



5.3F Reverse Percentages: Foundation Tier Practice

EDEXCEL Edexcel 1MA1 · Calculator allowed · about 50 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** A toy is priced at £48 after a 20% increase. Work out the original price of the toy.

(Total for Question 1 is 1 mark)

- 2** A jumper costs £30 after a 25% discount. Work out the jumper's price before the discount.

(Total for Question 2 is 1 mark)

- 3** A pair of trainers has been reduced by 10% and now costs £27. Work out the original price of the trainers.

(Total for Question 3 is 2 marks)

- 4** After a 20% reduction the sale price of a television is £288. Work out the price before the reduction.

(Total for Question 4 is 2 marks)

- 5** A shop increases the price of an item by 15%, then later reduces the new price by 10%. The final price is £103.50. Work out the original price before any change.

(Total for Question 5 is 3 marks)

- 6** A laptop costs £240 including 20% VAT. Work out the price of the laptop before VAT was added.

(Total for Question 6 is 3 marks)

- 7** A gadget costs £54 after an 8% price rise. Work out the price before the rise.

(Total for Question 7 is 3 marks)

- 8** A shop sets a selling price of £65 to make a 30% profit. Work out the cost price of the item to the shop.

(Total for Question 8 is 3 marks)

- 9** A jacket is on sale at 40% off and now costs £36. Work out the price of the jacket before the sale.

(Total for Question 9 is 3 marks)

- 10** A laptop originally costs £450. It is reduced by 20% and later increased by 10% on the reduced price. Work out the final selling price.

(Total for Question 10 is 3 marks)

Mark scheme · 5.3F Reverse Percentages: Foundation Tier Practice

Question 1

- **B1** 40 cao
- **Answer: 40.00 or 40 pounds sterling (40.00 or 40) (cao = 40)**

Question 2

- **B1** 40 cao
- **Answer: 40 (pounds sterling) cao**

Question 3

- **M1** divide 27 by 0.9 (or 90%) eg $27/0.9$
- **A1** 30 cao
- **Answer: 30 (pounds sterling) cao**

Question 4

- **M1** divide 288 by 0.8 (or 80%) shown
- **A1** 360 cao
- **Answer: 360 (pounds sterling) cao**

Question 5

- **M1** use combined multiplier $1.15 \times 0.90 = 1.035$ or state equation $x \times 1.035 = 103.5$
- **M1** divide 103.5 by 1.035 or rearrange to $x = 103.5/1.035$
- **A1** 100 cao
- **Answer: 100 (pounds sterling) cao**

Question 6

- **M1** divide 240 by 1.20 (show method)
- **M1** obtain 200 (method shown correctly)
- **A1** 200 cao
- **Answer: 200 (pounds sterling) cao**

Question 7

- **M1** divide 54 by 1.08 or show $54 = \text{original} \times 1.08$
- **M1** calculate original = $54/1.08$
- **A1** 50 cao
- **Answer: 50 (pounds sterling) cao**

Question 8

- **M1** recognise selling price = cost $\times 1.30$
- **M1** divide 65 by 1.3 shown
- **A1** 50 cao
- **Answer: 50 (pounds sterling) cao**

Question 9

- **M1** divide 36 by 0.6 or show method using $60\% = 0.6$
- **M1** compute $36/0.6 = 60$
- **A1** 60 cao
- **Answer: 60 (pounds sterling) cao**

Question 10

- **M1** find reduced price: $450 \times 0.80 = 360$ or show 20% of 450 = 90 then $450 - 90$
- **M1** increase reduced price by 10%: 360×1.10 or show 10% of 360 = 36 then add
- **A1** 396 cao
- **Answer: 396 (pounds sterling) cao**