5.3 Reverse Percentages: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 In a sale, all prices are reduced by 25%. The sale price of a jumper is £18. Work out the original price of the jumper before the sale.

(Total for Question 1 is 2 marks)

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

(Total for Question 2 is 2 marks)

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

(Total for Question 3 is 2 marks)

4 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 4 is 3 marks)

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5 A washing machine costs £342 including VAT at 20%. Work out the cost of the washing machine before VAT was added.

(Total for Question 5 is 2 marks)

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6 The number of members of a gym increased by 12% this year. There are now 504 members. Work out the number of members last year.

(Total for Question 6 is 2 marks)

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7 A price is increased by 12%. State the single decimal multiplier used to find the new price directly from the original price.

(Total for Question 7 is 1 mark)

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8 State the single decimal multiplier equivalent to a decrease of 6%.

(Total for Question 8 is 1 mark)

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

(Total for Question 9 is 3 marks)

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10 After a 15% decrease, a quantity of paint is 68 litres. Find the original quantity of paint.

(Total for Question 10 is 2 marks)

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11 A shop increases the price of a laptop by 20%. In a later sale, the shop reduces this new price by 20%. The final sale price of the laptop is £249.60.
Work out the price of the laptop before the first increase.

(Total for Question 11 is 3 marks)

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Mark scheme · 5.3 Reverse Percentages: 30-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

multiplier 0.75 used, e.g. 18 / 0.75 oe	**M1**
£24 cao	**A1**

Answer: £24

Question 2

divide 27 by 0.9 (or 90%) eg 27/0.9	**M1**
30 cao	**A1**

Answer: £30 cao

Question 3

divide 288 by 0.8 (or 80%) shown	**M1**
360 cao	**A1**

Answer: £360 cao

Question 4

divide 36 by 0.6 or show method using 60% = 0.6	**M1**
compute 36/0.6 = 60	**M1**
60 cao	**A1**

Answer: £60 cao

Question 5

342 / 1.20 oe	**M1**
£285 cao	**A1**

Answer: £285

Question 6

504 / 1.12 oe	**M1**
450 cao	**A1**

Answer: 450

Question 7

1.12 oe	**B1**

Answer: 1.12

Question 8

0.94 oe	**B1**

Answer: 0.94

Question 9

divide 240 by 1.20 (show method)	**M1**
obtain 200 (method shown correctly)	**M1**
200 cao	**A1**

Answer: £200 cao

Question 10

correct multiplier 0.85 oe, or 68 / 0.85 seen	**M1**
80 litres cao	**A1**

Answer: 80 litres

Question 11

overall multiplier 1.20 x 0.80 (= 0.96) found oe	**M1**
249.60 / 0.96 used, dependent on a correct method for the overall multiplier	**M1**
£260 cao	**A1**

Answer: £260

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