

3
Primary

+hinkingMath@TM
onSponge

CONQUER PROBLEM SUMS

- Proven strategies used by top performing schools to conquer problem sums
- Based on latest MOE syllabus
- Challenging questions to excel in Upper Primary
- Full solutions in book and online

www.onSponge.com

Answer Booklet

2016 Copyright of onSponge Pte Ltd

All rights reserved. No parts of this material may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the copyright owner.

P3 Solutions

Note: In all solutions, U represents Units

Chapter 1 Numbers Up To 10 000

Unit 1.1 – Identifying Place Values and Digits

- Qn 1 **1238** : 3 is in the tens place, 1238 is lesser than 2000, 2 is in the hundreds place
 Qn 2 **3619** : 6 (hundreds place) is 5 more than 1 (tens place), 1 (tens place) is 2 lesser than 3 (thousands place)
 Qn 3 **3 268** : 2 (hundreds place) is 6 less than 8 (ones place), 6 (tens place) is 3 more than 3 (thousands place)
 Qn 4 **742** : 7 (hundreds place) is 3 more than 4 (tens place), 4 (tens place) is twice of 2 (ones place)
 Qn 5 **1 634** : 6 (hundreds place) is twice of 3 (tens place), 3 (tens place) is thrice of 1 (thousands place)

Unit 1.2 – Arranging Digits Within Place Values

- Qn 1 : 1236 Qn 2 : 5320 Qn 3 : 2354
 Qn 4 : 4085 Qn 5 : 7430 Qn 6 : 9503

Unit 1.3 – Addition & Subtraction Involving Unknown

Qn 1

$$2 \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} + 2 \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} + 2 \begin{array}{c} \text{Cross} \\ \text{Cross} \end{array} = 60$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} + \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} + \begin{array}{c} \text{Cross} \\ \text{Cross} \end{array} = 30$$

Qn 2

$$3 \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} = 18 \Rightarrow \begin{array}{c} \text{Cross} \\ \text{Cross} \end{array} = 6$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} + 6 = 13 \Rightarrow \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} = 7$$

$$7 + 6 + \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} = 34 \Rightarrow \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} = 21$$

Qn 3

$$3 \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \\ \text{Cylinder} \end{array} + 3 \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} = 32 + 28 = 60$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} + \begin{array}{c} \text{Cross} \\ \text{Cross} \end{array} = 20$$

$$20 + \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} = 37 \Rightarrow \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} = 17$$

Qn 4

$$\begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 12 \quad} \quad \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 9 \quad} \quad \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} \quad \underline{\quad 7 \quad}$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 5 \quad} \quad \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 8 \quad}$$

Qn 5

$$\begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 8 \quad} \quad \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 5 \quad} \quad \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} \quad \underline{\quad 6 \quad}$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 9 \quad} \quad \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 10 \quad}$$

Qn 6

$$\begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 9 \quad} \quad \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 8 \quad} \quad \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} \quad \underline{\quad 11 \quad}$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 7 \quad}$$

Qn 7

$$\begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 15 \quad} \quad \begin{array}{c} \text{Cup} \\ \text{Cup} \end{array} \quad \underline{\quad 11 \quad} \quad \begin{array}{c} \text{Cross} \\ \text{Cross} \\ \text{Cross} \end{array} \quad \underline{\quad 14 \quad}$$

$$\begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 12 \quad} \quad \begin{array}{c} \text{Cylinder} \\ \text{Cylinder} \\ \text{Cylinder} \end{array} \quad \underline{\quad 10 \quad}$$

- Qn 8 B would be 1 since $1 + 5 = 6$
 A would be 0 since $0 + 1 = 1$
 C would be 4 since $1 + 4 = 5$

- Qn 9 A would be 4 since $9 + 4 = 13$
 B would be 5 since $5 + 5 = 10$
 C would be 3 since $8 + 3 + 1 = 12$

- Qn 10 B would be 2 since $2 + 3 = 5$
 A would be 8 since $8 + 2 = 10$

Unit 1.4 - Comparison – More Than Models

Qn 1

Men	4245	
Women	4245	964
Women =	$4245 + 964$	
	$= 5209$	

Qn 2

Alice	245	
Janet	245	125
Total	$= 245 + 245 + 125$	
	$= 615$	

They have 615 stickers altogether.

Qn 3

Adults	465	
Children	465	245
Total	$= 465 + 465 + 245$	
	$= 1175$	

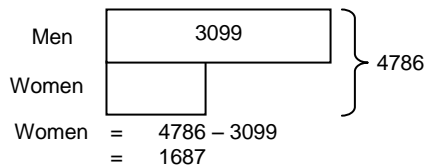
There was 1175 people altogether.

Qn 4

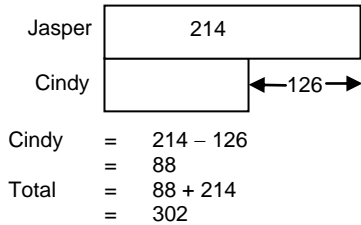
Boys	325	
Girls	325	432
Total	$= 325 + 325 + 432$	
	$= 1082$	

Unit 1.5 – Comparison – Less Than Models

Qn 1

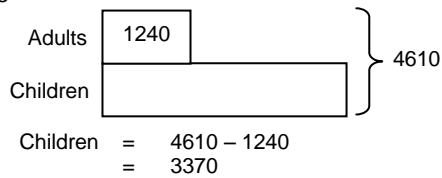


Qn 2

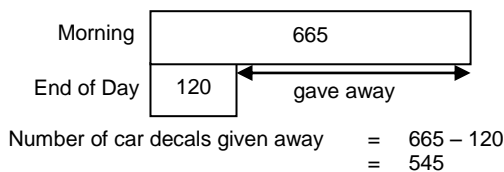


They collected 302 seashells altogether.

Qn 3

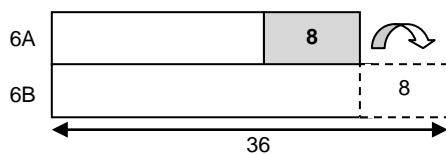


Qn 4

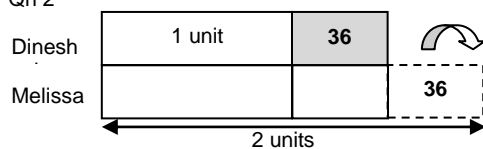


Unit 1.6 – Equal Concept With Model Drawing

Qn 1



Qn 2

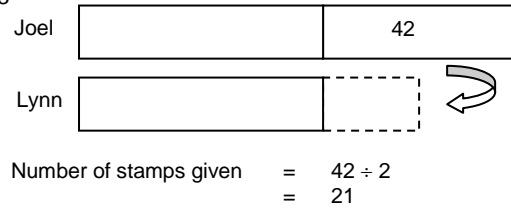


$$1 \text{ unit} = \$36 + \$36$$

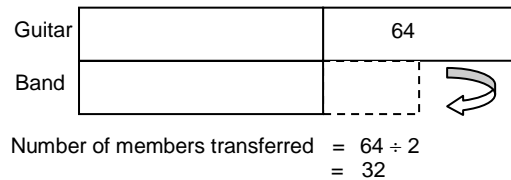
$$= \$72$$

Amount of money each person received at first
= $72 + 36$
= \$108

Qn 3



Qn 4



Unit 1.7 – Working Backwards With Unknown Beginning

Qn 1

$$\text{Before 2}^{\text{nd}} \text{ stop} = 34 - 6 + 4 = 32$$

$$\text{At interchange} = 32 - 7 + 5 = 30$$

30 passengers boarded the bus at the interchange at first.

Qn 2

$$\text{Before 2}^{\text{nd}} \text{ stage} = 50 - 13 + 8 = 45$$

$$\text{At start of game} = 45 - 12 + 8 = 41$$

John had 41 marbles before the game.

Qn 3

$$\text{Number of bottles used} = (15 \times 5) + (20 \times 2)$$

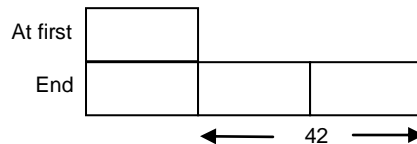
$$= 75 + 40$$

$$= 115$$

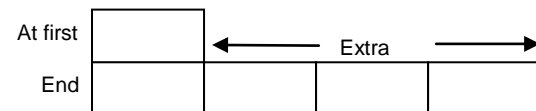
$$\text{Number of bottles bought} = 115 + 120$$

$$= 235$$

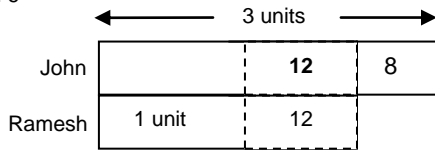
Qn 4



Qn 5



Qn 6

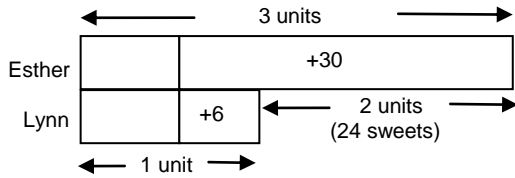


$$2 \text{ units} = 12 + 8 = 20$$

$$1 \text{ unit} = 20 \div 2 = 10$$

Number of sweets each of them had at first
 $= 10 + 12 = 22$

Qn 7

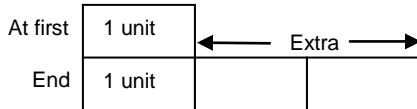


$$2 \text{ units} = 24 \text{ sweets}$$

$$1 \text{ unit} = 24 \div 2 = 12$$

Number of sweets each had at first $= 1 \text{ unit} - 6$
 $= 12 - 6$
 $= 6$

Qn 8



$$\text{Extra} = 48 - 3 - 5 = 40$$

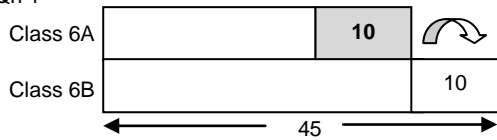
$$2 \text{ units} = 40$$

$$1 \text{ unit} = 20$$

At first $= 1 \text{ unit} = 20$
 She had 20 sweets at first.

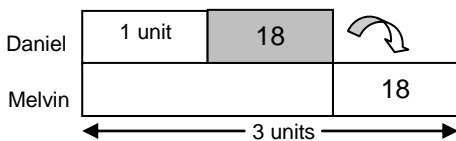
Unit 1.8 – Internal Transfer

Qn 1



Number of students in each class at first $= 45 - 10 = 35$

Qn 2



$$2 \text{ units} = \$18 + \$18 = \$36$$

$$1 \text{ unit} = \$18$$

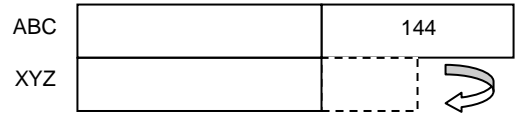
Amount of money each of them had at first
 $= \$18 + \$18 = \$36$

Qn 3



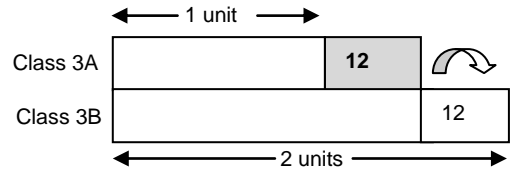
Number of marbles to be given to Lynn $= 24 \div 2 = 12$

Qn 4



Number of members transferred $= 144 \div 2 = 72$

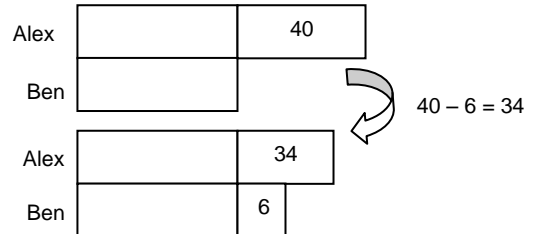
Qn 5



$$1 \text{ unit} = 12 + 12 = 24$$

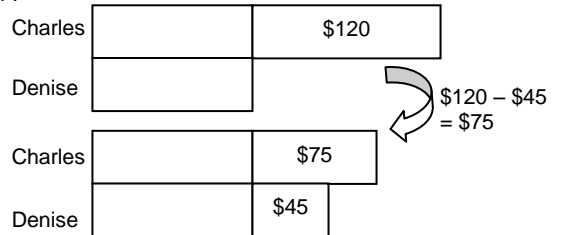
Number of students in each class at first
 $= 24 + 12 = 36$

Qn 6



Difference between Alex and Ben $= 34 - 6 = 28$
 Alex would have 28 more stickers than Ben.

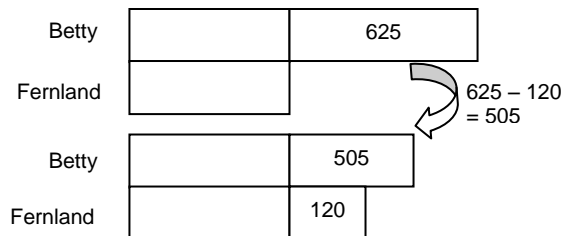
Qn 7



Difference between Charles and Denise $= \$75 - \$45 = \$30$

Charles would have \$30 more than Denise.

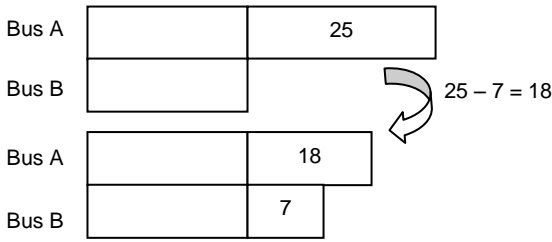
Qn 8



Difference $= 505 - 120 = 385$

There are 385 more students in Betty Primary School than in Fernland Primary School.

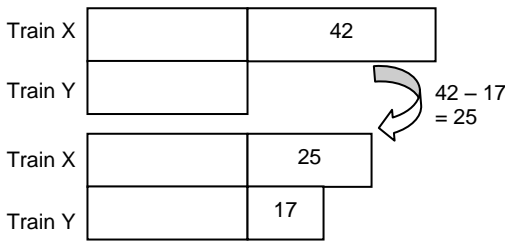
Qn 9



Difference = $25 - 7 = 18$

There would be 18 more passengers on Bus A than on Bus B.

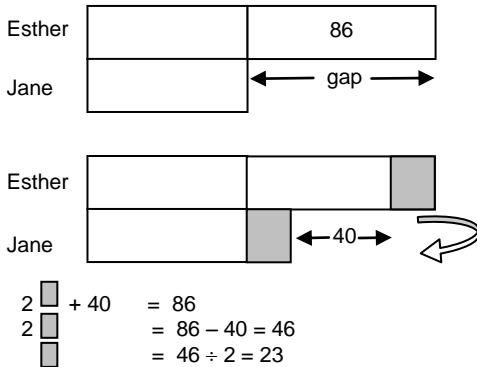
Qn 10



Difference = $42 - 17 = 25$

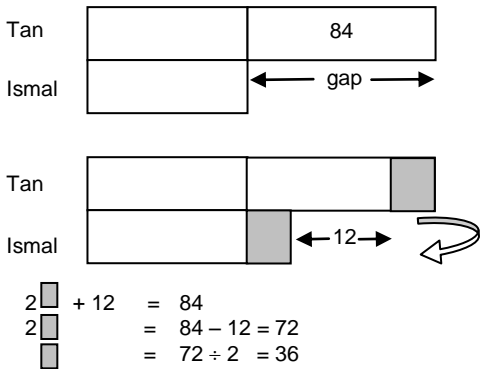
There would be 25 more passengers in Train X than in Train Y.

Qn 11



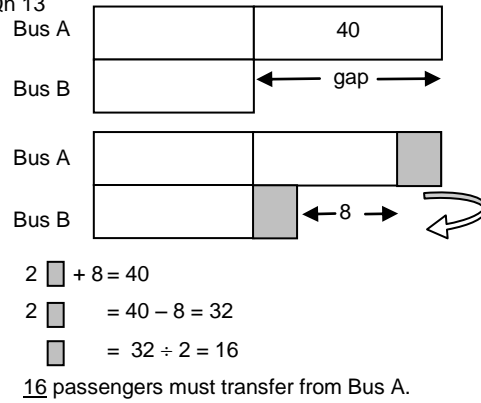
Esther must give Jane 23 stickers.

