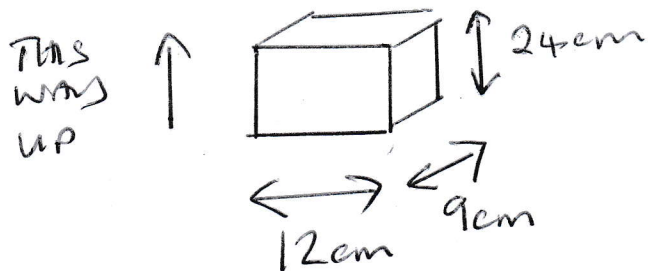
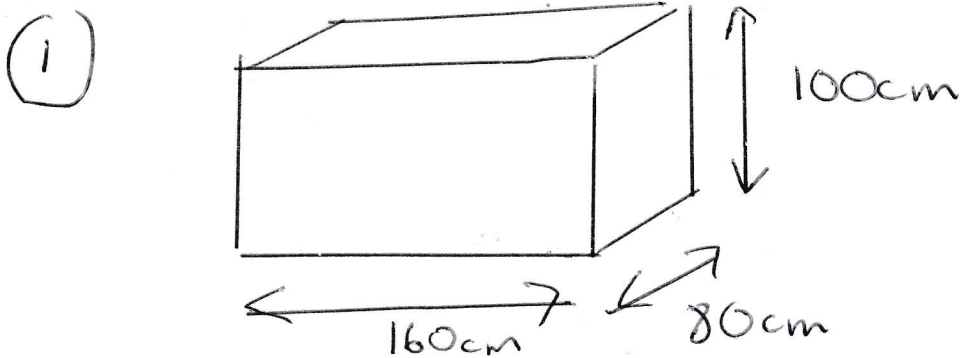


## ES2 N5 Applications of Maths (Geometry & Measure) Container Packing

Worked Solutions Courtesy of Mr R. Milton



### OPTION 1

LENGTH  $160 \div 12 = 13$   
 BREADTH  $80 \div 9 = 8$   
 HEIGHT  $100 \div 24 = 4$

N<sup>o</sup> OF PACKAGES =  
 $13 \times 8 \times 4$   
 = 416 ✓

### OPTION 2

L:  $160 \div 9 = 17$   
 B:  $80 \div 12 = 6$   
 H: 4 (SAME)

