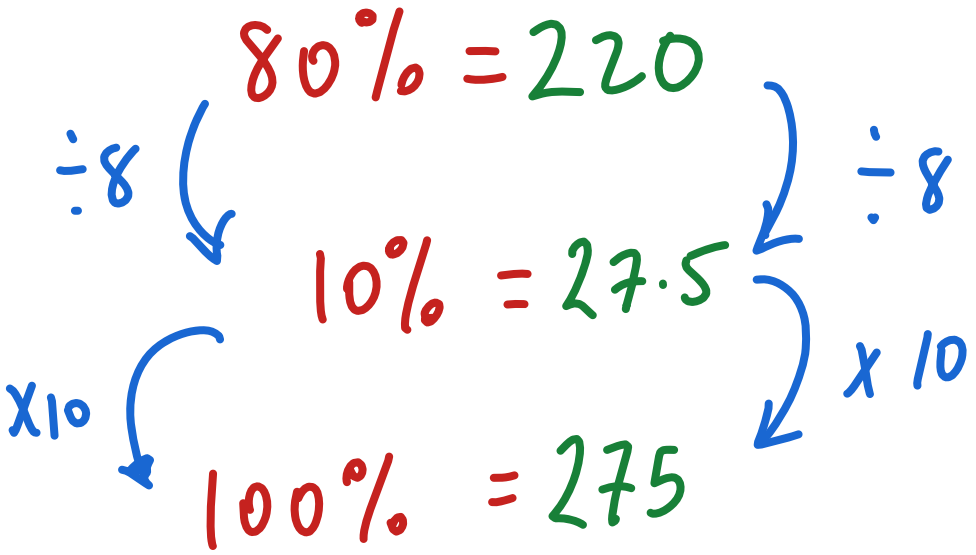
**1.** In a sale, normal prices are reduced by 20%.

100 - 20 = 80%

SALE
20% OFF

Andrew bought a saddle for his horse in the sale.
The sale price of the saddle was £220.

Calculate the normal price of the saddle.




£ 275

**(Total 3 marks)**

**2.**



Jacob answered 80% of the questions in a test correctly.
He answered 32 of the questions correctly.

Work out the total number of questions in the test.

80% = 32

÷8 ↓ ↓ ÷8

10% = 4

×10 ↓ ↓ ×10

100% = 40

£40

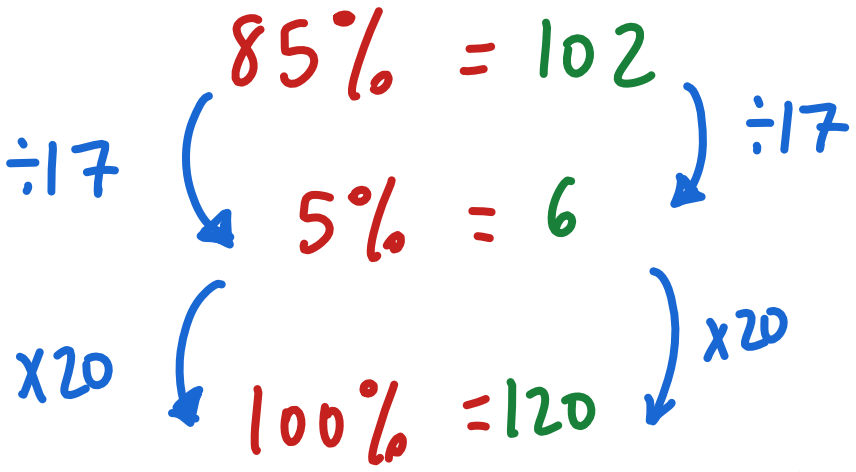
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**(Total 3 marks)**

**3.** In a sale, normal prices are reduced by 15%.
The sale price of a CD player is £102

100 - 15 = 85

Work out the normal price of the CD player.




£ 120

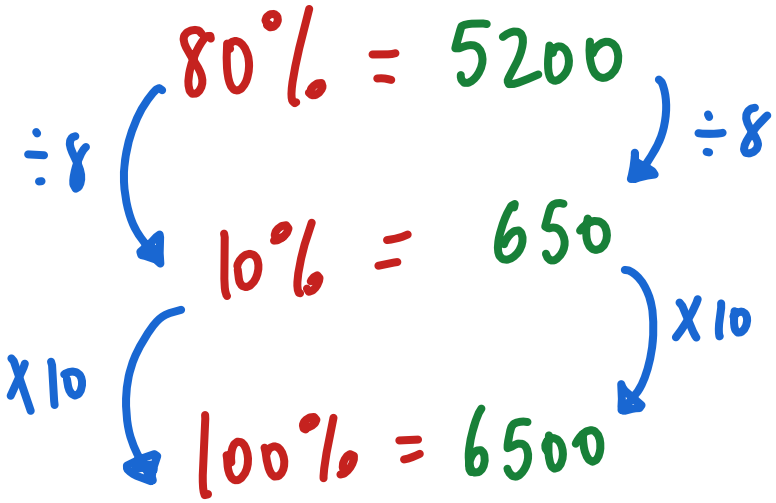
**(Total 3 marks)**

**4.** A garage sells cars.
It offers a discount of 20% off the normal price for cash.

Dave pays £5200 cash for a car.