Qn 12



Mrs Tan must give 36 cookies.

Qn 13



Chapter 2 Number Patterns

Unit 2.1 - Linear Formation

Qn 1

- (a) 1st lamp post to 20th lamp post = 19 gaps
Distance = $19 \times 20 \text{ m} = 380 \text{ m}$
- (b) 5th lamp post to 20th lamp post = 15 gaps
Distance = $15 \times 20 \text{ m} = 300 \text{ m}$

Qn 2

- (a) Number of markings = $20 - 1 = 19$
- (b) Length between any 2 markings = $200 \div 20 = 10 \text{ cm}$
- (c) Distance between 1st and 9th marking = $10 \text{ cm} \times 8 = 80 \text{ cm}$

Qn 3

60 trees – 4 trees (at the corners) = 56
 $56 \div 4 = 14$
At each side, there were = $14 + 2$ (trees at the 2 corners on each side of garden) = 16 trees

Qn 4

56 cones – 4 cones (at the corners) = 52 cones
 $52 \div 4 = 13$ cones
 $13 + 2$ (cones at the 2 corners on each side) = 15 cones along each side

Qn 5

40 students – 4 students (at the corners) = 36 students
 $36 \div 4 = 9$ students
 $9 + 2$ (students at the 2 corners on each side) = 11 students

Qn 6

54 trees – 3 trees (at the corners) = 51
 $51 \div 3 = 17$
 $17 + 2$ (trees at the 2 corners on each side) = 19 trees

Qn 7

42 students – 3 students (at the corners) = 39 students
 $39 \div 3 = 13$ students
 $13 + 2$ (students at the corners on each side) = 15 students

Unit 2.2 - Regular Gaps

Qn 1

(a) Figure 5 = $5 \times 3 + 1$
= 16 sticks

(b) Figure 10 = $10 \times 3 + 1$
= 31 sticks

(c) Figure 20 = $20 \times 3 + 1$
= 61 sticks

(d) $244 - 1 = 243$
 $243 \div 3 = 81$
Figure 81 has 244 sticks.

Qn 2

(a) Figure 5 = $5 \times 2 + 1$
= 11 sticks

(b) Figure 10 = $10 \times 2 + 1$
= 21 sticks

(c) Figure 20 = $20 \times 2 + 1$
= 41 sticks

(d) $137 - 1 = 136$
 $136 \div 2 = 68$
Figure 68 has 137 sticks.

Qn 3

(a) Figure 5 = $5 \times 3 + 2$
= 17 dots

(b) Figure 10 = $10 \times 3 + 2$
= 32 dots

(c) Figure 30 = $30 \times 3 + 2$
= 92 dots

(d) $152 - 2 = 150$
 $150 \div 3 = 50$
Figure 50 has 152 dots.

Qn 4

(a) Figure 5 = 5×5
= 25 sticks

(b) Figure 10 = 10×5
= 50 sticks

(c) Figure 20 = 20×5
= 100 sticks

(d) $135 \div 5 = 27$
Figure 27 has 135 sticks.

Qn 5

(a) Figure 5 = $5 + 2$
= 7 dots

(b) Figure 10 = $10 \times 2 + 1$
= 21 sticks

(c) Figure 20 = $20 + 2$
= 22 dots

(d) $99 - 2 = 97$
Figure 97 has 99 dots.

(e) $215 - 1 = 214$
 $214 \div 2 = 107$
Figure 107 has 215 dots.

Qn 6

(a) Figure 5 = $5 \times 3 + 1$
= 16 dots

(b) Figure 10 = $10 \times 3 + 1$
= 31 dots

(c) Figure 20 = $20 \times 3 + 1$
= 61 dots

(d) $109 - 1 = 108$
 $108 \div 3 = 36$
Figure 36 has 109 dots.

Chapter 3 Division

Unit 3.1 – Division with Remainder

Qn 1

$$\begin{array}{r} 25 \times 5 = 125 \\ 125 + 2 = 127 \end{array}$$

Qn 2

$$\begin{array}{r} 95 \\ 9 \overline{)858} \\ \underline{81} \\ 48 \\ \underline{45} \\ 3 \end{array}$$

3 sweets are left unpacked.

Qn 3

$$236 \div 6 = 39 \text{ r } 2$$

She can give to 39 friends.

Qn 4

$$1 \times 8 + 4 = 12$$

Qn 5

Multiples of 5 : 5, 10, 15, 20, 25, 30, 35, 40
Add 3 : 8, 13, 18, 23, 28, **33**, 38, 41

Multiples of 7 : 7, 14, 21, 28, 35, 42, 49, 56
Add 5 : 12, 19, 26, **33**, 40, 47, 54, 61
The smallest number is 33.

Qn 6

$$117 + 8 = 125$$
$$125 \div 5 = 25$$

There are 25 students in her class.

Qn 7

$$243 - 3 = 240$$
$$240 \div 6 = 40$$

There are 40 students in her class.

Unit 3.2 - Equal Distribution Without Remainder

Qn 1

$$425 \div 5 = 85$$

She would need 85 containers.

Qn 2

$$2000 \div 8 = 250$$

She would need 250 boxes.

Qn 3

$$588 \div 6 = 98$$

She used 98 boxes.

Qn 4

(a) $63 \div 5 = 12 \text{ r } 3$
3 students were not involved.

(b) $63 \div 9 = 7$
7 students in each new group.

Qn 5

$$\begin{array}{r} \text{Multiples of 7} = 49, 56, 63, 70, 77, 84 \\ \text{Add 6} \quad \quad \quad \underline{+6} \quad \underline{+6} \quad \underline{+6} \quad \underline{+6} \quad \underline{+6} \quad \underline{+6} \\ 55, 62, \mathbf{69}, 76, 83, 90 \end{array}$$

$$\begin{array}{r} \text{Multiples of 5} = 50, 55, 60, 65, 70, 75 \\ \text{Add 4} \quad \quad \quad \underline{+4} \quad \underline{+4} \quad \underline{+4} \quad \underline{+4} \quad \underline{+4} \quad \underline{+4} \\ 54, 59, 64, \mathbf{69}, 74, 79 \end{array}$$

The minimum number of stickers is 69.

Qn 6

Gives 5 sweets to each child = 54 extra sweets
Gives 8 sweets to each child = need 33 more sweets

Giving extra 3 sweets to each child = need $(54 + 33)$
= 87 sweets more

Giving extra 1 sweet to each child = need $(87 \div 3)$
= 29 sweets more

She has 29 children in her class.

Qn 7

Divide into groups of 10 = 9 left
Divide into groups of 12 = 7 left

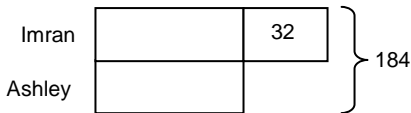
Multiples of 10 = 50, 60, 70, 80, 90, 100
Add 9 = 59, 69, **79**, 89, 99, 109

Multiples of 12 = 60, 72, 84, 96, 108
Add 7 = 67, **79**, 91, 103, 115

The minimum number of stamps is 79.

Unit 3.3 – More Than / Less Than (Division)

Qn 1

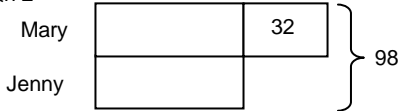


$$184 - 32 = 152$$

$$152 \div 2 = 76$$

Ashley had 76 stamps.

Qn 2

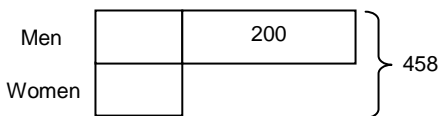


$$98 - 32 = 66$$

$$66 \div 2 = 33$$

Number of marbles Mary has = $33 + 32 = 65$

Qn 3

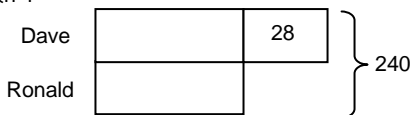


$$2 \text{ units} = 458 - 200 = 258$$

$$1 \text{ unit} = 258 \div 2 = 129$$

129 women took part in the triathlon.

Qn 4



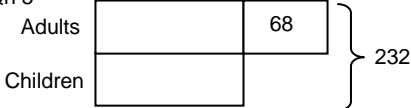
$$2 \text{ units} = 240 - 28 = 212$$

$$1 \text{ unit} = 212 \div 2 = 106$$

Dave received = $106 + 28 = 134$ sweets

Ronald received 106 sweets.

Qn 5

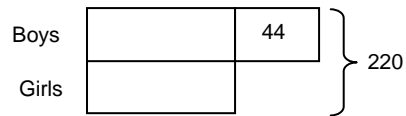


$$2 \text{ units} = 232 - 68 = 164$$

$$1 \text{ unit} = 164 \div 2 = 82$$

There were 82 children.

Qn 6

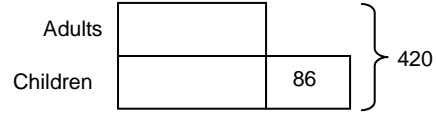


$$2 \text{ units} = 220 - 44 = 176$$

$$1 \text{ unit} = 176 \div 2 = 88$$

Number of boys = $88 + 44 = 132$

Qn 7

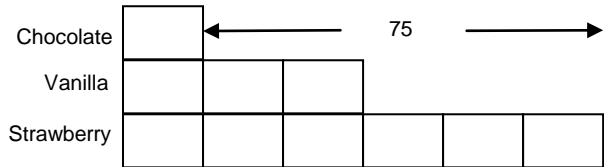


$$2 \text{ units} = 420 - 86 = 334$$

$$1 \text{ unit} = 334 \div 2 = 167$$

Number of children = $86 + 167 = 253$

Qn 8

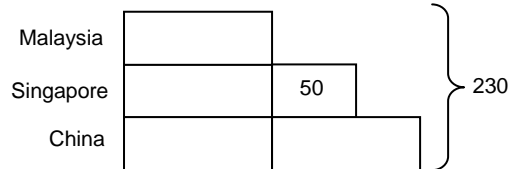


$$5 \text{ units} = 75$$

$$1 \text{ unit} = 75 \div 5 = 15$$

Number of cookies at first = 10 units
= $10 \times 15 = 150$

Qn 9



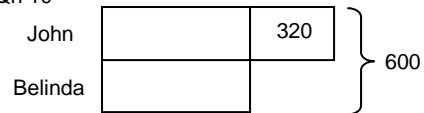
$$4 \text{ units} + 50 = 230$$

$$4 \text{ units} = 230 - 50 = 180$$

$$1 \text{ unit} = 180 \div 4 = 45$$

Number of Singapore stamps bought = $45 + 50 = 95$

Qn 10

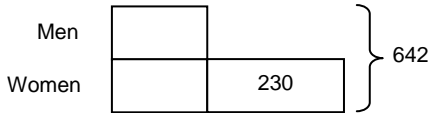


(a) $2 \text{ units} = 600 - 320 = 280$
 $1 \text{ unit} = 280 \div 2 = 140$

Belinda has 140 stickers.

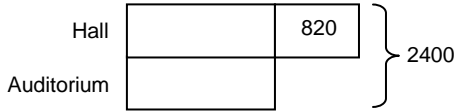
(b) $\text{John has} = 140 + 320 = 460$ stickers

Qn 11



$$\begin{aligned} 2 \text{ units} &= 642 - 230 = 412 \\ 1 \text{ unit} &= 412 \div 2 = 206 \\ \text{There were } &\underline{206} \text{ men at the trade fair.} \end{aligned}$$

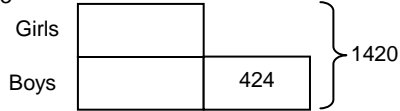
Qn 12



$$\begin{aligned} 2 \text{ units} &= 2400 - 820 \\ &= 1580 \\ 1 \text{ unit} &= 1580 \div 2 \\ &= 790 \end{aligned}$$

Number of students the hall can accommodate
= 790 + 820 = 1610

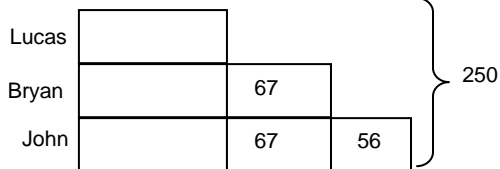
Qn 13



$$\begin{aligned} 2 \text{ units} &= 1420 - 424 \\ &= 996 \\ 1 \text{ unit} &= 996 \div 2 \\ &= 498 \\ \text{(a) Number of boys} &= 498 + 424 = 922 \\ \text{(b) Number of girls} &= 498 \end{aligned}$$

Unit 3.4 - More Than / Less Than (Multiple Individuals)

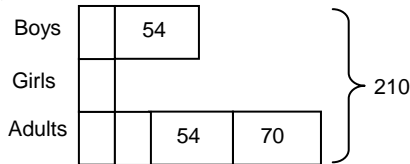
Qn 1



$$\begin{aligned} 3 \text{ units} + 67 + 67 + 56 &= 250 \\ 3 \text{ units} &= 250 - 190 \\ &= 60 \\ 1 \text{ unit} &= 20 \end{aligned}$$

Number of stamps Bryan had = 20 + 67
= 87

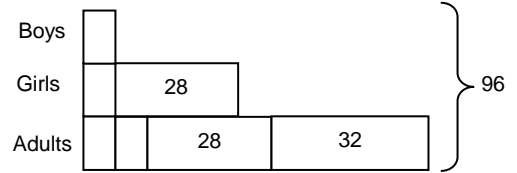
Qn 2



$$\begin{aligned} 4 \text{ units} + 54 + 54 + 70 &= 210 \\ 4 \text{ units} &= 210 - 178 = 32 \\ 1 \text{ unit} &= 8 \end{aligned}$$

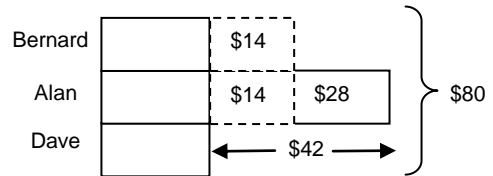
Number of boys at the gathering = 8 + 54
= 62

Qn 3



$$\begin{aligned} 4 \text{ units} + 28 + 28 + 32 &= 96 \\ 4 \text{ units} &= 96 - 88 = 8 \\ 1 \text{ unit} &= 2 \\ \text{Total number of children} &= 2 \text{ units} + 28 \\ &= 2 \times 2 + 28 \\ &= 32 \end{aligned}$$

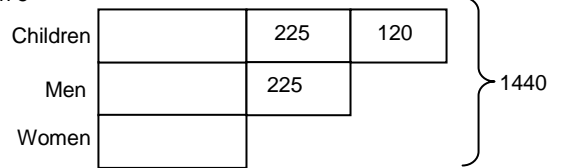
Qn 4



$$\begin{aligned} 3 \text{ units} + \$14 + \$14 + \$28 &= \$80 \\ 3 \text{ units} &= 80 - 56 \\ &= \$24 \\ 1 \text{ unit} &= \$8 \end{aligned}$$

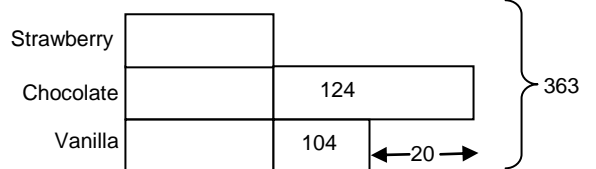
Dave had \$8.

