

Chapter 13

Exercise 13A

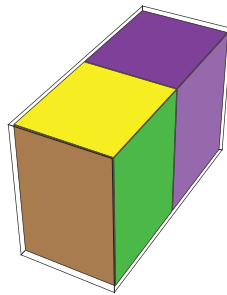
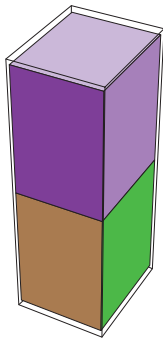
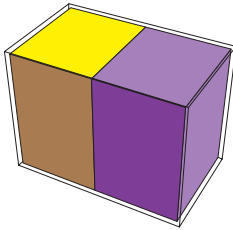
1 24

2 a tin: 42
box: 55

b box

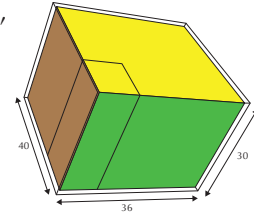
3 a 10 X 12 X 30
10 X 24 X 15
20 X 12 X 15

b



c 20 X 12 X 15

d 40 X 36 X 30,



4 a 20.4 cm

b 20

5 21

6 a 6

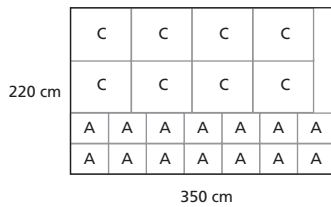
b 42

7 error in question: "maximum number of trays"

a 12

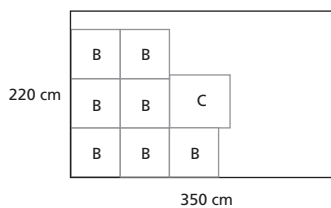
b 32

8



Trip 1
28 size A boxes (2 layers of 14 boxes)
16 size C boxes (2 layers of 8 boxes)
Maximum height of boxes is 150cm
for 2 layers of size C boxes which is
under the van height (190cm)

2 trips are required



Trip 2
14 size B boxes (2 layers of 7 boxes)
1 size C box
Maximum height of boxes is 180cm
for 2 layers of size B boxes which is
under the van height (190cm)

9

- a** (i) 36 X 24 roll multipack
 (ii) 63 X 12 can pack
 (iii) 27 X boxes
- b** (i) £647.64
 (ii) £343.35
 (iii) £539.73

10

- a** 250
b 63 months
c 58

11 No. The maximum amount of crates that can fit in the van is 135.

Activity 1 – exercise for student

Activity 2

- a** 18.2 m
b (i) 32.8 km
 (ii) roughly Dundee and Perth.
c 4326.5 years

Exercise 13B

- 1 a** won't fit.
b Lane 1 - L, L, L, L
 Lane 2 - L, V, V, V, V, V
 Lane 3 - V, V, V, V, V, C, C
 Lane 4 - C, C, C, C, C, C, C, C, C

- 2 a** (4,3), (7),(6),(5),(2,3),(5),(8),(6,2),(5),(4)
b (8),(7),(6,2),(6,2),(5,3),(5,3),(5),(4,4)

3

Note tomatoes arranged height swapped width

shelf1: 2 X tomatoes + 12 X oil

shelf2: 4 X tomatoes + 12 X sugar

shelf3: 10 X orange juice + 2 X sugar

4 potatoes in first 4 X 4

In second 4 X 4: potatoes in 4 X 3 section + potatoes in 1 X 2 section + beetroot in 1 X 2 section

In first 3 X 8: onions in 1 X 8 + lettuce in 2 X 3 + cabbage in 5 X 2

In second 3 X 8: carrots in 3 X 2, courgette in 3 X 2, beans in 4 X 3

6 Room1: 5 X G2W + 3 X G6W

Room2: 6 X G3W + 2 X G5W

Room3: 4 X G4M + 2 X G1M + 2 X G5M

Room4: 6 X G2M

Room5: 5 X G3M

Room6: 5 X G6M

Room7: 4 X G4W

Room8: 4 X G1W