1.11 Percentages of Amounts and Percentage Change: Test Pack

Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Write down 10% of each amount.

(a) 10% of 150 **(1)**

(b) 10% of 2,340 **(1)**

(c) 10% of 3.6 kg **(1)**

2 The cost of a ticket changed from 40 to 34. Work out the percentage decrease.

(3)

3 A jacket costs £150. In a sale there is 15% off. Work out the sale price.

(2)

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4 (a) Write down the multiplier for a 22% increase.
(b) Use your multiplier to increase 200 by 22%.

(2)

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5 Work out 10% of 25.

(2)

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6 Calculate 15% of each amount. You may use mental or written methods, no calculator.

(a) 15% of 220 **(1)**

.....

(b) 15% of 60 **(1)**

.....

(c) 15% of 1,040 **(1)**

.....

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7 Work out 12% of 480.

(2)

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8 A car is worth £80. Its value is increased by 10% in the first year and then decreased by 25% of its new value in the second year. Work out its value at the end of the second year.

(3)

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9 After a 15% reduction, the price of a pair of trainers is £127.50. Work out the original price.

(3)

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10 After a 40% reduction, the price of a watch is £72. Work out the original price.

(3)

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11 Work out 5% of 75.

(2)

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12 Write each percentage as a multiplier.

(a) Multiplier for an increase of 25% **(1)**

(b) Multiplier for a decrease of 15% **(1)**

(c) Multiplier for an increase of 5% **(1)**

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13 A bike costs £120. A shop offers 25% off. A second shop sells the same bike for £95. Which shop is cheaper, and by how much?

(3)

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14 A coat is priced at £80. It is first reduced by 10% then a further 25% is taken from the reduced price. Calculate the final sale price.

(4)

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15 Write the multiplier for a 30% decrease, then use it to find the new value of 90 after the decrease.

(2)

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16 A washing machine costs £320. In a sale it is reduced by 15%. Calculate the sale price.

(3)

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17 Find 25% of 160.

(1)

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18 Find 35% of 200.

(2)

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Mark scheme · 1.11 Percentages of Amounts and Percentage Change: Test Pack

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

Question 1

(a) 15 cao	B1
(a) Answer: **15**	
(b) 234 cao	B1
(b) Answer: **234**	
(c) 0.36 kg cao	B1
(c) Answer: **0.36 kg**	

Question 2

change = 6 found	M1
6 ÷ 40 x 100 (change over original)	M1
15% decrease cao	A1
Answer: **15% decrease**	

Question 3

15% of 150 = 22.5 found or multiplier 0.85	M1
£127.50 cao	A1
Answer: **£127.50**	

Question 4

(a) 1.22	B1
(b) 244	B1
Answer: **(a) 1.22, (b) 244**	

Question 5

10% = 2.5 or 10/100 x 25 seen	M1
2.5 cao	A1
Answer: **2.5**	

Question 6

(a) 33 cao	B1
(a) Answer: **33**	
(b) 9 cao	B1
(b) Answer: **9**	
(c) 156 cao	B1
(c) Answer: **156**	

Question 7

10% = 48 or 12/100 x 480 seen	M1
57.6 cao	A1
Answer: **57.6**	

Question 8

first change: £88 (or multiplier 1.1)	M1
second change applied to the new value	M1
£66 cao	A1
Answer: **£66**	

Question 9

multiplier 0.85 (or 85% = £127.50)	M1
£127.50 ÷ 0.85	M1
£150 cao	A1
Answer: **£150**	

Question 10

multiplier 0.6 (or 60% = £72)	M1
£72 ÷ 0.6	M1
£120 cao	A1
Answer: **£120**	

Question 11

10% = 7.5 or 5/100 x 75 seen	M1
3.75 cao	A1
Answer: **3.75**	

Question 12

(a) 1.25 cao	B1
(a) Answer: **1.25**	
(b) 0.85 cao	B1
(b) Answer: **0.85**	
(c) 1.05 cao	B1
(c) Answer: **1.05**	

Question 13

first shop price £90 found	M1
compares £90 with £95	M1
The first shop is cheaper by £5 cao	A1
Answer: **The first shop is cheaper by £5**	

Question 14

correct method to find the price after the first 10% reduction, e.g. 80 x 0.9 or 80 - 8 oe	M1
£72 (price after the first reduction) cao	A1
correct method to find the further 25% reduction on the reduced price, e.g. their 72 x 0.75 or 72 - 18 oe	M1
£54 cao	A1
Answer: **£54**	

Question 15

correct multiplier 0.7 stated	M1
63 cao	A1
Answer: **63**	

Question 16

correct method to find 15% of 320, e.g. 10% = 32, 5% = 16	M1
correct subtraction of the reduction from 320	M1
£272 cao	A1
Answer: **£272**	

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Question 17

40 cao	**B1**

Answer: **40**

Question 18

correct method, e.g. 10% = 20 and 5% = 10, combined to find 35%	**M1**
70 cao	**A1**

Answer: **70**

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