Qn 5



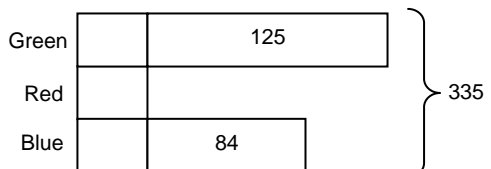
$$\begin{aligned} 3 \text{ units} + 225 + 225 + 120 &= 1440 \\ 3 \text{ units} &= 1440 - 225 - 225 - 120 \\ &= 870 \\ 1 \text{ unit} &= 290 \\ \text{Number of children} &= 290 + 225 + 120 = 635 \end{aligned}$$

Qn 6



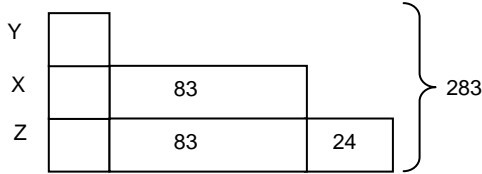
$$\begin{aligned} 3 \text{ units} &= 363 - 124 - 104 = 135 \\ 1 \text{ unit} &= 45 \\ \text{Chocolate buns produced} &= 45 + 124 = 169 \end{aligned}$$

Qn 7



$$\begin{aligned} 3 \text{ units} &= 335 - 125 - 84 = 126 \\ 1 \text{ unit} &= 42 \\ \text{There were } &\underline{42} \text{ red marbles.} \end{aligned}$$

Qn 8



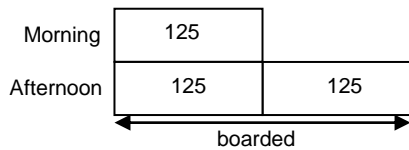
$$\begin{aligned} 3 \text{ units} &= 283 - 83 - 83 - 24 = 93 \\ 1 \text{ unit} &= 31 \end{aligned}$$

There are 31 Type Y prizes at the booth.

Chapter 4 Multiplication

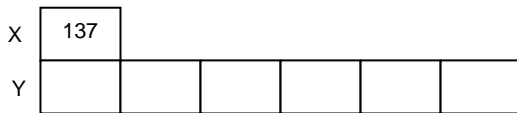
Unit 4.1 – Repeated Identity

Qn1



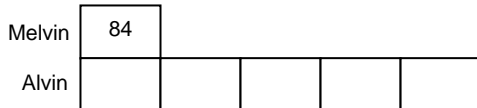
In the afternoon = $125 \times 3 = 375$
There were 375 passengers on the ship in the afternoon.

Qn 2



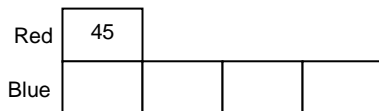
Mass of Container Y = $137 \times 6 = 822$ kg

Qn 3



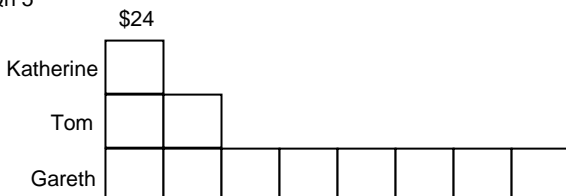
Number of books Alvin read = $84 \times 5 = 420$

Qn 4



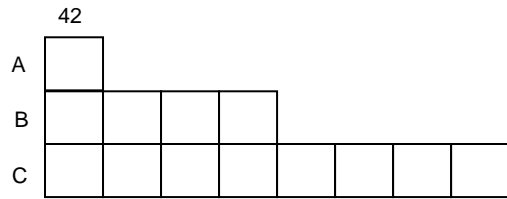
- (a) Number of blue marbles = $45 \times 4 = 180$
(b) Total number of marbles = $180 + 45 = 225$

Qn 5



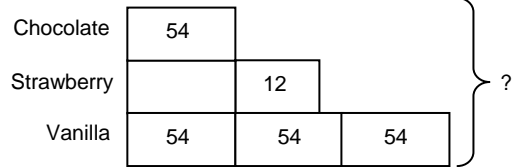
Amount of money Gareth has = $24 \times 8 = \$192$

Qn 6



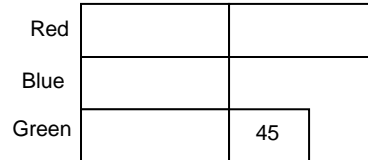
Total number of sweets in Container C = $42 \times 8 = 336$

Qn 7



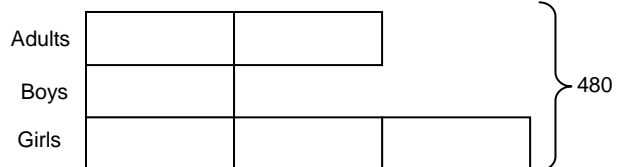
Total number of cookies she baked
= $54 \times 5 + 12 = 282$

Qn 8



Total number of markers purchased = $4 \text{ units} + 45$
= $4 \times 80 + 45$
= $320 + 45$
= 365

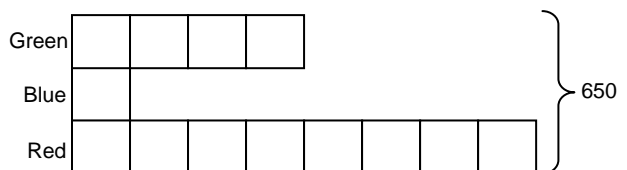
Qn 9



$$\begin{aligned} 6 \text{ units} &= 480 \\ 1 \text{ unit} &= 480 \div 6 \\ &= 80 \end{aligned}$$

No. of girls at the funfair = $80 \times 3 = 240$

Qn 10



$$\begin{aligned} \text{Total} &= 13 \text{ units} = 650 \\ 1 \text{ unit} &= 650 \div 13 = 50 \\ \text{Number of green marbles} &= 50 \times 4 = 200 \end{aligned}$$

Unit 4.2 – Gap and Difference

Qn 1

$$\begin{aligned} \text{Amount of money Mrs Koh had} &= \$70 \times 4 - \$15 \\ &= \$265 \end{aligned}$$

Qn 2

$$\begin{aligned} \text{Amount of money Tommy had} &= \$4 \times 8 - \$9 \\ &= \$32 - \$9 \\ &= \$23 \end{aligned}$$

Qn 3

$$\begin{aligned} \text{Number of muffins Mrs Krishnan baked} &= 40 \times 4 + 25 \\ &= 160 + 25 \\ &= 185 \end{aligned}$$

Qn 4

$$\begin{aligned} \text{Amount of money James had at first} &= 12 \times \$4 + \$7 \\ &= \$48 + \$7 \\ &= \$55 \end{aligned}$$

Qn 5

$$\begin{aligned} \text{Number of muffins Mrs Tan baked at first} &= 12 \times 8 + 5 \\ &= 96 + 5 \\ &= 101 \end{aligned}$$

Qn 6

$$\begin{aligned} \text{Buys 4 pencils} &= \text{left } \$2 \\ \text{Buys 5 pencils} &= \text{need } \$1 \text{ more} \\ \text{1 extra pencil need} &= \$(2 + 1) \\ &= \$3 \end{aligned}$$

- (a) A pencil costs \$3.
- (b) Amount of money Jeremy had at first
 $= 4 \times \$3 + \2
 $= \$12 + \2
 $= \$14$

Qn 7

$$\begin{aligned} \text{Buys 4 erasers} &= \$1 \text{ left} \\ \text{Buys 8 erasers} &= \text{need } \$3 \text{ more} \\ \text{4 extra erasers need} &= \$(1 + 3) \\ &= \$4 \\ \text{1 extra eraser need} &= \$4 \div 4 \\ &= \$1 \end{aligned}$$

- (a) The cost of 1 eraser is \$1.
- (b) Amount of money Kevin had at first
 $= 4 \times \$1 + \1
 $= \$5$

Qn 8

$$\begin{aligned} \text{Each child gets 3 sweets} &= 30 \text{ left} \\ \text{Each child gets 4 sweets} &= \text{need } 5 \text{ more} \\ \text{Each child gets 1 extra sweet need} &= 30 + 5 \\ &= 35 \text{ more} \end{aligned}$$

- (a) There are 35 students in Miss Lim's class.
- (b) Number of sweets = $35 \times 3 + 30 = 135$

Qn 9

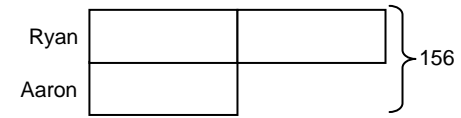
$$\begin{aligned} \text{Each child gets 2 chocolates} &= 40 \text{ left} \\ \text{Each child gets 4 chocolates} &= \text{need } 30 \text{ more} \\ \text{Each child gets 2 extra chocolates need} &= 40 + 30 \\ &= 70 \text{ more} \\ \text{Each child gets 1 extra chocolate need} &= 70 \div 2 \\ &= 35 \text{ more} \end{aligned}$$

- (a) There are 35 children in the class.
- (b) Number of chocolates at first
 $= 35 \times 2 + 40 = 110$

Unit 4.3 – Internal Transfer

Qn 1

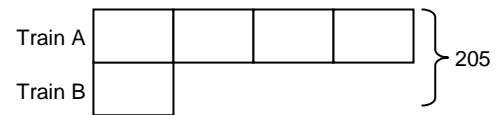
In the end



$$\begin{aligned} 3 \text{ units} &= 156 \\ 1 \text{ unit} &= 156 \div 3 = 52 \end{aligned}$$

$$\begin{aligned} \text{Number of bottle caps Ryan had at first} \\ &= 52 \times 2 + 40 = 144 \end{aligned}$$

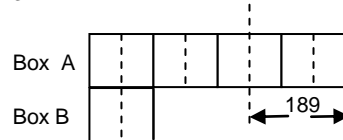
Qn 2



$$\begin{aligned} 5 \text{ units} &= 205 \\ 1 \text{ unit} &= 205 \div 5 = 41 \end{aligned}$$

$$\text{Number of passengers in Train B at first} = 41 - 16 = 25$$

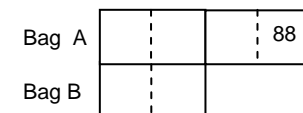
Qn 3



$$\begin{aligned} 3 \text{ units} &= 189 \\ 1 \text{ unit} &= 189 \div 3 \\ &= 63 \end{aligned}$$

$$\begin{aligned} \text{Number of apples in Box A at first} &= 63 \times 8 \\ &= 504 \end{aligned}$$

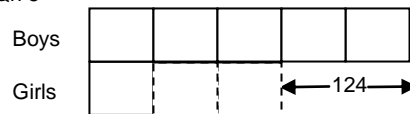
Qn 4



$$1 \text{ unit} = 88$$

$$\text{Number of balls in Bag A at first} = 88 \times 4 = 352$$

Qn 5



$$\begin{aligned} 2 \text{ units} &= 124 \\ 1 \text{ unit} &= 62 \end{aligned}$$

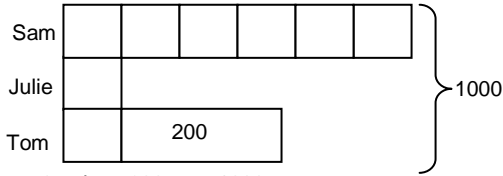
$$\begin{aligned} \text{No. of boys at first} &= 62 \times 5 \\ &= 310 \end{aligned}$$



Visit www.onsponge.com - a parenting & learning community focusing on the nurturing and development of tweens or preteens. For help on ThinkingMath@onSponge, simply join the Forum or be further equipped through our editorials, blogs, workshops and more!

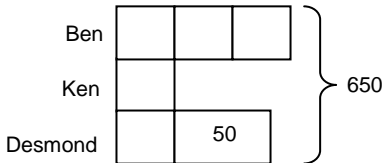
Unit 4.4 – Comparison Models

Qn 1



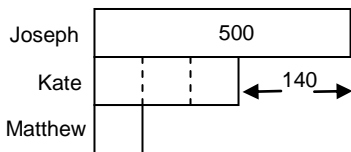
$$\begin{aligned} 8 \text{ units} + 200 &= 1000 \\ 8 \text{ units} &= 1000 - 200 \\ &= 800 \\ 1 \text{ unit} &= 100 \\ \text{Number of oranges Sam bought} &= 6 \times 100 = 600 \end{aligned}$$

Qn 2



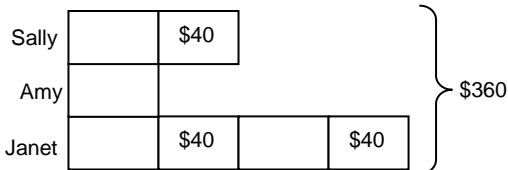
$$\begin{aligned} 5 \text{ units} + 50 &= 650 \\ 5 \text{ units} &= 650 - 50 \\ &= 600 \\ 1 \text{ unit} &= 600 \div 5 \\ &= 120 \\ \text{Number of eggs Desmond bought} &= 120 + 50 = 170 \end{aligned}$$

Qn 3



$$\begin{aligned} \text{Kate} &= 500 - 140 \\ &= 360 \\ \text{Matthew} &= 360 \div 3 \\ &= 120 \\ \text{Total marbles collected} &= 500 + 360 + 120 \\ &= 980 \end{aligned}$$

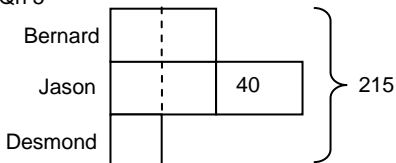
Qn 4



$$\begin{aligned} 4 \text{ units} + \$120 &= \$360 \\ 4 \text{ units} &= \$360 - \$120 \\ &= \$240 \\ 1 \text{ unit} &= \$240 \div 4 \\ &= \$60 \end{aligned}$$

$$\text{Amount of money Janet had} \rightarrow (\$60 + \$40) \times 2 = \$200$$

Qn 5

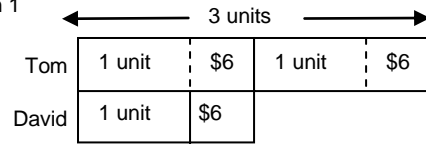


Qn 5 (Cont.)

$$\begin{aligned} 5 \text{ units} + 40 &= 215 \\ 5 \text{ units} &= 215 - 40 \\ &= 175 \\ 1 \text{ unit} &= 175 \div 5 \\ &= 35 \\ \text{Number of erasers Jason has} &= 35 \times 2 + 40 \\ &= 110 \end{aligned}$$

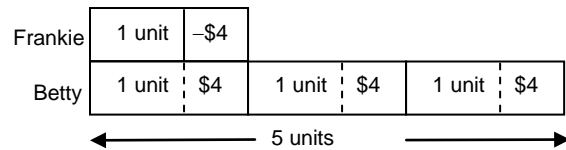
Unit 4.5 – External Change Concept

Qn 1



$$\begin{aligned} 1 \text{ unit} &= \$6 + \$6 = \$12 \\ \text{Amount of money David had at first} &= \$12 + \$6 = \$18 \end{aligned}$$

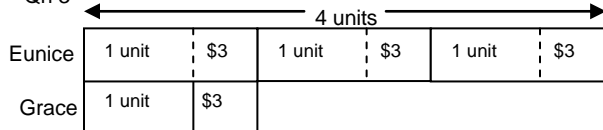
Qn 2



$$\begin{aligned} 2 \text{ units} &= \$4 \times 3 \\ &= \$12 \\ 1 \text{ unit} &= \$6 \end{aligned}$$

$$\begin{aligned} \text{Amount of money Frankie had at first} &= \$6 + \$4 \\ &= \$10 \end{aligned}$$