N<sup>o</sup> OF PACKAGES =  
 $17 \times 6 \times 4$   
 = 408 ✓

OPTION 1 WITH 416 IS THE MAX N<sup>o</sup> ✓

② OPTION 1

$$L: 250 \div 16 = 15$$

$$B: 90 \div 13 = 6$$

$$H: 120 \div 19 = 6$$

$$\underline{15 \times 6 \times 6 = 540} \checkmark$$

OPTION 2

$$L: 250 \div 13 = 19$$

$$B: 90 \div 16 = 5$$

$$H: 6 \text{ (SAME)}$$

$$\underline{19 \times 5 \times 6 = 570} \checkmark$$

OPTION 2 WITH 570 IS THE MAX NO  $\checkmark$

③ OPTION 1

$$L: 300 \div 35 = 8$$

$$B: 240 \div 21 = 11$$

$$H: 70 \div 32 = 2$$

$$\underline{8 \times 11 \times 2 = 176}$$

OPTION 2

$$L: 300 \div 21 = 14$$

$$B: 240 \div 35 = 6$$

$$H: 70 \div 32 \text{ (same)} = 2$$

$$\underline{14 \times 6 \times 2 = 168}$$

OPTION 1 WITH 176 IS THE MAX NO  $\checkmark$

④ OPTION 1

$$L: 200 \div 18 = 11$$

$$B: 130 \div 15 = 8$$

$$H: 90 \div 16 = 5$$

$$11 \times 8 \times 5 = 440$$

OPTION 2

$$L: 200 \div 15 = 13$$

$$B: 130 \div 18 = 7$$

$$H: 90 \div 16 = 5 \text{ (SAME)}$$

$$13 \times 7 \times 5 = 455$$

OPTION 2 WITH 455 IS THE MAX NO

⑤ OPTION 1

$$L: 400 \div 45 = 8$$

$$B: 320 \div 30 = 10$$

$$H: 210 \div 40 = 5$$

$$8 \times 10 \times 5 = 400$$

OPTION 2

$$L: 400 \div 30 = 13$$

$$B: 320 \div 45 = 7$$

$$H: 210 \div 40 = 5 \text{ (SAME)}$$

$$13 \times 7 \times 5 = 455$$

OPTION 2 WITH 455 IS THE MAX NO

⑥

OPTION 1

$$L: 42 \div 9 = 4$$

$$B: 30 \div 7 = 4$$

$$H: 18 \div 3 = 6$$

$$\underline{4 \times 4 \times 6 = 144}$$

OPTION 2

$$L: 42 \div 7 = 6$$

$$B: 30 \div 9 = 3$$

$$H: 18 \div 3 = 6 \text{ (SAME)}$$

$$\underline{6 \times 3 \times 6 = 108}$$

OPTION 1 WITH 144 IS THE MAX NO ✓

⑦

OPTION 1

$$L: 1.8 \div 0.21 = 8$$

$$B: 0.75 \div 0.12 = 6$$

$$H: 1.2 \div 0.36 = 3$$

$$\underline{8 \times 6 \times 3 = 144}$$

OPTION 2

$$L: 1.8 \div 0.12 = 15$$

$$B: 0.75 \div 0.21 = 3$$

$$H: \text{SAME} = 3$$

$$\underline{15 \times 3 \times 3 = 135}$$

OPTION 1 WITH 144 IS THE MAX NO

8

OPTION 1

$$L \quad 4 \div 0.6 = 6$$

$$B \quad 2.45 \div 0.45 = 5$$

$$H \quad 2.5 \div 0.6 = 4$$

$$\underline{6 \times 5 \times 4 = 120}$$

✓

OPTION 2

$$L \quad 4 \div 0.45 = 8$$

$$B \quad 2.45 \div 0.6 = 4$$

$$H \quad 4 \text{ (SAME)}$$

$$\underline{8 \times 4 \times 4 = 128}$$

OPTION 2 ✓

BEST

9

OPTION 1

$$L \quad 120 \div 10 = 12$$

$$B \quad 100 \div 10 = 10$$

$$H \quad 90 \div 15 = 6$$

$$\underline{12 \times 10 \times 6 = 720}$$

✓

OPTION 2

$$L \quad 120 \div 10 = 12$$

$$B \quad 100 \div 15 = 6$$

$$H \quad 90 \div 10 = 9$$

$$\underline{12 \times 6 \times 9 = 648}$$

✓

OPTION 3

$$L \quad 120 \div 15 = 8$$

$$B \quad 100 \div 10 = 10$$

$$H \quad 90 \div 10 = 9$$

$$\underline{8 \times 10 \times 9 = 720}$$

✓

720 IS

THE MAX

NO

✓

10

OPTION 1

L  $150 \div 13 = 11$

B  $110 \div 13 = 8$

H  $70 \div 17 = 4$

$11 \times 8 \times 4 = 352$



OPTION 2

L  $150 \div 17 = 8$

B  $110 \div 13 = 8$

H  $70 \div 13 = 5$

$8 \times 8 \times 5 = 320$



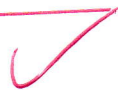
OPTION 3

L  $150 \div 13 = 11$

B  $110 \div 17 = 6$

H  $70 \div 13 = 5$

$11 \times 6 \times 5 = 330$



352 IS THE

MAX NO



QA

OPTION 1

L  $65 \div 12 = 5$

B  $90 \div 11 = 8$

H  $50 \div 9 = 5$

$5 \times 8 \times 5 = 200$



OPTION 2

L  $65 \div 11 = 5$

B  $90 \div 12 = 7$

H  $50 \div 9 = 5$

$5 \times 7 \times 5 = 175$



OPTION 1

IS BEST

WITH

MAX

200