100 - 20 = 80%

Calculate the normal price of the car.



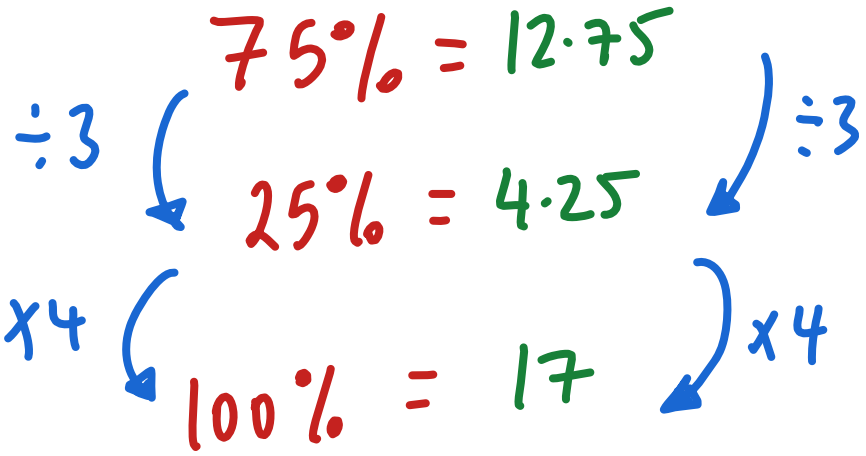

£ 6500

**(Total 3 marks)**

**5.** In a sale, normal prices are reduced by 25%.
The sale price of a saw is £12.75

100 - 25 = 75%

Calculate the normal price of the saw.



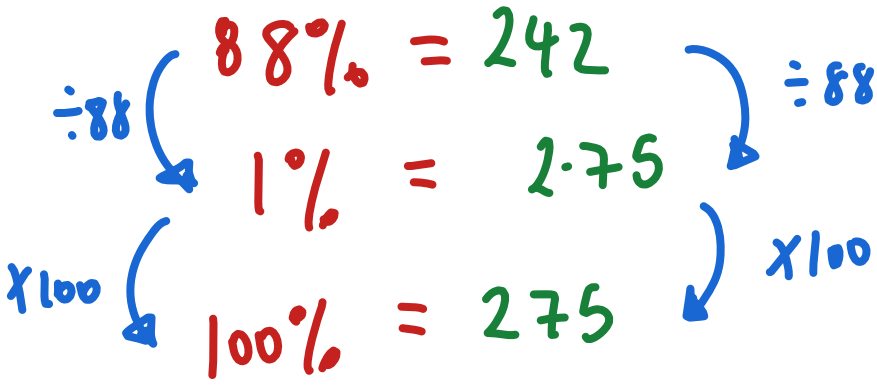

£ 17

**(Total 3 marks)**

**6.** In a sale, normal prices are reduced by 12%.
The sale price of a DVD player is £242.

100 - 12 = 88

Work out the normal price of the DVD player.