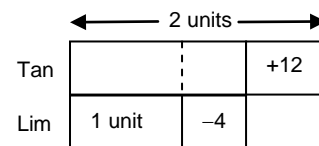
Qn 3



$$1 \text{ unit} = 3 \times 3 = 9$$

$$\text{Amount of money Grace had at first} = \$9 + \$3 = \$12$$

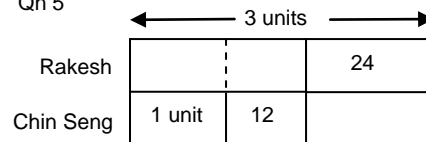
Qn 4



$$1 \text{ unit} = 12 + 4 = 16$$

$$\text{Number of pies each of them had at first} = 16 + 4 = 20$$

Qn 5



$$\begin{aligned} 2 \text{ units} &= 24 + 12 = 36 \\ 1 \text{ unit} &= 18 \end{aligned}$$

$$\text{Number of stickers Rakesh had at first} = 18 + 12 = 30$$

Chapter 5 Length

Unit 5.1 – Comparison of Length

Qn 1

- (a) 1 m 90 cm (b) 70 m (c) 1100 m

Qn 2

- (a) shorter than (b) longer than
(c) shorter than (d) shorter than

Unit 5.2 – Addition / Subtraction of Length

Qn 1

$$7 \text{ m } 35 \text{ cm} = 735 \text{ cm}$$

$$2 \text{ m } 25 \text{ cm} = 225 \text{ cm}$$

Length of wire given to neighbour

$$= 735 \text{ cm} - 201 \text{ cm} - 225 \text{ cm}$$

$$= 309 \text{ cm}$$

$$= 3 \text{ m } 9 \text{ cm}$$

Qn 2

Total distance covered

$$= 1200 \text{ m} + 20 \text{ km } 40 \text{ m} + 6 \text{ km } 20 \text{ m}$$

$$= 1200 \text{ m} + 20040 \text{ m} + 6020 \text{ m}$$

$$= 27260 \text{ m}$$

$$= 27 \text{ km } 260 \text{ m}$$

Qn 3

$$\text{Length of cloth left} = 4 \text{ m } 50 \text{ cm} - 205 \text{ cm} - 120 \text{ cm}$$

$$= 450 \text{ cm} - 205 \text{ cm} - 120 \text{ cm}$$

$$= 125 \text{ cm}$$

$$= 1 \text{ m } 25 \text{ cm}$$

Qn 4

$$\text{Total distance Joyce ran} = 426 \text{ m} \times 6$$

$$= 2556 \text{ m}$$

$$= 2 \text{ km } 556 \text{ m}$$

Qn 5

$$\text{Total length of 6 shelves} = 430 \text{ cm} \times 3 + 3 \text{ m } 45 \text{ cm}$$

$$= 1290 \text{ cm} + 345 \text{ cm}$$

$$= 1635 \text{ cm}$$

$$= 16 \text{ m } 35 \text{ cm}$$

Qn 6

(a) Total length of string David had at first

$$= 180 \text{ cm} + 2 \text{ m } 35 \text{ cm}$$

$$= 180 \text{ cm} + 235 \text{ cm}$$

$$= 415 \text{ cm}$$

(b) Length of each remaining piece = $2 \text{ m } 35 \text{ cm} \div 5$

$$= 235 \div 5$$

$$= 47 \text{ cm}$$

Qn 7

Length of ribbon needed for 6 presents = $60 \text{ cm} \times 6$

$$= 360 \text{ cm}$$

Ribbon left in the end

$$= 7 \text{ m } 40 \text{ cm} - 360 \text{ cm} - 1 \text{ m } 20 \text{ cm}$$

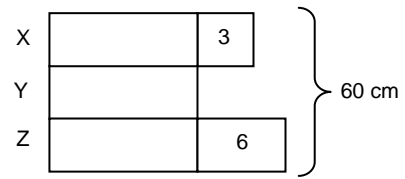
$$= 740 \text{ cm} - 360 \text{ cm} - 120 \text{ cm}$$

$$= 260 \text{ cm}$$

$$= 2 \text{ m } 60 \text{ cm}$$

Unit 5.3 – More than / Less than (Models)

Qn 1



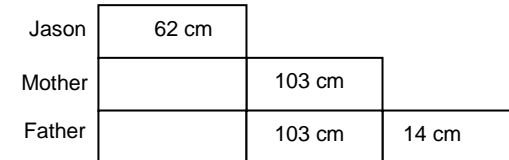
$$3 \text{ units} + 9 \text{ cm} = 60 \text{ cm}$$

$$3 \text{ units} = 60 \text{ cm} - 9 = 51 \text{ cm}$$

$$1 \text{ unit} = 51 \text{ cm} \div 3 = 17 \text{ cm}$$

$$\text{Length of Stick X} = 17 \text{ cm} + 3 = 20 \text{ cm}$$

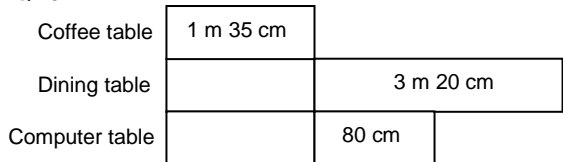
Qn 2



(a) Jason's mother = $(62 + 103) \text{ cm}$
= $165 \text{ cm} = 1 \text{ m } 65 \text{ cm}$

(b) Jason's father = $(165 + 14) \text{ cm}$
= 179 cm
= $1 \text{ m } 79 \text{ cm}$

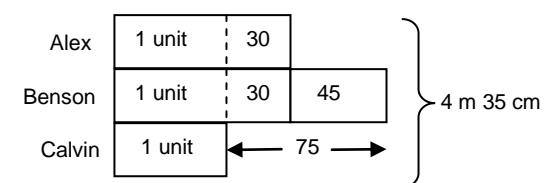
Qn 3



(a) Length of computer table = $1 \text{ m } 35 \text{ cm} + 80 \text{ cm}$
= $135 \text{ cm} + 80 \text{ cm}$
= 215 cm

(b) Total length of 3 tables
= $2 \text{ m } 15 \text{ cm} + 1 \text{ m } 35 \text{ cm} + 3 \text{ m } 20 \text{ cm} + 1 \text{ m } 35 \text{ cm}$
= $215 \text{ cm} + 135 \text{ cm} + 320 \text{ cm} + 135 \text{ cm}$
= 805 cm

Qn 4



$$3 \text{ units} + 30 + 30 + 45 \rightarrow 435 \text{ cm}$$

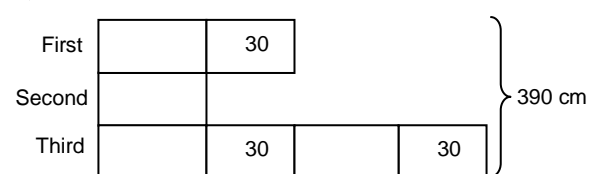
$$3 \text{ units} = 435 - 105 = 330 \text{ cm}$$

$$1 \text{ unit} = 330 \div 3 = 110 \text{ cm}$$

(a) Benson's height = $110 \text{ cm} + 30 \text{ cm} + 45 \text{ cm}$
= 185 cm

(b) Alex's height = $110 \text{ cm} + 30 \text{ cm}$
= 140 cm

Qn 5



Qn 5 (Cont.)

$$\begin{aligned}
 4 \text{ units} + 90 \text{ cm} &= 390 \text{ cm} \\
 4 \text{ units} &= 390 \text{ cm} - 90 \text{ cm} \\
 &= 300 \text{ cm} \\
 1 \text{ unit} &= 300 \text{ cm} \div 4 \\
 &= 75 \text{ cm} \\
 \text{Length of third rope} &= (75 \text{ cm} + 30) \times 2 \\
 &= 210 \text{ cm} \\
 &= 2 \text{ m } 10 \text{ cm}
 \end{aligned}$$

Unit 5.4 — Gaps And Intervals

Qn 1

$$\begin{aligned}
 \text{Number of smaller logs} &= 9 \text{ m } 50 \text{ cm} \div 50 \text{ cm} \\
 &= 950 \text{ cm} \div 50 \text{ cm} \\
 &= 19 \text{ strips} \\
 \text{Number of cuts he needed to make} &= 19 - 1 \\
 &= 18 \text{ cuts}
 \end{aligned}$$

Qn 2

- (a) Number of gaps between 1st and 10th trees = 9
 Distance between 1st and 10th trees = $9 \times 140 \text{ cm}$
 = 1260 cm
 = 12 m 60 cm
- (b) Number of gaps between 1st and 20th trees = 19
 Distance between 1st and 20th trees = $19 \times 140 \text{ cm}$
 = 2660 cm
 = 26 m 60 cm

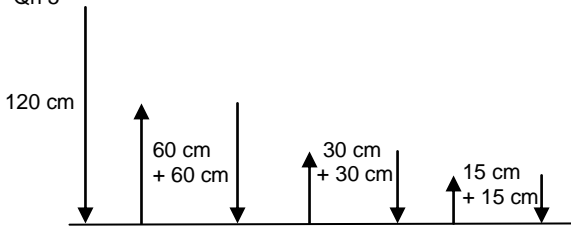
Qn 3

$$\begin{aligned}
 \text{Between 1}^{\text{st}} \text{ and the 4}^{\text{th}} \text{ lamp post} &= 3 \text{ gaps} \\
 3 \text{ gaps} &= 18 \text{ m} \\
 1 \text{ gap} &= 6 \text{ m} \\
 \text{Distance between the 1}^{\text{st}} \text{ and 10}^{\text{th}} \text{ lamp post} \\
 &= 9 \text{ gaps} \times 6 \text{ m} \\
 &= 54 \text{ m}
 \end{aligned}$$

Qn 4

$$\begin{aligned}
 \text{Every hour, the ant effectively climbed} \\
 &= (50 - 20) \text{ cm} = 30 \text{ cm} \\
 \text{Time taken to reach the top} &= 3 \text{ m} \div 30 \text{ cm} \\
 &= 300 \text{ cm} \div 30 \text{ cm} \\
 &= 10 \text{ h}
 \end{aligned}$$

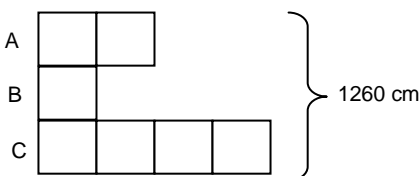
Qn 5



$$\begin{aligned}
 \text{Total distance travelled} \\
 &= 120 + 60 + 60 + 30 + 30 + 15 + 15 \\
 &= 330 \text{ cm} = 3 \text{ m } 30 \text{ cm}
 \end{aligned}$$

Unit 5.5 – Repeated Identity

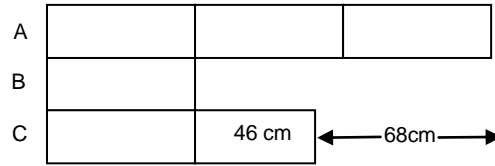
Qn 1



Qn 1 (Cont.)

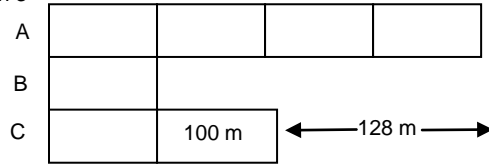
$$\begin{aligned}
 7 \text{ units} &= 1260 \text{ cm} \\
 1 \text{ unit} &= 1260 \div 7 = 180 \text{ cm} \\
 \text{Height of Giraffe C} &= 180 \times 4 \\
 &= 720 \text{ cm} = 7 \text{ m } 20 \text{ cm}
 \end{aligned}$$

Qn 2



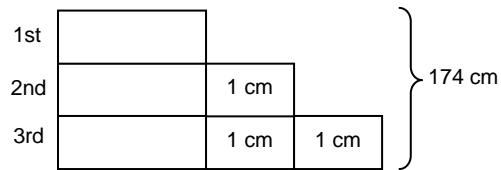
$$\begin{aligned}
 2 \text{ units} &= 46 \text{ cm} + 68 \text{ cm} = 114 \text{ cm} \\
 1 \text{ unit} &= 57 \text{ cm} \\
 \text{Rope B is } &\underline{57 \text{ cm}} \text{ long.}
 \end{aligned}$$

Qn 3



$$\begin{aligned}
 3 \text{ units} &= 228 \text{ m} \\
 1 \text{ unit} &= 228 \div 3 = 76 \text{ m} \\
 \text{Building B is } &\underline{76 \text{ m}} \text{ tall.}
 \end{aligned}$$

Qn 4



$$\begin{aligned}
 3 \text{ units} + 3 \text{ cm} &= 174 \text{ cm} \\
 3 \text{ units} &= 174 \text{ cm} - 3 \text{ cm} \\
 &= 171 \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 1 \text{ unit} &= 171 \div 3 = 57 \text{ cm} \\
 \text{The length of the shortest ribbon is } &\underline{57 \text{ cm}}.
 \end{aligned}$$

Qn 5



$$\begin{aligned}
 4 \text{ units} + 45 \text{ cm} &= 185 \text{ cm} \\
 4 \text{ units} &= 185 - 45 = 140 \text{ cm} \\
 1 \text{ unit} &= 140 \div 4 = 35 \text{ cm} \\
 \text{Length of the first rope} &= 35 + 15 = 50 \text{ cm}
 \end{aligned}$$

Chapter 6 Mass

Unit 6.1 – Measure and Compare Mass in Compound Units

Qn 1

- (a) 320 g (b) 450 g (c) 3 kg 700 g
 (d) 3 kg 400 g (e) 2 kg 700 g (f) 2 kg 300 g

Qn 2

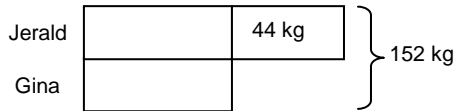
Water = 0 kg 800 g
Sand = 1 kg 200 g

Qn 3

- (a) 7400 g, 7 kg 40 g, 7004 g
(b) 80 kg 240 g, 8240 g, 8024 g
(c) 34300 g, 34 kg 30 g, 3430 g
(d) 13300 g, 13 kg 130 g, 1330 g

Unit 6.2 – Comparison – More Than Models

Qn 1

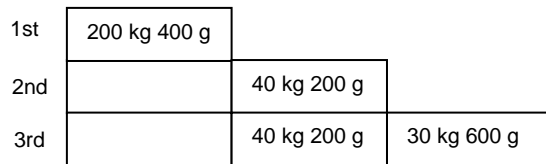


$$\begin{aligned} 2 \text{ units} &= 152 - 44 \\ &= 108 \text{ kg} \\ 1 \text{ unit} &= 108 \div 2 \\ &= 54 \text{ kg} \\ \text{Jerald's mass} &= 54 + 44 = 98 \text{ kg} \end{aligned}$$

Qn 2

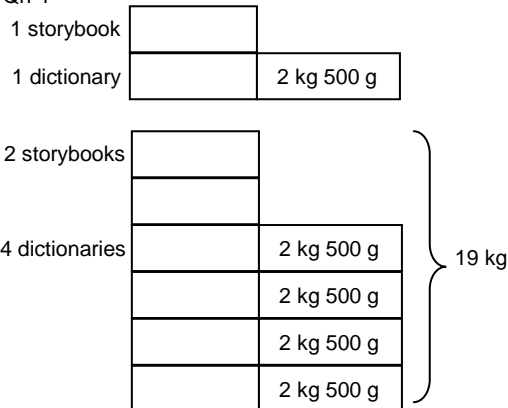
$$\begin{aligned} \text{Amount list} &= 2 \text{ kg } 200 \text{ g} \times 3 \\ &= 6 \text{ kg } 600 \text{ g} \\ \text{Now he weighs} &= 74 \text{ kg } 200 \text{ g} - 6 \text{ kg } 600 \text{ g} \\ &= 74200 \text{ g} - 6600 \text{ g} \\ &= 67600 \text{ g} \\ &= 67 \text{ kg } 600 \text{ g} \end{aligned}$$

Qn 3



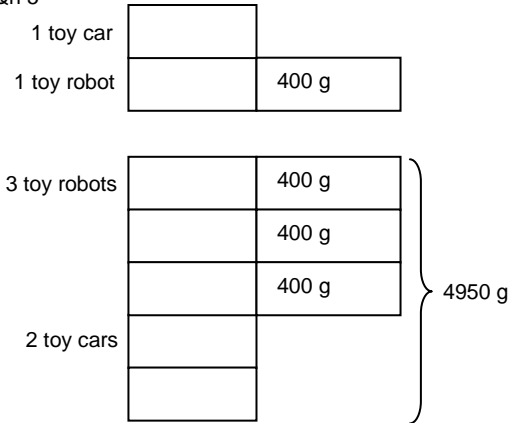
$$\begin{aligned} \text{Total mass lifted} &= (200 \text{ kg } 400 \text{ g}) \times 3 + (40 \text{ kg } 200 \text{ g}) \times 2 + 30 \text{ kg } 600 \text{ g} \\ &= 712 \text{ kg } 200 \text{ g} \end{aligned}$$

