

revise.wales — Mark Scheme

Mock Paper A — Unit 1: Financial Mathematics and Other Applications of Numeracy (Foundation Tier, Calculator-allowed)

65 marks. R.WM-MNF-U1-001 (MS).

Notation. M_n = method mark; A_n = accuracy / answer mark; B_n = independent unsupported correct value; C_n = communication (OCW); ft = follow through from a prior error; oe = or equivalent; cao = correct answer only.

Question 1 (5 marks)

(a) **M1** 0.35×240 or $\frac{35}{100} \times 240$.

A1 = £ **84** (cao).

(b) **M1** $\frac{2}{5} \times 750$ or $750 \div 5 \times 2$.

A1 = **300** g (cao).

(c) **B1** **7.49** (cao). Penalise truncation 7.48.

Question 2 (8 marks)

(a) **M1** $2 \times 1.25 = 2.50$ or $3 \times 1.40 = 4.20$ seen.

M1 Sum of all three items: $2.50 + 4.20 + 3.60$.

A1 = £ **10.30** (cao).

(b) **M1** 180×1.20 or $180 + 0.20 \times 180$ or VAT = 36 seen.

A1 = £ **216.00** (cao). Accept £ 216.

(c) **M1** $20 - 10.30$ (ft from (a)).

A1 = £ **9.70** (cao).

B1 Independent units / £-sign correctly used on the answer line.

Question 3 (6 marks)

(a) **M1** Basic: $35 \times 11.40 = \text{£}399.00$.

M1 Overtime rate $11.40 \times 1.5 = \text{£}17.10$; overtime pay $6 \times 17.10 = \text{£}102.60$.

A1 Gross = $399.00 + 102.60 = \text{£}501.60$ (cao).

(b) **M1** Total deductions = $45.60 + 28.50 + 19.80 = \text{£}93.90$.

M1 Net = $501.60 - 93.90$ (ft from (a)).

A1 = £ **407.70** (cao).

Question 4 (6 marks)

(a) **M1** Total parts = $2 + 3 + 5 = 10$; one part = $420 \div 10 = \text{£}42$.

M1 Multiplies one-part value by 2, 3, 5.

A1 Ffion = £ **84**; Gareth = £ **126**; Huw = £ **210** (all three required). Check sum = 420.

(b) M1 Multiplier = $10 \div 4 = 2.5$ (oe).

M1 Multiplies at least two ingredients by the multiplier.

A1 Bananas **5**; Strawberries **400** g; Milk **1000** ml (or 1 litre); Honey **75** g (all four required, cao).

Question 5

(8 (6 + 2 OCW) marks)

(a) M1 Small carton: $\text{£}1.45 \div 0.5 = \text{£}2.90$ per litre (oe: $\text{£}1.45 \div 500 = \text{£}0.0029$ per ml).

A1 £ **2.90** per litre (cao).

M1 Large carton: $\text{£}3.90 \div 1.5 = \text{£}2.60$ per litre.

A1 £ **2.60** per litre (cao).

M1 Compares the two cost-per-litre values.

A1 States: **Large carton is better value** (cao).

C1 Working laid out in clear sentences, units used throughout, method legible.

C1 Conclusion explicitly justified by reference to the lower price per litre.

Question 6

(6 marks)

(a) M1 Interest for 1 year = $2500 \times 0.03 = \text{£}75$ (or $2500 \times 3 \div 100$).

M1 Multiplies one-year interest by 4.

M1 $75 \times 4 = \text{£}300$ (oe: full formula $I = \frac{PRT}{100} = \frac{2500 \times 3 \times 4}{100}$).

A1 = £ **300.00** (cao).

(b) M1 Total = $2500 + 300$ (ft from (a)).

A1 = £ **2,800.00** (cao). Accept £ 2800.

Question 7

(8 marks)

(a) M1 Identifies that Bus C arrives 11:10 (too late) so Bus B is the latest acceptable.

A1 **09:45** (cao).

(b) M1 $10:35 - 09:45$ (counts up: 15 min to 10:00 then 35 min).

A1 = **50** minutes (cao). Do not accept 0.90 h without unit.

(c) (i) B1 **20** minutes (cao). Accept 50 – 30 seen.

(ii) M1 Reads outward distance = 18 km from graph (accept 17–19 km).

M1 Converts 30 min to 0.5 h (oe).

M1 Speed = $\frac{18}{0.5}$ (oe: 18×2).

A1 = **36** km/h (cao; accept 34–38 km/h for graph-read tolerance).

Question 8

(9 marks)

(a) M1 Identifies the two missing edges: top short edge = 3 m and inner vertical edge = $4 - 2 = 2$ m (or recognises total horizontal = 8, total vertical = 4).

M1 Sums all six sides: $8 + 2 + 5 + 2 + 3 + 4$ (oe).

A1 = **24 m** (cao).

(b) **M1** Splits the L-shape into two rectangles (e.g. 8×2 bottom strip and 3×2 top-left block; or 8×4 minus 5×2).

M1 Calculates first part: $8 \times 2 = 16$ (oe $8 \times 4 = 32$).

M1 Calculates second part: $3 \times 2 = 6$ (oe cut-out $5 \times 2 = 10$).

A1 Total area = $16 + 6 = \mathbf{22\ m^2}$ (oe $32 - 10 = 22$; cao).

(c) **M1** 22×4.80 (ft from (b)).

A1 = **£ 105.60** (cao).

Question 9

(9 marks)

(a) **M1** Recognises scale: 1 cm on map = 2 km in reality.

M1 4×2 (oe).

A1 = **8 km** (cao).

(b) **M1** Identifies C is directly south of B (or measures angle from north line at B).

M1 Recognises bearing measured clockwise from north.

A1 **180°** (cao). Bearing must be written as a three-figure value.

(c) **M1** Converts 6 km to map distance: $6 \div 2 = 3$ cm.

M1 Identifies bearing 270° from C means due west of C (or angle 90° anticlockwise from north).

A1 Cross plotted 3 cm to the west of C (i.e. at the point (3, 2.5) on the map grid) and labelled **D** (tolerance ± 2 mm and $\pm 2^\circ$).

Total: $5 + 8 + 6 + 6 + 8 + 6 + 8 + 9 + 9 = \mathbf{65}$ marks.