2.1 Calculation Problems: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Erin buys a sandwich for £2.15, a drink for £1.10 and a snack bar for £0.85. Work out the total amount Erin spends.

(Total for Question 1 is 1 mark)

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2 A ribbon is 3.2 m long. Work out the length of the ribbon in centimetres.

(Total for Question 2 is 1 mark)

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3 A baker makes 50 cupcakes and packs them into boxes of 6. Work out how many full boxes the baker can make and how many cupcakes are left over.

(Total for Question 3 is 2 marks)

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4 A school trip needs to transport 134 students. Each minibus can carry 15 students. Work out the least number of minibuses needed to transport all the students.

(Total for Question 4 is 2 marks)

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5 Aisha and Ben each go for a run. The table shows the distance each of them ran and the time each of them took.

Runner	Distance (km)	Time (minutes)
Aisha	15	50
Ben	21	60

Work out which runner had the greater average speed. You must show your working.

(Total for Question 5 is 3 marks)

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Mark scheme · 2.1 Calculation Problems: 10-minute Pack

Question 1

£4.10 cao **B1**

Answer: £4.10. Working check: 2.15 + 1.10 + 0.85 = 4.10.

Question 2

320 cm cao **B1**

Answer: 320 cm. Working check: 3.2 x 100 = 320.

Question 3

divides 50 by 6 to find number of full boxes (method) **M1**

8 boxes and 2 left over cao **A1**

Answer: 8 full boxes and 2 cupcakes left over. Working check: 50 ÷ 6 = 8 remainder 2.

Question 4

divides 134 by 15 (method), e.g. 134 / 15 = 8.9(3...) **M1**

9 cao (rounds up to a whole number of minibuses) **A1**

Answer: 9 minibuses. Working check: 134 / 15 = 8.93 (2 dp); 8 minibuses only hold 120 students, so 9 minibuses are needed.

Question 5

finds Aisha's average speed: 15 / (50/60) = 18 km/h (oe) **M1**

finds Ben's average speed: 21 / (60/60) = 21 km/h (oe) **M1**

correct conclusion that Ben has the greater average speed (21 km/h > 18 km/h) cao **A1**

Answer: Ben has the greater average speed (21 km/h compared with Aisha's 18 km/h). Working check: Aisha 15 / (50/60) = 18; Ben 21 / (60/60) = 21.

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