Qn 4



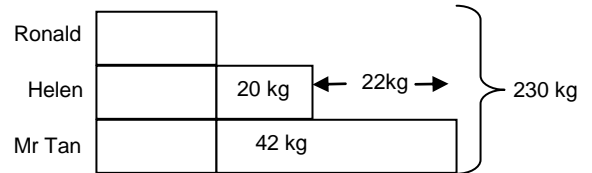
$$\begin{aligned} 6 \text{ units} + 10 \text{ kg} &= 19 \text{ kg} \\ 6 \text{ units} &= 19 \text{ kg} - 10 \text{ kg} = 9 \text{ kg} \\ 9 \text{ kg} &= 9000 \text{ g} \\ 1 \text{ unit} &= 9000 \text{ g} \div 6 = 1500 \text{ g} \\ \text{The mass of each story book is } &1500 \text{ g.} \end{aligned}$$

Qn 5



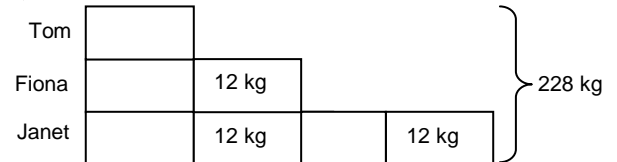
$$\begin{aligned} 5 \text{ units} + 1200 \text{ g} &= 4950 \text{ g} \\ 5 \text{ units} &= 4950 \text{ g} - 1200 \text{ g} \\ &= 3750 \text{ g} \\ 1 \text{ unit} &= 3750 \text{ g} \div 5 \\ &= 750 \text{ g} \\ \text{The mass of each toy car is } &750 \text{ g.} \end{aligned}$$

Qn 6



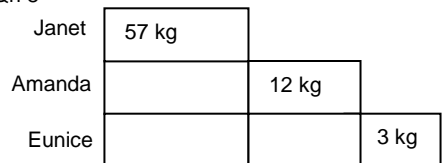
$$\begin{aligned} \text{Total mass} &= 3 \text{ units} + 20 \text{ kg} + 42 \text{ kg} \\ &= 230 \text{ kg} \\ 3 \text{ units} &= 168 \text{ kg} \\ 1 \text{ unit} &= 168 \div 3 \\ &= 56 \text{ kg} \\ \text{Mr Tan's mass} &= 42 \text{ kg} + 56 \text{ kg} \\ &= 98 \text{ kg} \end{aligned}$$

Qn 7



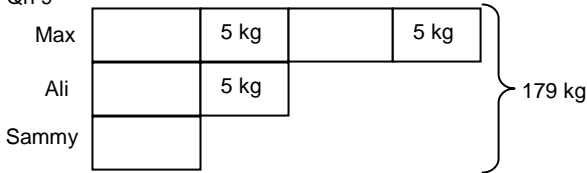
$$\begin{aligned} 4 \text{ units} + 36 \text{ kg} &= 228 \text{ kg} \\ 4 \text{ units} &= 228 \text{ kg} - 36 \text{ kg} \\ &= 192 \text{ kg} \\ 1 \text{ unit} &= 192 \text{ kg} \div 4 \\ &= 48 \text{ kg} \\ \text{Fiona's mass} &= 48 \text{ kg} + 12 \text{ kg} \\ &= 60 \text{ kg} \end{aligned}$$

Qn 8



$$\begin{aligned} \text{Total mass} &= (57 \text{ kg} \times 3) + (12 \text{ kg} \times 2) + 3 \text{ kg} \\ &= 198 \text{ kg} \end{aligned}$$

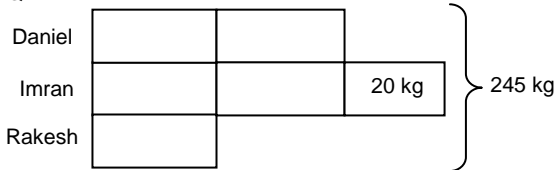
Qn 9



$$\begin{aligned} \text{Total mass} &= 4 \text{ units} + 15 \text{ kg} \\ &= 179 \text{ kg} \\ 4 \text{ units} &= 179 \text{ kg} - 15 \text{ kg} \\ &= 164 \text{ kg} \\ 1 \text{ unit} &= 164 \text{ kg} \div 4 \\ &= 41 \text{ kg} \\ \text{Sammy's mass is } &41 \text{ kg.} \end{aligned}$$

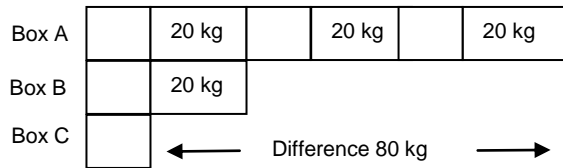
Unit 6.3 – Repeated Identity (Mass)

Qn 1



$$\begin{aligned} \text{Total} &= 5 \text{ units} + 20 \text{ kg} = 245 \text{ kg} \\ 5 \text{ units} &= 245 \text{ kg} - 20 \text{ kg} \\ &= 225 \text{ kg} \\ 1 \text{ unit} &= 225 \text{ kg} \div 5 \\ &= 45 \text{ kg} \\ \text{Imran's mass} &= 45 \text{ kg} + 45 \text{ kg} + 20 \text{ kg} \\ &= 110 \text{ kg} \end{aligned}$$

Qn 2



$$\begin{aligned} 2 \text{ units} + 60 \text{ kg} &= 80 \text{ kg} \\ 2 \text{ units} &= 80 \text{ kg} - 60 \text{ kg} \\ &= 20 \text{ kg} \\ 1 \text{ unit} &= 10 \text{ kg} \end{aligned}$$

$$\begin{aligned} \text{Mass of Box B} &= 10 \text{ kg} + 20 \text{ kg} \\ &= 30 \text{ kg} \end{aligned}$$

Qn 3

$$\begin{aligned} \text{Container} + 5 \text{ balls} &= 2400 \text{ g} \\ \text{Container} + 3 \text{ balls} &= 1800 \text{ g} \\ (5 - 3 = 2) \text{ balls} &= 2400 \text{ g} - 1800 \text{ g} \\ &= 600 \text{ g} \\ 1 \text{ ball} &= 300 \text{ g} \\ 3 \text{ balls} &= 300 \text{ g} \times 3 \\ &= 900 \text{ g} \\ \text{Mass of container} &= 1800 \text{ g} - 900 \text{ g} \\ &= 900 \text{ g} \end{aligned}$$

Qn 4

$$\begin{aligned} \text{John} + \text{Daniel} &= 150 \text{ kg} \\ \text{Ramesh} + \text{Daniel} &= 142 \text{ kg} \end{aligned}$$

(a) Difference between John and Ramesh
 $= 150 \text{ kg} - 142 \text{ kg}$
 $= 8 \text{ kg}$

Qn 4 (Cont.)

(b) Total = 150 kg + 142 kg
 $= 292 \text{ kg}$

Since Daniel is repeated, mass of Daniel
 $= 292 \text{ kg} - 224 \text{ kg}$
 $= 68 \text{ kg}$

Qn 5

$$\begin{aligned} \text{Container} + 7 \text{ glasses} &= 2500 \text{ g} \\ \text{Container} + 3 \text{ glasses} &= 1500 \text{ g} \end{aligned}$$

$$\begin{aligned} 4 \text{ glasses} &= 1000 \text{ g} \\ 1 \text{ glass} &= 1000 \text{ g} \div 4 = 250 \text{ g} \\ 3 \text{ glasses} &= 250 \text{ g} \times 3 \\ &= 750 \text{ g} \end{aligned}$$

$$\text{Mass of container} = 1500 - 750 = 750 \text{ g}$$

Chapter 7 Volume and Capacity

Unit 7.1 – Measuring and Comparing in Scale Reading

Qn 1

$$\begin{aligned} \text{Container C} &= 1400 \text{ ml} \\ \text{Container D} &= 800 \text{ ml} \\ \text{Container C has } &600 \text{ ml more than Container D.} \end{aligned}$$

Qn 2

$$\begin{aligned} \text{Container E} &= 280 \text{ ml} \\ \text{Container F} &= 160 \text{ ml} \\ \text{Container E has } &120 \text{ ml more than Container F.} \end{aligned}$$

Qn 3

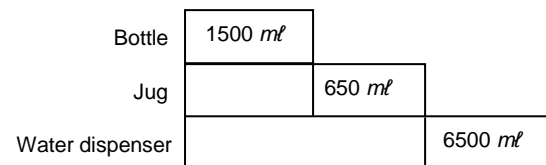
$$\begin{aligned} \text{Container G} &= 350 \text{ ml} \\ \text{Container H} &= 150 \text{ ml} \\ \text{Container G has } &200 \text{ ml more than Container H.} \end{aligned}$$

Qn 4

$$\begin{aligned} \text{Container J} &= 700 \text{ ml} \\ \text{Container K} &= 400 \text{ ml} \\ \text{Container J has } &300 \text{ ml more than Container K.} \end{aligned}$$

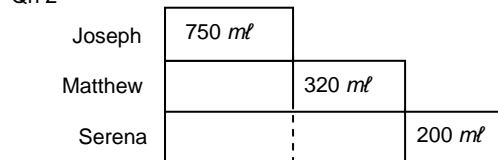
Unit 7.2 – Addition And Subtraction

Qn 1



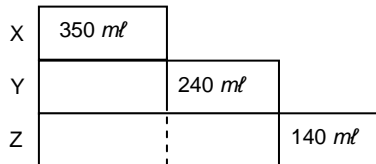
$$\begin{aligned} \text{Water dispenser} &= (1500 + 650 + 6500) \text{ ml} \\ &= 8650 \text{ ml} \\ &= 8 \text{ l } 650 \text{ ml} \end{aligned}$$

Qn 2



$$\begin{aligned} \text{Volume of water in Serena's water bottle} &= (750 + 320 + 200) \text{ ml} \\ &= 1270 \text{ ml} \\ &= 1 \text{ l } 270 \text{ ml} \end{aligned}$$

Qn 3



$$\begin{aligned} \text{Beaker Z} &= (350 + 240 + 140) \text{ ml} \\ &= 730 \text{ ml} \end{aligned}$$

Qn 4

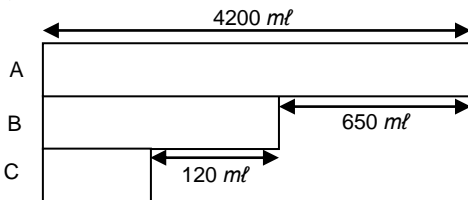
$$\begin{aligned} \text{Bottle C} &= 8400 \text{ ml} - 2420 \text{ ml} - 3100 \text{ ml} \\ &= 2880 \text{ ml} \\ &= 2 \text{ l } 880 \text{ ml} \end{aligned}$$

Qn 5

$$\begin{aligned} \text{Volume of water taken from basin} &= 520 \text{ ml} \times 2 \\ &= 1040 \text{ ml} \end{aligned}$$

$$\begin{aligned} \text{Volume of water left in the pail} &= 5400 \text{ ml} - 1040 \text{ ml} \\ &= 4360 \text{ ml} \end{aligned}$$

Qn 6

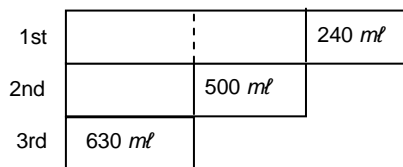


$$\begin{aligned} \text{Tank C} &= (4200 - 650 - 120) \text{ ml} \\ &= 3430 \text{ ml} \\ &= 3 \text{ l } 430 \text{ ml} \end{aligned}$$

Qn 7

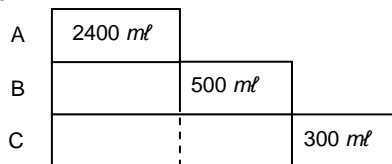
$$\begin{aligned} \text{Total capacity} &= 1250 \text{ ml} \times 2 + 420 \text{ ml} \\ &= 2920 \text{ ml} \\ &= 2 \text{ l } 920 \text{ ml} \end{aligned}$$

Qn 8



$$\begin{aligned} \text{First tank} &= (630 + 500 + 240) \text{ ml} \\ &= 1370 \text{ ml} \\ &= 1 \text{ l } 370 \text{ ml} \end{aligned}$$

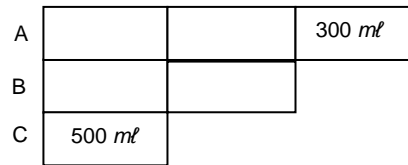
Qn 9



$$\begin{aligned} \text{Container C} &= (2400 + 500 + 300) \text{ ml} \\ &= 3200 \text{ ml} \\ &= 3 \text{ l } 200 \text{ ml} \end{aligned}$$

Unit 7.3 – Multiplication And Division Of Volume

Qn 1



$$\begin{aligned} \text{Total} &= 500 \text{ ml} \times 2 + 300 \text{ ml} \\ &= 1300 \text{ ml} \\ &= 1 \text{ l } 300 \text{ ml} \end{aligned}$$

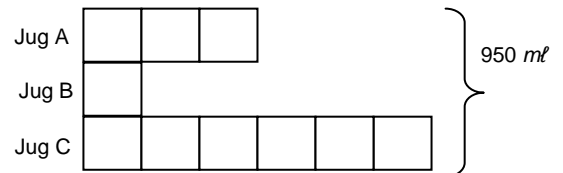
Qn 2

$$\begin{aligned} 7 \text{ jugs of water} &= 320 \text{ ml} \times 7 = 2240 \text{ ml} \\ \text{Total volume of water} &= (2240 + 460) \text{ ml} \\ &= 2700 \text{ ml} \\ &= 2 \text{ l } 700 \text{ ml} \end{aligned}$$

Qn 3

$$\begin{aligned} \text{Volume of water left in the drum} &= (600 - 350) \text{ ml} \\ &= 250 \text{ ml} \\ \text{Volume of water in each pail} &= 250 \text{ ml} \div 5 \\ &= 50 \text{ ml} \end{aligned}$$

Qn 4

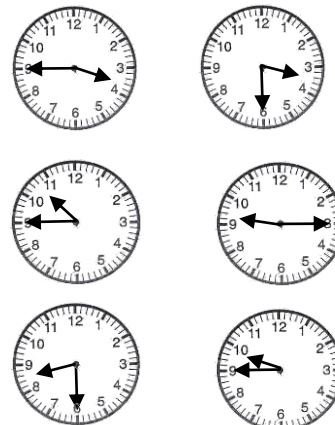


$$\begin{aligned} 10 \text{ units} &= 950 \text{ ml} \\ 1 \text{ unit} &= 950 \div 10 = 95 \text{ ml} \\ \text{Volume of water in Jug C} &= 95 \text{ ml} \times 6 = 570 \text{ ml} \end{aligned}$$

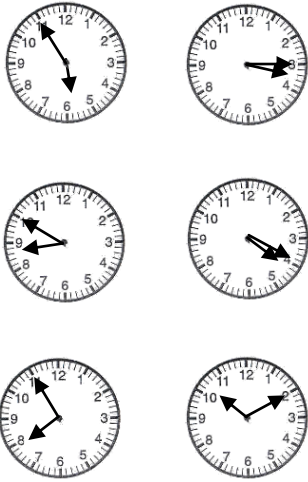
Chapter 8 Time

Unit 8.1 – Constructing Hour and Minute Hands

Qn 1



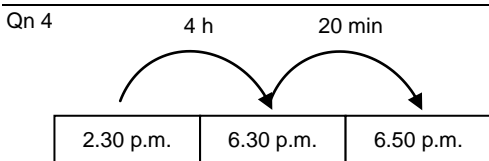
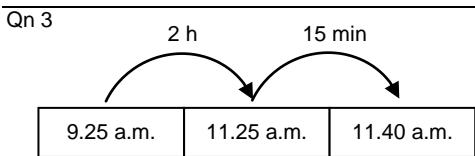
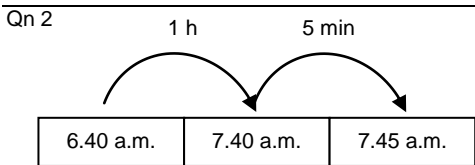
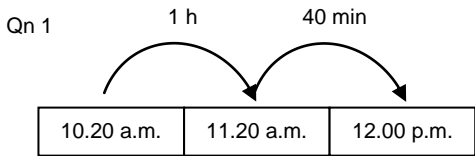
Qn 2