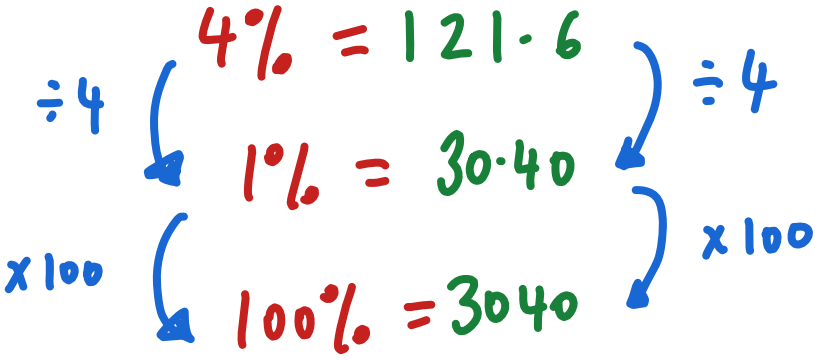



£ 275

**(Total 3 marks)**

**7.** The price of all rail season tickets to London increased by 4%.

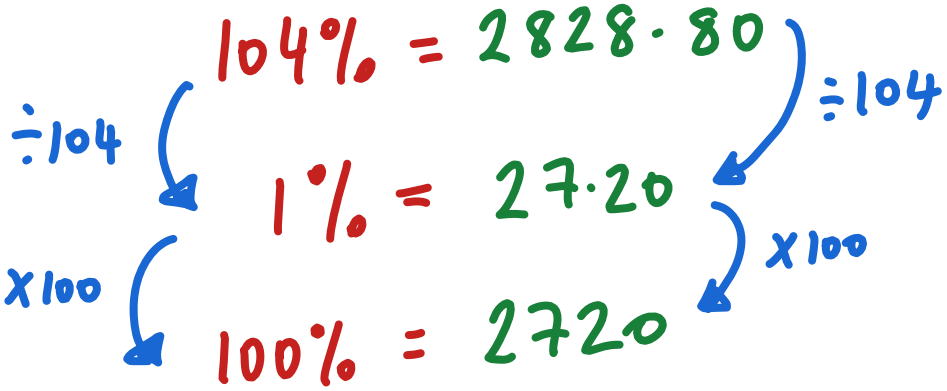
(a) The price of a rail season ticket from Cambridge to London increased by £121.60
Work out the price before this increase.




£ 3040

**(2)**

(b) After the increase, the price of a rail season ticket from Brighton to London was £2828.80
Work out the price before this increase.



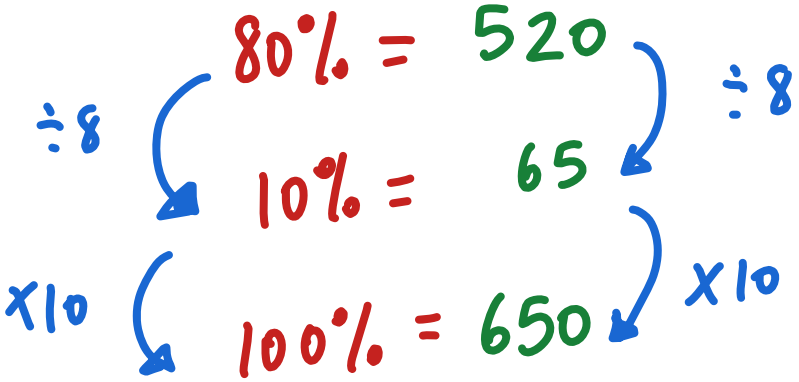

£ 2720

**(3)**
**(Total 5 marks)**

100 - 20 = 80%

**8.** Loft insulation reduces annual heating costs by 20%.
**After** he insulated his loft, Curtley's annual heating cost was £520.

Work out Curtley's annual heating cost would have been, if he had not insulated his loft.




£ 650

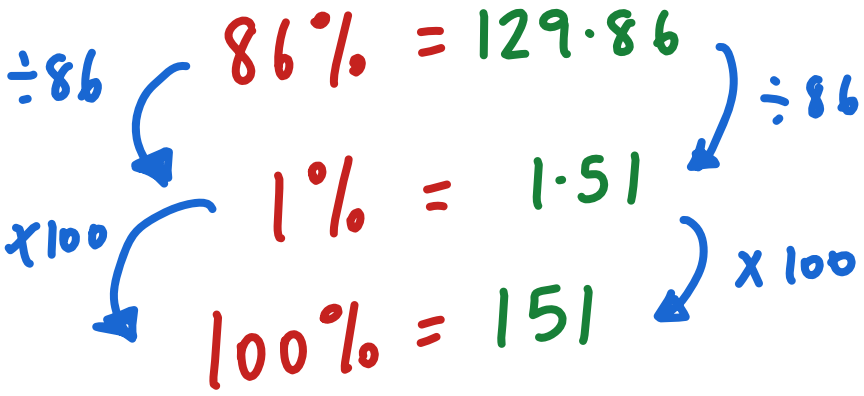
**(Total 3 marks)**

**9.** In a sale, normal prices are reduced by 14%.

The sale price of a digital camera is £129.86

100 - 14 = 86%

(b) Work out the normal price of the digital camera.




£ .....

**(Total 3 marks)**

**10.** Hajra's weekly pay this year is £240
This is 20% more than her weekly pay last year.

100 + 20 = 120%

÷6 (120% = 240) ÷6
x5 (20% = 40) x5
(100% = 200)

Bill says 'This means Hajra's weekly pay last year was £192'.

Bill is wrong,

(a) Explain why.

Her pay was £200

**(1)**

(b) Work out Hajra's weekly pay last year.

£ £200

**(2)**
**(Total 3 marks)**