



## GCSE Foundation/Higher 04

*Number*

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Mark scheme



21 minutes



19 marks

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*Decimals*

**M1.**       $100 \times 0.84$  or  $60 \times 1.1(0)$   
                  *84 or 66 or 150*  
                  *Money out*  
**M1**

their  $150 \times 1.4 (= 210)$   
                  *oe dep on first M1*  
                  *Required total sales income*  
**M1 dep**

$100 \times 1.2(0)$  or  $40 \times 1.6(0)$   
                  *120 or 64 or 184*  
                  *Money in after 40 packs sold*  
**M1**

$(\text{their } 210 - \text{their } 184) \div 20$   
                  *dep on 2nd and 3<sup>rd</sup> M1*  
                  *Money needed  $\div 20$*   
**M1 dep**

1.30  
                  *Do not accept 1.3*  
**A1**

#### **Alternative method 1**

$100 \times 0.84$  or  $60 \times 1.1(0)$   
                  *84 or 66 or 150*  
                  *Money out*  
**M1**

$100 \times 1.2(0)$  or  $40 \times 1.6(0)$   
                  *120 or 64 or 184*  
                  *Money in after 40 packs sold*  
**M1**

their  $184 - \text{their } 150$   
                  *34 if correct dep on*  
                  *1st and 2nd M1*  
                  *Profit after 40 packs sold*  
**M1 dep**

$(0.4 \times \text{their } 150 - \text{their } 34) \div 20$   
                  *dep on 3rd M1*  
                  *Money needed  $\div 20$*   
**M1 dep**

1.30  
                  *Do not accept 1.3*  
**A1**

### Alternative method 2

$$100 \times 0.84 \text{ or } 60 \times 1.1(0)$$

*84 or 66 or 150*

*Money out*

**M1**

$$100 \times 0.36 \text{ or } 40 \times 0.50$$

*36 or 20 or 56*

*Profit so far*

**M1**

$$(0.4 \times \text{their } 150 - \text{their } 56) \div 20$$

*0.20 if correct dep on 1st and 2nd M1*

*Profit per pack needed*

**M1 dep**

$$\text{their } 0.20 + 1.10$$

*dep on 3rd M1*

*Cost price + profit per pack*

**M1 dep**

$$1.30$$

*Do not accept 1.3*

**A1**

### Alternative method 3

$$100 \times 1.2(0) \text{ or } 100 \times 0.84$$

*120 or 84 or 36*

*Profit*

**M1**

$$40 \times 1.6(0) \text{ or } 60 \times 1.1(0)$$

*64 or 66 or -2*

*Profit*

**M1**

$$\text{their } 36 + \text{their } (-2)$$

*34 if correct dep on*

*1st and 2nd M1*

*Profit after 40 packs sold*

**M1 dep**

$$(0.4 \times \text{their } 150 - \text{their } 34) \div 20$$

*dep on 3rd M1*

*Money needed  $\div 20$*

**M1 dep**

$$1.30$$

*Do not accept 1.3*

**A1**

**[5]**

**M2.** (a) 2.56

**B1**

(b) 81.92

**B1**

**[2]**

**M3.** Less  
More  
More  
More

*B1 Any three correct*  
*B2 Correct evaluations*  
*7, 14 (or better), 100, 100*

**B2**

**[2]**

**M4.** (a)  $50 \leq \text{plan area} \leq 55$

*B1  $43 \leq \text{plan area} < 50$  or*  
 *$55 < \text{plan area} \leq 62$  or*  
*Attempt to find plan area*

**B2**

(b) (their) plan area  $\times 4$   
(= area of turf)

*Allow restart with new (their) plan area*

**M1**

(their) area of turf  $\times \text{cost} / \text{m}^2$

*Cost /  $\text{m}^2 \leftrightarrow$  (their) area of turf*

**M1**

(£) 406 to (£) 446.60 inclusive  
cao

**A1**

**[5]**

**M5.** (a) 5.285(7 ...)  
or  $5\frac{2}{7}$

**B1**

(b) 5.3

**B1ft**

**[2]**

**M6.** Any two correct calculations of 45 – 55 cookies

eg,  $3 \times '18' = 54 = £14.97$  and  $50 \times 0.75 = £37.50$

$50 \times 0.75 = 37.5(0)$

$10 \times 2.25 = 22.5(0)$

$6 \times 2.99 = 17.94$

$4 \times 3.99 = 15.96$

$3 \times 4.99 = 14.97$

**B1**

Evidence that 50 is broken down into 'blocks' of 18, 13, 8 etc ...

*Not  $50 \times 1$  or  $10 \times 5$*

**M1**

= 14.72

*2 lots of 18 plus 13 plus 1*

**A1**

**[3]**