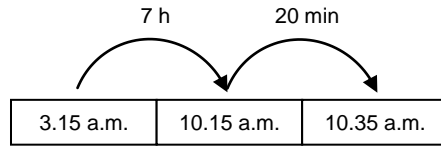
Unit 8.2 – Calculating Time Difference (Analog Clock)

- Qn 1 3 h 30 min Qn 2 15 min
- Qn 3 3 h 15 min Qn 4 3 h 30 min
- Qn 5 2 h 15 min Qn 6 7 h 15 min
- Qn 7 3 h 30 min
- Qn 8 Clock C, Clock B, Clock A
- Qn 9 Clock A, Clock C, Clock B
- Qn 10 Clock A, Clock C, Clock B
- Qn 11 Clock C, Clock B, Clock A
- Qn 12 Clock A, Clock B, Clock C
- Qn 13 Clock C, Clock B, Clock A
- Qn 14 Clock B, Clock C, Clock A

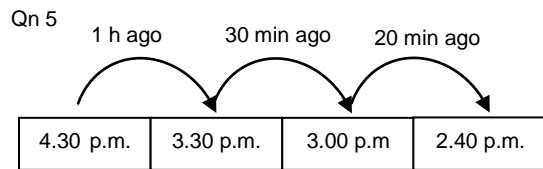
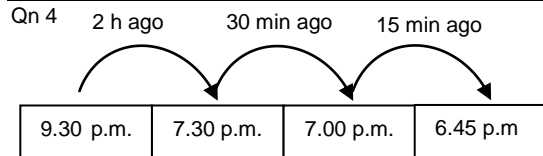
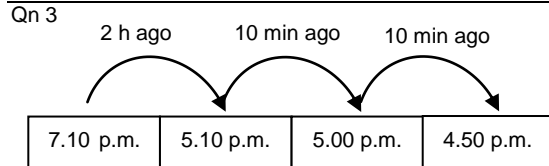
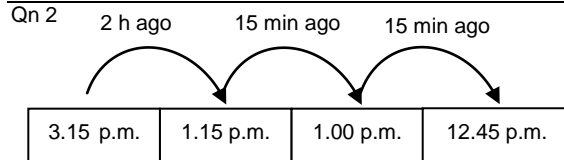
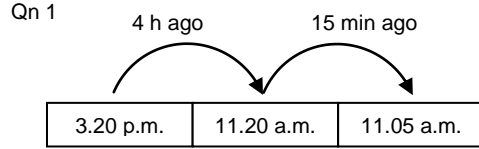
Unit 8.3 – Finding Ending Time



Qn 5



Unit 8.4 – Finding Starting Time



Chapter 9 Graphs

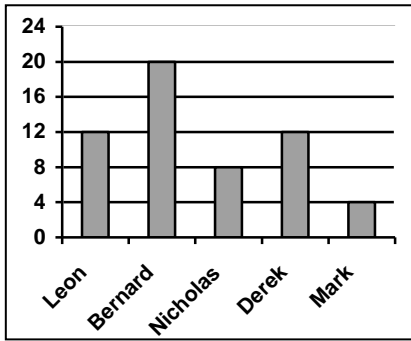
Unit 9.1 – Interpreting Bar Graphs

- Qn 1
 - (a) 36
 - (b) Oranges
 - (c) 8
 - (d) 2
 - (e) 36
- Qn 2
 - (a) Julie
 - (b) Jenny
 - (c) 9
 - (d) 4
 - (e) 37
- Qn 3
 - (a) Lorries
 - (b) 20
 - (c) 15
 - (d) 3
 - (e) 80
- Qn 4
 - (a) 20
 - (b) \$10
 - (c) 2
 - (d) 130
 - (e) $25 \times \$1 + 20 \times 50 c + 15 \times 20 c + 40 \times 10 c + 30 \times 5 c = \43.50

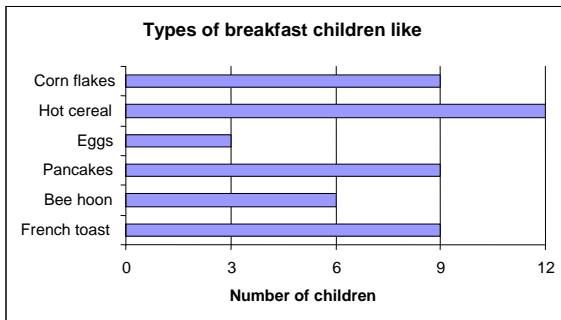
- Qn 5
 (a) 20 (b) 10
 (c) $20 + 60 + 180 + 80 + 200 = 540$ children

Unit 9.2 – Making Bar Graphs with Scales

- Qn 1
 (a) Bernard
 (b) \$4
 (c) Leon and Derek
 (d) Nicholas
 (e) \$56
 (f)



- Qn 2
 (a) 6
 (b) Hot cereal
 (c) Eggs
 (d) Hot cereal
 (e) Pancakes
 (f)



Chapter 10 Money

Unit 10.1 – Comparing Dollars and Cents

- Qn 1 4 Qn 2 40
 Qn 3 120 Qn 4 15
 Qn 5 16 Qn 6 20
 Qn 7 6

Unit 10.2 – Adding Dollars and Cents

Qn 1
 Total amount = $5 \times \$2 + 12 \times \$0.50 + 12 \times \$0.10$
 = $\$10 + \$6 + \$1.20$
 = $\$17.20$

Qn 2
 Total amount
 = $4 \times \$5 + 8 \times \$0.50 + 12 \times \$0.20 + 9 \times \0.05
 = $\$20 + \$4 + \$2.40 + \0.45
 = $\$26.85$

Qn 3
 Total amount
 = $5 \times \$10 + 6 \times \$2 + 12 \times \$0.20 + 8 \times \0.05
 = $\$50 + \$12 + \$2.40 + \0.40
 = $\$64.80$

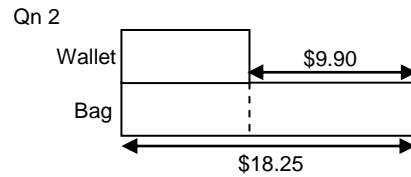
Qn 4
 Total amount
 = $4 \times \$10 + 5 \times \$2 + 10 \times \$0.50 + 12 \times \0.10
 = $\$40 + \$10 + \$5 + \1.20
 = $\$56.20$

Qn 5
 Total amount = $5 \times \$5 + 6 \times \$2 + 8 \times \$0.50 + 4 \times \0.10
 = $\$25 + \$12 + \$4 + \0.40
 = $\$41.40$

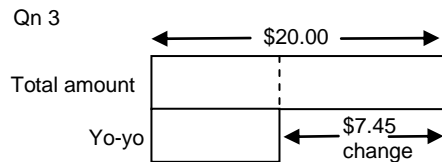
Qn 6
 Total amount = $8 \times \$5 + 5 \times \$1 + 6 \times \$0.50 + 4 \times \0.20
 = $\$40 + \$5 + \$3 + \0.80
 = $\$48.80$

Unit 10.3 – Subtracting Dollars and Cents

Qn 1
 Sum = $\$43.72 + \24.66
 = $\$68.38$
 Difference = $\$68.38 - \47.50
 = $\$20.88$



Cost of wallet = $\$18.25 - \9.90
 = $\$8.35$



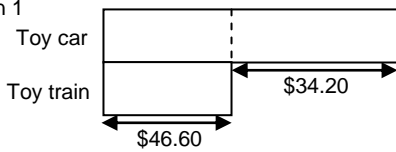
Cost of yo-yo = $\$20.00 - \7.45
 = $\$12.55$

Qn 4
 Total amount = $5 \times \$10 + 4 \times \5
 = $\$50 + \20
 = $\$70$
 Cost of magazine = $\$70 - \$15.30 - \$24.20$
 = $\$30.50$

Qn 5
 Total amount = $3 \times \$10 + 5 \times \2
 = $\$30 + \10
 = $\$40$
 Change received = $\$40 - \12.45
 = $\$27.55$

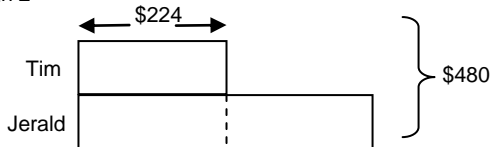
Unit 10.4 – More than (Model)

Qn 1



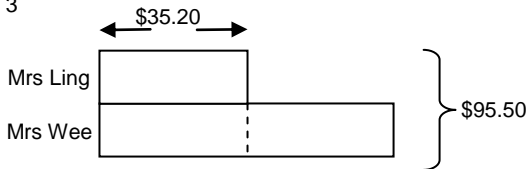
$$\begin{aligned} \text{Cost of toy train} &= \$46.60 + \$34.20 \\ &= \$80.80 \end{aligned}$$

Qn 2



$$\begin{aligned} \text{Amount Jerald received} &= \$480 - \$224 = \$256 \\ \text{Difference in amount} &= \$256 - \$224 = \$32 \end{aligned}$$

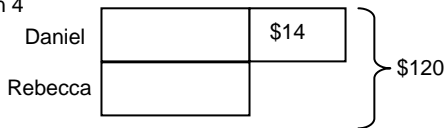
Qn 3



$$\begin{aligned} \text{Amount Mrs Wee spent} &= \$95.50 - \$35.20 \\ &= \$60.30 \end{aligned}$$

$$\begin{aligned} \text{Difference in the amount of money spent} &= \$60.30 - \$35.20 \\ &= \$25.10 \end{aligned}$$

Qn 4



$$2 \text{ units} + \$14 = \$120$$

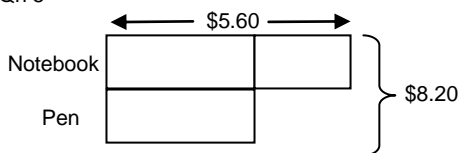
$$2 \text{ units} = \$120 - \$14$$

$$= \$106$$

$$1 \text{ unit} = \$53$$

$$\text{Amount of money Daniel received} = \$53 + \$14 = \$67$$

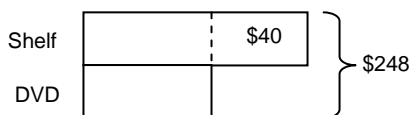
Qn 5



$$\begin{aligned} \text{Cost of pen} &= \$8.20 - \$5.60 \\ &= \$2.60 \end{aligned}$$

$$\begin{aligned} \text{Difference between pen and notebook} &= \$5.60 - \$2.60 = \$3 \end{aligned}$$

Qn 6

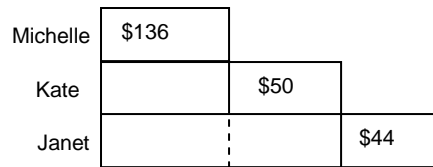


$$2 \text{ units} = \$248 - \$40 = \$208$$

$$1 \text{ unit} = \$208 \div 2 = \$104$$

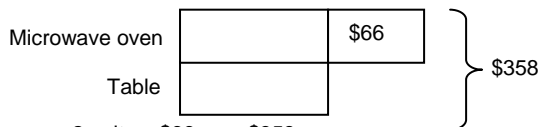
$$\text{The DVD costs } \$104.$$

Qn 7



$$\begin{aligned} \text{Amount of money Janet had} &= \$136 + \$50 + \$44 \\ &= \$230 \end{aligned}$$

Qn 8



$$2 \text{ units} + \$66 = \$358$$

$$2 \text{ units} = \$358 - \$66$$

$$= \$292$$

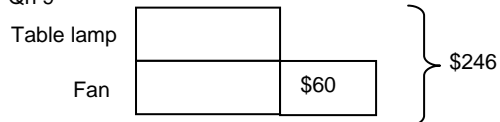
$$1 \text{ unit} = \$292 \div 2$$

$$= \$146$$

$$\text{Cost of 1 table} = \$146$$

$$\text{Cost of 2 tables} = \$146 \times 2 = \$292$$

Qn 9



$$2 \text{ units} = \$246 - \$60$$

$$= \$186$$

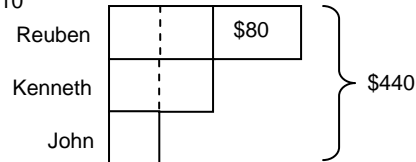
$$1 \text{ unit} = \$186 \div 2$$

$$= \$93$$

$$\text{Cost of 1 table lamp} = \$93$$

$$\text{Cost of 3 table lamps} = \$93 \times 3 = \$279$$

Qn 10

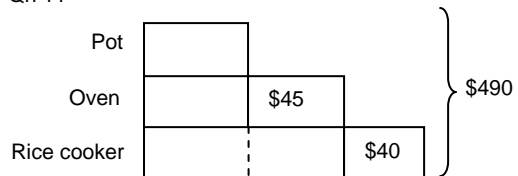


$$5 \text{ units} = \$440 - \$80 = \$360$$

$$1 \text{ unit} = \$360 \div 5 = \$72$$

$$\text{Amount of money John make} = \$72$$

Qn 11



$$3 \text{ units} + \$45 + \$45 + \$40 = \$490$$

$$3 \text{ units} = \$490 - \$130$$

$$= \$360$$

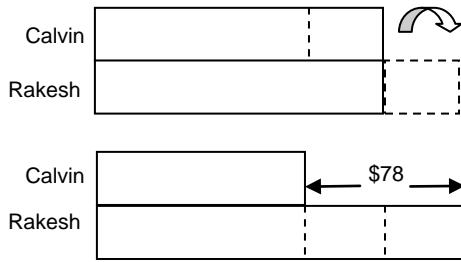
$$1 \text{ unit} = \$360 \div 3$$

$$= \$120$$

$$\text{Cost of pot} = \$120$$

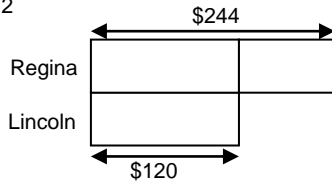
Unit 10.5 – Comparison-Equal Models

Qn 1



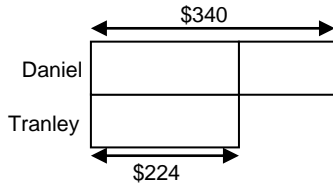
$$\begin{aligned} 2 \text{ units} &= \$78 \\ 1 \text{ unit} &= \$78 \div 2 \\ &= \$39 \\ \text{Calvin must give Rakesh } &\$39. \end{aligned}$$

Qn 2



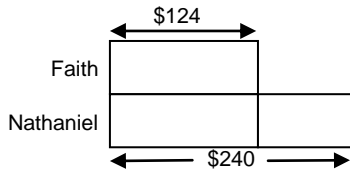
$$\begin{aligned} \text{Difference} &= \$244 - \$120 = \$124 \\ \text{Amount of money Regina should give Lincoln} &= \$124 \div 2 = \$62 \end{aligned}$$

Qn 3



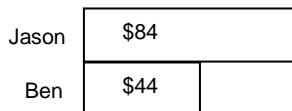
$$\begin{aligned} \text{Difference} &= \$340 - \$224 = \$116 \\ \text{Amount of money Daniel should give Tranley} &= \$116 \div 2 = \$58 \end{aligned}$$

Qn 4



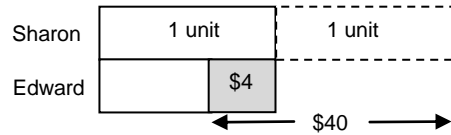
$$\begin{aligned} \text{Difference} &= \$240 - \$124 = \$116 \\ \text{Amount of money Nathaniel should give Faith} &= \$116 \div 2 = \$58 \end{aligned}$$

Qn 5



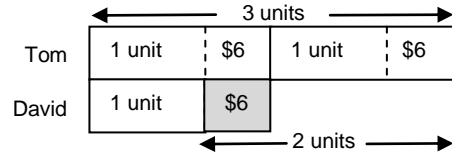
$$\begin{aligned} \text{Gerald} &= 2 \times (\$84 + \$44) \\ &= \$256 \\ \text{Total} &= \$256 + \$44 + \$84 \\ &= \$384 \\ \text{Amount of money each must have} &= \$384 \div 3 = \$128 \\ \text{Amount of money Jason must receive from Gerald} &= \$128 - \$84 = \$44 \\ \text{Amount of money Ben must receive from Gerald} &= \$128 - \$44 = \$84 \end{aligned}$$

