2.47-2 Mixed Problem-Solving Paper B: 10-minute Pack

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A garden is formed from a rectangle 9 m by 6 m, with a right-angled triangular corner removed. The triangle removed has a base of 3 m and a height of 2 m. Find the remaining area of the garden.

(3)

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2 A conveyor belt moves 24 identical parcels every 4 minutes, working at a constant rate. How many parcels does it move in 15 minutes?

(3)

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3 In triangle PQR, angle P = 38 degrees, and angle Q is 16 degrees more than angle R. Find the size of angle Q.

(3)

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4 A fruit punch is made by mixing orange juice, pineapple juice and lemonade. The ratio of orange juice to pineapple juice is 3:2, and the ratio of pineapple juice to lemonade is 4:5. Altogether, 3 litres of punch is made. How much lemonade is used?

(3)

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Mark scheme · 2.47-2 Mixed Problem-Solving Paper B: 10-minute Pack

Question 1

9 x 6 = 54 (rectangle area)	**M1**
0.5 x 3 x 2 = 3 (triangle area removed)	**M1**
51 m² cao	**A1**

Answer: 51 m^2

Question 2

24 / 4 = 6 (parcels per minute)	**M1**
6 x 15 (complete correct method)	**M1**
90 cao	**A1**

Answer: 90 parcels

Question 3

180 - 38 = 142 (sum of angles Q and R)	**M1**
sets up 2R + 16 = 142, i.e. 2R = 126	**M1**
79 degrees cao	**A1**

Answer: 79 degrees

Question 4

combines the ratios using a common value for pineapple juice: orange:pineapple:lemonade = 6:4:5	**M1**
6 + 4 + 5 = 15 parts; 3 / 15 = 0.2 (litres per part)	**M1**
1 litre cao	**A1**

Answer: 1 litre

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