Qn 6



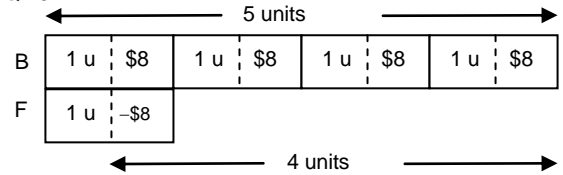
$$\begin{aligned} 1 \text{ unit} &= \$40 - \$4 \\ &= \$36 \\ \text{Amount of money Edward had at first} &= \$36 \end{aligned}$$

Qn 7



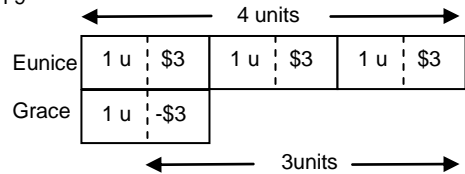
$$\begin{aligned} 1 \text{ unit} &= \$6 + \$6 \rightarrow \$12 \\ \text{Amount of money David had at first} &= \$12 + \$6 \\ &= \$18 \end{aligned}$$

Qn 8



$$\begin{aligned} 1 \text{ unit} &= \$8 \times 4 \\ &= \$32 \\ \text{Amount Frankie had at first} &= \$32 + \$8 \\ &= \$40 \end{aligned}$$

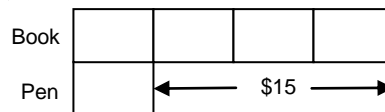
Qn 9



$$\begin{aligned} 1 \text{ unit} &= \$3 \times 3 \\ &= \$9 \\ \text{Amount of money Grace had at first} &= \$9 + \$3 \\ &= \$12 \end{aligned}$$

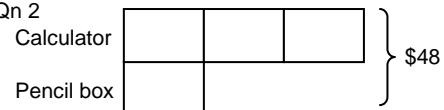
Unit 10.6 – Comparison-Less Than/Difference Models

Qn 1



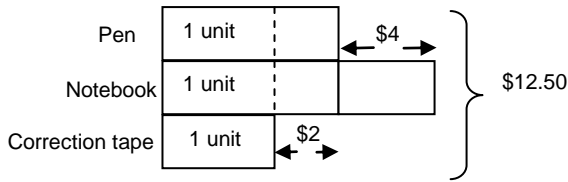
$$\begin{aligned} 3 \text{ units} &= \$15 \\ 1 \text{ unit} &= \$15 \div 3 \\ &= \$5 \\ \text{Cost of the pen} &= \$5 \end{aligned}$$

Qn 2



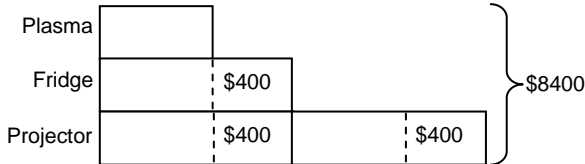
$$\begin{aligned} 4 \text{ units} &= \$48 \\ 1 \text{ unit} &= \$48 \div 4 = \$12 \\ \text{Cost of calculator} &= \$12 \times 3 = \$36 \end{aligned}$$

Qn 3



Total = 3 units + (2 × \$2) + \$4 = \$12.50
 3 units + \$8 = \$12.50
 3 units = \$12.50 - \$8 = \$4.50
 1 unit = \$4.50 ÷ 3 = \$1.50
 Cost of notebook = \$1.50 + \$2 + \$4 = \$7.50

Qn 4



4 units + \$1200 = \$8400
 4 units = \$8400 - \$1200
 = \$7200
 1 unit = \$7200 ÷ 4
 = \$1800
 Cost of plasma television = \$1800

Unit 10.7 – Guess and Check

Qn 1

Number of 50-cent coins	Number of 20-cent coins	Total number of coins	Total amount of money
10	10	20	\$5 + \$2 = \$7
12	8	20	\$6 + \$1.60 = \$7.60
14	6	20	\$7 + \$1.20 = \$8.20

Note that an increase of two 50-cent coins resulted in an increase of 60 cents in the total amount of money.

From a total of \$7 to \$8.20, I need to increase by \$1.20, therefore I need 4 more 50-cent coins.

She had fourteen 50-cent coins.

Qn 2

20-cent (amount)	10-cent (amount)	Total amount
6 × 20 ¢ = \$1.20	6 × 10 ¢ = \$0.60	\$1.80
7 × 20 ¢ = \$1.40	5 × 10 ¢ = \$0.50	\$1.90
9 × 20 ¢ = \$1.80	3 × 10 ¢ = \$0.30	\$2.10

Mary had nine 20-cent coins.

Qn 3

Car wheels	Motorbikes wheels	Total wheels
70 × 4 = 280	70 × 2 = 140	420
80 × 4 = 320	60 × 2 = 120	440

Qn 3 (Cont.)

Increase 10 cars = Total number of wheels increase by 20

Increase 1 car = Total number of wheels increase by 2
 From 420 to 490 wheels, there is an increase of 70 wheels.

Increase of 70 wheels = 70 ÷ 2 = 35 cars
 Total number of cars = 70 + 35 = 105

Car wheels	Motorbikes wheels	Total wheels
105 × 4 = 420	35 × 2 = 140	490

There are 105 cars.

Qn 4

Boys (sweets)	Girls (sweets)	Total sweets
20 × 4 = 80	20 × 3 = 60	140
22 × 4 = 88	18 × 3 = 54	142
23 × 4 = 92	17 × 3 = 51	143

There are 23 boys in the class.

Qn 5

Gold (points)	Silver (points)	Total points
40 × 5 = 200	40 × 4 = 160	360
20 × 5 = 100	60 × 4 = 240	340

Decrease 20 gold medals = Decrease 20 points
 Decrease 1 gold medal = Decrease 1 point
 From 360 to 331 points, there is a decrease of 29 points.

Decrease of 29 points = Decrease of 29 gold medals
 Total number of gold medals = 40 - 29 = 11

Gold (points)	Silver (points)	Total points
11 × 5 = 55	69 × 4 = 276	331

There were 11 gold medals won.

Unit 10.8 – Number of units x Value of units

Qn 1

Number × Value = Total amount
 \$10-note: 2 units × \$10 = 20 units
 \$2-note: 1 unit × \$2 = 2 units
 22 units

22 units = 88
 1 unit = 88 ÷ 22
 = 4
 Number of \$10-note = 2 units
 = 2 × 4
 = 8

Qn 2

	Number	×	Value	=	Total amount
Boy	3 units	×	\$8	=	24 units
Girl	1 unit	×	\$5	=	5 units
					<u>29 units</u>
29 units = \$580					
1 unit = \$580 ÷ \$29					
= 20					
Number of boys = 3 units					
= 3 × 20					
= 60					

Qn 3

	Number	×	Value	=	Total amount
Gold	4 units	×	\$4	=	\$16 units
Silver	1 unit	×	\$3	=	\$3 units
Bronze	2 units	×	\$2	=	<u>\$4 units</u>
					\$23 units
\$23 units = \$230					
1 unit = \$230 ÷ \$23					
= 10					
Number of gold medals won = 4 units					
= 4 × 10					
= 40					

Qn 4

	Number	×	Value	=	Total amount
Type C	3 units	×	\$30	=	\$90 units
Type E	1 unit	×	\$50	=	<u>\$50 units</u>
					\$140 units
\$140 units = \$2 800					
1 unit = \$2 800 ÷ \$140					
= 20					
Number of workers = 4 units					
= 4 × 20					
= 80					

Chapter 11 Fractions

Unit 11.1 – Comparing and Ordering Fractions

Qn 1

$$\frac{3}{12}, \frac{3}{10}, \frac{3}{8}, \frac{3}{4}$$

Qn 2

$$\frac{5}{12}, \frac{5}{10}, \frac{5}{8}, \frac{5}{6}$$

Qn 3

$$\frac{1}{11}, \frac{1}{9}, \frac{1}{7}, \frac{1}{3}$$

Qn 4

$$\frac{7}{12}, \frac{7}{10}, \frac{7}{9}, \frac{7}{8}$$

Qn 5

$$\frac{2}{11}, \frac{2}{9}, \frac{2}{5}, \frac{2}{3}$$

Qn 6

$$\frac{5}{6}, \frac{5}{8}, \frac{5}{10}, \frac{5}{12}$$

Qn 7

$$\frac{3}{5}, \frac{3}{7}, \frac{3}{8}, \frac{3}{11}$$

Qn 8

$$\frac{4}{5}, \frac{4}{7}, \frac{4}{9}, \frac{4}{11}$$

Qn 9

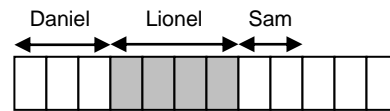
$$\frac{6}{7}, \frac{6}{8}, \frac{6}{9}, \frac{6}{11}$$

Qn 10

$$\frac{2}{5}, \frac{2}{6}, \frac{2}{7}, \frac{2}{12}$$

Unit 11.2 – Part Whole Fractions

Qn 1



(a) Fraction of original bar of chocolate given to Leonard

$$= \frac{4}{12} = \frac{1}{3}$$

(b) Fraction of original bar of chocolate left

$$= \frac{3}{12} = \frac{1}{4}$$

Qn 2

(a) Fraction of money spent on vegetables

$$= \frac{\$30}{\$200} = \frac{3}{20}$$

(b) Amount of money left = \$200 - \$40 - \$30 = \$130

$$\text{Fraction of money left} = \frac{130}{200} = \frac{13}{20}$$

Qn 3

(a) Fraction of sweets given to her brother

$$= \frac{6}{18} = \frac{1}{3}$$

(b) Number of sweets left = 18 - 6 - 4 = 8

$$\text{Fraction of sweets left} = \frac{8}{18} = \frac{4}{9}$$

Qn 4

(a) Number of word problems completed by 4th day = 4 × 2 = 8

Fraction of assignment completed by 4th day

$$= \frac{8}{20} = \frac{2}{5}$$

(b) Number of word problems completed by 7th day = 7 × 2 = 14

Fraction of assignment completed by 7th day

$$= \frac{14}{20} = \frac{7}{10}$$

Fraction of assignment left to complete

$$= 1 - \frac{7}{10} = \frac{3}{10}$$

Qn 5

(a) Distance covered by 3rd day = 3 × 40 km = 120 km

$$\text{Fraction covered by 3rd day} = \frac{120}{640} = \frac{3}{16}$$

Qn 5 (Cont.)

$$(b) \text{ Distance covered by 7}^{\text{th}} \text{ day} = 7 \times 40 = 280 \text{ km}$$

$$\text{Fraction completed by 7}^{\text{th}} \text{ day} = \frac{280}{640} = \frac{7}{16}$$

$$\text{Fraction of journey left} = 1 - \frac{7}{16} = \frac{9}{16}$$

Unit 11.3 – Conversion into Equivalent Fractions

Qn 1



$$\frac{3}{4} = \frac{6}{8}$$

Qn 2



$$\frac{2}{3} = \frac{4}{6}$$

Qn 3



$$\frac{4}{5} = \frac{8}{10}$$

Qn 4



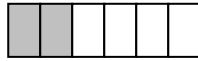
$$\frac{1}{3} = \frac{3}{9}$$

Qn 5



$$\frac{2}{3} = \frac{8}{12}$$

Qn 6



$$\frac{1}{3} = \frac{2}{6}$$

Qn 7



$$\frac{1}{4} = \frac{2}{8}$$

Qn 8



$$\frac{1}{6} = \frac{2}{12}$$

Qn 9



$$\frac{2}{3} = \frac{6}{9}$$

Qn 10



$$\frac{3}{4} = \frac{9}{12}$$

Qn 11



$$\frac{1}{2} = \frac{3}{6}$$

Qn 12



$$\frac{3}{5} = \frac{6}{10}$$

Qn 13



$$\frac{5}{6} = \frac{10}{12}$$

Qn 14



$$\frac{2}{5} = \frac{4}{10}$$

Qn 15



$$\frac{1}{2} = \frac{2}{4}$$



$$\frac{1}{2} = \frac{3}{6}$$



$$\frac{1}{2} = \frac{4}{8}$$

Unit 11.4 – Addition of Fractions

Qn 1

$$\begin{aligned} \text{Total string used} &= \frac{3}{5} \text{ m} + \frac{1}{4} \text{ m} \\ &= \frac{12}{20} \text{ m} + \frac{5}{20} \text{ m} = \frac{17}{20} \text{ m} \end{aligned}$$

Qn 2

Fraction of homework not completed

$$\begin{aligned} &= 1 - \frac{5}{12} - \frac{1}{4} \\ &= 1 - \frac{5}{12} - \frac{3}{12} \\ &= 1 - \frac{8}{12} \\ &= \frac{4}{12} = \frac{1}{3} \end{aligned}$$

Qn 3

Fraction of salary left

$$\begin{aligned} &= 1 - \frac{2}{5} - \frac{1}{4} \\ &= 1 - \frac{8}{20} - \frac{5}{20} \\ &= 1 - \frac{13}{20} \\ &= \frac{7}{20} \end{aligned}$$

Qn 4

Fraction of ice-cream left

$$\begin{aligned}
 &= 1 - \frac{1}{4} - \frac{2}{5} \\
 &= 1 - \frac{5}{20} - \frac{8}{20} \\
 &= 1 - \frac{13}{20} \\
 &= \frac{7}{20}
 \end{aligned}$$

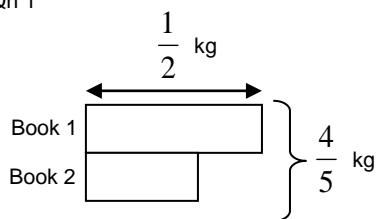
Qn 5

Fraction of cake left

$$\begin{aligned}
 &= 1 - \frac{1}{5} - \frac{3}{4} \\
 &= 1 - \frac{4}{20} - \frac{15}{20} \\
 &= 1 - \frac{19}{20} = \frac{1}{20}
 \end{aligned}$$

Unit 11.5 – Subtraction of Fractions

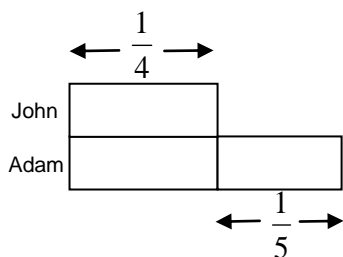
Qn 1



Mass of the other book

$$\begin{aligned}
 &= \frac{4}{5} \text{ kg} - \frac{1}{2} \text{ kg} \\
 &= \frac{8}{10} \text{ kg} - \frac{5}{10} \text{ kg} = \frac{3}{10} \text{ kg}
 \end{aligned}$$

Qn 2



Fraction of cake eaten by Adam

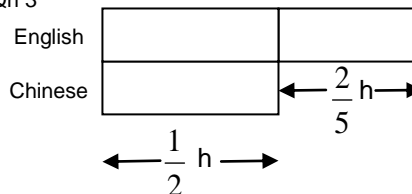
$$\begin{aligned}
 &= \frac{1}{4} + \frac{1}{5} \\
 &= \frac{5}{20} + \frac{4}{20} = \frac{9}{20}
 \end{aligned}$$

Qn 2 (Cont.)

Fraction of cake left

$$\begin{aligned}
 &= 1 - \frac{9}{20} - \frac{1}{4} \\
 &= 1 - \frac{9}{20} - \frac{5}{20} \\
 &= 1 - \frac{14}{20} = \frac{6}{20} = \frac{3}{10}
 \end{aligned}$$

Qn 3



Time spent to complete her English homework

$$\begin{aligned}
 &= \left(\frac{1}{2} + \frac{2}{5}\right) \text{ h} = \left(\frac{5}{10} + \frac{4}{10}\right) \text{ h} \\
 &= \frac{9}{10} \text{ h}
 \end{aligned}$$

Qn 4

$$\begin{aligned}
 \text{Length of cloth left} &= \frac{5}{6} \text{ m} - \frac{3}{4} \text{ m} \\
 &= \frac{10}{12} \text{ m} - \frac{9}{12} \text{ m} = \frac{1}{12} \text{ m}
 \end{aligned}$$

Qn 5

Amount of flour used to bake the cake

$$\begin{aligned}
 &= \frac{4}{5} \text{ kg} - \frac{1}{4} \text{ kg} \\
 &= \frac{16}{20} \text{ kg} - \frac{5}{20} \text{ kg} \\
 &= \frac{11}{20} \text{ kg}
 \end{aligned}$$

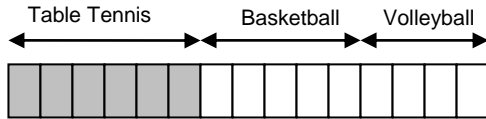
Qn 6

(a) Fraction of students who like volleyball

$$\begin{aligned}
 &= 1 - \frac{2}{5} - \frac{1}{3} \\
 &= 1 - \frac{6}{15} - \frac{5}{15} \\
 &= 1 - \frac{11}{15} \\
 &= \frac{4}{15}
 \end{aligned}$$

Qn 6 (Cont.)

(b)



2 units = 6

1 unit = 3

Total number of students in the class = $15 \times 3 = 45$

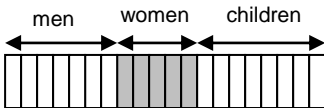
Qn 7

(a) Fraction of people who are men

$$= 1 - \frac{2}{5} - \frac{1}{4} = 1 - \frac{8}{20} - \frac{5}{20}$$

$$= 1 - \frac{13}{20}$$

$$= \frac{7}{20}$$



(b) 1 unit = 20

Total no of people at the funfair = 20×20
= 400

Chapter 12 Geometry

Unit 12.1 – Recognising Angle Sizes

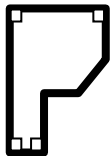
Qn 1 2 angles

Qn 2 1 angle

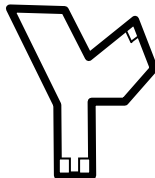
Qn 3 7 angles

Qn 4 4 angles

Qn 5



Qn 6



Qn 7

Figure	Number of sides	Number of angles inside the figure	Number of angles greater than a right angle	Number of angles smaller than a right angle
(a)	4	4	1	1
(b)	6	6	3	2
(c)	7	7	2	4
(d)	8	8	2	4

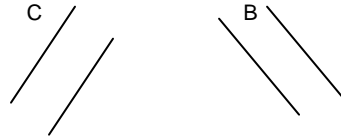
Qn 8

Figure	Number of sides	Number of angles inside the figure	Number of angles greater than a right angle	Number of angles smaller than a right angle
(a)	7	7	4	3
(b)	9	9	5	2
(c)	10	10	4	5
(d)	11	11	6	3

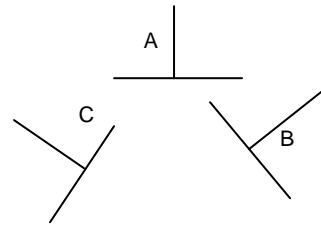
Unit 12.2 – Parallel and Perpendicular Lines

Qn 1

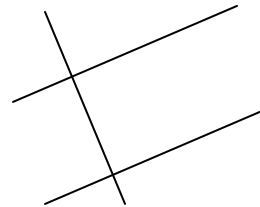
(a) A _____



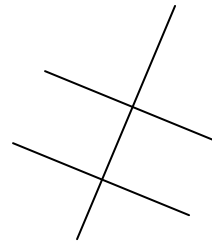
(b)



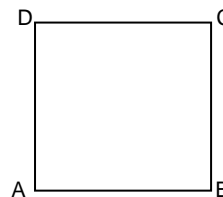
Qn 2



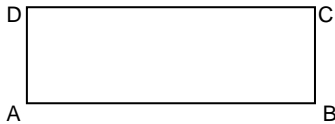
Qn 3



Qn 4



Qn 5



Chapter 13 Area And Perimeter

Unit 13.1 – Finding Area and Perimeter with Given Sides

Qn 1

$$\begin{aligned} \text{Area} &= 7 \text{ cm} \times 5 \text{ cm} \\ &= 35 \text{ cm}^2 \\ \text{Perimeter} &= (7 \text{ cm} + 5 \text{ cm}) \times 2 \\ &= 24 \text{ cm} \end{aligned}$$

Qn 2

$$\begin{aligned} \text{Area} &= 7 \text{ cm} \times 4 \text{ cm} \\ &= 28 \text{ cm}^2 \\ \text{Perimeter} &= (7 \text{ cm} + 4 \text{ cm}) \times 2 \\ &= 22 \text{ cm} \end{aligned}$$

Qn 3

$$\begin{aligned} \text{Area} &= 5 \text{ cm} \times 5 \text{ cm} \\ &= 25 \text{ cm}^2 \\ \text{Perimeter} &= 5 \text{ cm} \times 4 \\ &= 20 \text{ cm} \end{aligned}$$

Qn 4

$$\begin{aligned} \text{Area} &= 7 \text{ cm} \times 7 \text{ cm} \\ &= 49 \text{ cm}^2 \\ \text{Perimeter} &= 7 \text{ cm} \times 4 \\ &= 28 \text{ cm} \end{aligned}$$

Unit 13.2 – Finding Area and Perimeter Of Composite Figures

Qn 1

$$\begin{aligned} \text{Area} &= (8 \text{ cm} \times 8 \text{ cm}) + (5 \text{ cm} \times 5 \text{ cm}) \\ &= 64 \text{ cm}^2 + 25 \text{ cm}^2 \\ &= 89 \text{ cm}^2 \\ \text{Perimeter} &= (8 \text{ cm} \times 2) + (13 \text{ cm} \times 2) \\ &= 16 \text{ cm} + 26 \text{ cm} \\ &= 42 \text{ cm} \end{aligned}$$

Qn 2

$$\begin{aligned} \text{Area} &= (10 \text{ cm} \times 10 \text{ cm}) + (6 \text{ cm} \times 6 \text{ cm}) \\ &= 100 \text{ cm}^2 + 36 \text{ cm}^2 \\ &= 136 \text{ cm}^2 \\ \text{Perimeter} &= (16 \text{ cm} \times 2) + (10 \text{ cm} \times 2) \\ &= 32 \text{ cm} + 20 \text{ cm} \\ &= 52 \text{ cm} \end{aligned}$$

Qn 3

$$\begin{aligned} \text{Area} &= (9 \text{ cm} \times 9 \text{ cm}) + (7 \text{ cm} \times 7 \text{ cm}) + (4 \text{ cm} \times 4 \text{ cm}) \\ &= 81 \text{ cm}^2 + 49 \text{ cm}^2 + 16 \text{ cm}^2 \\ &= 146 \text{ cm}^2 \\ \text{Perimeter} &= (9 + 7 + 4) \text{ cm} \times 2 + 9 \text{ cm} \times 2 \\ &= 40 \text{ cm} + 18 \text{ cm} \\ &= 58 \text{ cm} \end{aligned}$$

Qn 4

$$\begin{aligned} \text{Area} &= (3 \text{ cm} \times 3 \text{ cm}) + (8 \text{ cm} \times 8 \text{ cm}) + (5 \text{ cm} \times 5 \text{ cm}) \\ &= 9 \text{ cm}^2 + 64 \text{ cm}^2 + 25 \text{ cm}^2 \\ &= 98 \text{ cm}^2 \\ \text{Perimeter} &= (3 + 8 + 5) \text{ cm} \times 2 + 8 \text{ cm} \times 2 \\ &= 32 \text{ cm} + 16 \text{ cm} \\ &= 48 \text{ cm} \end{aligned}$$

Qn 5

$$\begin{aligned} \text{Area} &= (9 \text{ cm} \times 6 \text{ cm}) + (5 \text{ cm} \times 5 \text{ cm}) \\ &= 54 \text{ cm}^2 + 25 \text{ cm}^2 \\ &= 79 \text{ cm}^2 \\ \text{Perimeter} &= (9 + 5) \text{ cm} \times 2 + 6 \text{ cm} \times 2 \\ &= 28 \text{ cm} + 12 \text{ cm} \\ &= 40 \text{ cm} \end{aligned}$$

Qn 6

$$\begin{aligned} \text{Area} &= (12 \text{ cm} \times 7 \text{ cm}) + (4 \text{ cm} \times 4 \text{ cm}) \\ &= 84 \text{ cm}^2 + 16 \text{ cm}^2 \\ &= 100 \text{ cm}^2 \\ \text{Perimeter} &= (12 + 4) \text{ cm} \times 2 + 7 \text{ cm} \times 2 \\ &= 32 \text{ cm} + 14 \text{ cm} \\ &= 46 \text{ cm} \end{aligned}$$

Qn 7

$$\begin{aligned} \text{Area} &= (10 \text{ cm} \times 10 \text{ cm}) - (2 \text{ cm} \times 2 \text{ cm}) \times 4 \\ &= 100 \text{ cm}^2 - 16 \text{ cm}^2 \\ &= 84 \text{ cm}^2 \\ \text{Perimeter} &= 10 \text{ cm} \times 4 \\ &= 40 \text{ cm} \end{aligned}$$

Qn 8

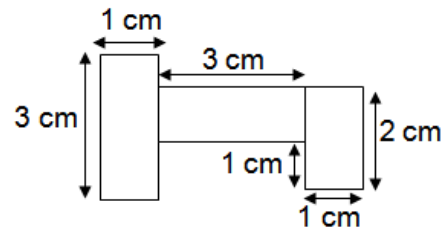
$$\begin{aligned} \text{Area} &= (12 \text{ cm} \times 8 \text{ cm}) - (2 \text{ cm} \times 2 \text{ cm}) \times 4 \\ &= 96 \text{ cm}^2 - 16 \text{ cm}^2 \\ &= 80 \text{ cm}^2 \\ \text{Perimeter} &= (12 \text{ cm} + 8 \text{ cm}) \times 2 \\ &= 40 \text{ cm} \end{aligned}$$

Qn 9

$$\begin{aligned} \text{Perimeter} &= (70 + 50) \text{ cm} \times 2 \\ &= 120 \text{ cm} \times 2 \\ &= 240 \text{ cm} \end{aligned}$$

Qn 10

Note : The diagram in the book should be replaced by the diagram below. The answer is 18 cm instead of 16 cm.



Perimeter

$$\begin{aligned} &= (1 + 3 + 1) \text{ cm} \times 2 + (3 \text{ cm} \times 2) + (1 \text{ cm} \times 2) \\ &= 10 \text{ cm} + 6 \text{ cm} + 2 \text{ cm} \\ &= 18 \text{ cm} \end{aligned}$$

Qn 11

$$\begin{aligned} \text{Perimeter} &= (45 + 39) \text{ cm} \times 2 \\ &= 84 \text{ cm} \times 2 \\ &= 168 \text{ cm} \end{aligned}$$

Qn 12

$$\begin{aligned} \text{Perimeter} &= (8 + 8) \text{ cm} \times 4 \\ &= 16 \text{ cm} \times 4 \\ &= 64 \text{ cm} \end{aligned}$$

Unit 13.3 – Finding a Side Given Its Area or Perimeter

Qn 1

(a) Twice the breadth = $200\text{ m} - 60\text{ m} - 60\text{ m}$
 $= 80\text{ m}$
 Breadth = $80\text{ m} \div 2$
 $= 40\text{ m}$

(b) Area of field = $40\text{ m} \times 60\text{ m}$
 $= 2400\text{ m}^2$

Qn 2

(a) Twice the breadth = $400\text{ m} - 120\text{ m} - 120\text{ m}$
 $= 160\text{ m}$
 Breadth = $160\text{ m} \div 2$
 $= 80\text{ m}$

(b) Area of field = $120\text{ m} \times 80\text{ m}$
 $= 9600\text{ m}^2$

Qn 3

(a) Twice the breadth = $88\text{ cm} - 24\text{ cm} - 24\text{ cm}$
 $= 40\text{ cm}$
 Breadth = $40\text{ cm} \div 2$
 $= 20\text{ cm}$

(b) Area of table top = $24\text{ cm} \times 20\text{ cm}$
 $= 480\text{ cm}^2$

Qn 4

Length of square = $36\text{ cm} \div 4$
 $= 9\text{ cm}$

Area of square = $9\text{ cm} \times 9\text{ cm}$
 $= 81\text{ cm}^2$

Qn 5

Length of square = $48\text{ cm} \div 4$
 $= 12\text{ cm}$

Area of square = $12\text{ cm} \times 12\text{ cm}$
 $= 144\text{ cm}^2$

Qn 6

Since $7 \times 7 = 49$

Length of square = 7 cm

Perimeter of square = $7\text{ cm} \times 4$
 $= 28\text{ cm}$

Qn 7

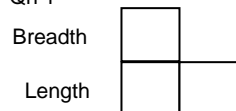
Since $9 \times 9 = 81$

Length of square = 9 cm

Perimeter of square = $9\text{ cm} \times 4 = 36\text{ cm}$

Unit 13.4 – Proportional Sides with Given Perimeter

Qn 1



Total perimeter = $2\text{ length} + 2\text{ breadth}$
 $= 4\text{ units} + 2\text{ units}$
 $= 6\text{ units}$

6 units = 30 cm

1 unit = 5 cm

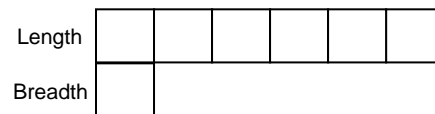
(a) Breadth = 5 cm

Length = $5\text{ cm} \times 2$
 $= 10\text{ cm}$

Qn 1 (Cont.)

(b) Area = $10\text{ cm} \times 5\text{ cm}$
 $= 50\text{ cm}^2$

Qn 2



Total perimeter = $2\text{ lengths} + 2\text{ breadths}$
 $= 12\text{ units} + 2\text{ units}$
 $= 14\text{ units}$

14 units = 56 cm

1 unit = 4 cm

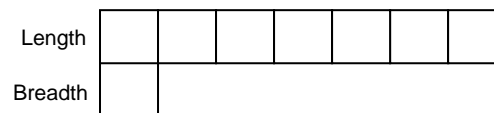
(a) Breadth = 4 cm

Length = $4\text{ cm} \times 6$

= 24 cm

(b) Area = $24\text{ cm} \times 4\text{ cm}$
 $= 96\text{ cm}^2$

Qn 3



Total perimeter = $2\text{ length} + 2\text{ breadth}$
 $= 14\text{ units} + 2\text{ units}$
 $= 16\text{ units}$

16 units = 48 cm

1 unit = 3 cm

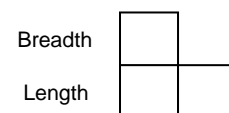
(a) Breadth = 3 cm

Length = $3\text{ cm} \times 7$

= 21 cm

(b) Area = $21\text{ cm} \times 3\text{ cm}$
 $= 63\text{ cm}^2$

Qn 4



Total perimeter = $2\text{ length} + 2\text{ breadth}$
 $= 4\text{ units} + 2\text{ units}$
 $= 6\text{ units}$

6 units = 60 cm

1 unit = 10 cm

(a) Breadth = 10 cm

Length = $10\text{ cm} \times 2$

= 20 cm

(b) Area = $20\text{ cm} \times 10\text{ cm}$
 $= 200\text{ cm}^2$

Unit 13.5 – Area and Perimeter of Figure using Unit Squares

Qn 1 Area = 4 cm^2 ; Perimeter = 10 cm

Qn 2 Area = 4 cm^2 ; Perimeter = 10 cm

Qn 3 Area = 6 cm^2 ; Perimeter = 14 cm

Qn 4 Area = 5 cm^2 ; Perimeter = 14 cm

Qn 5 Area = 6 cm^2 ; Perimeter = 16 cm

Qn 6 Area = 6 cm^2 ; Perimeter = 16 cm

Empowered Learning



Homework Help at
www.onsponge.com



Certified Tuition Partner

www.onsponge.com

While every care has been taken to compile this answer booklet, errors may still arise in the course of compilation and production. If you notice any error, kindly write to feedback@onsponge.com so that we can review it.