onsponge
all matters tweens

4

Primary

Based on Latest
MOE Syllabus

+hinkingMath@
onSponge

CONQUER
PROBLEM SUMS

- Proven strategies used by top performing schools to conquer problem sums
- Structured and guided approach to support learning in school
- Challenging questions to excel in P4 Mathematics

www.onsponge.com

Published by **onSponge Pte Ltd**
Company Registration Number: 200802783R
Mailing Address : Blk 632 Veerasamy Road, #19-106, Singapore 200632

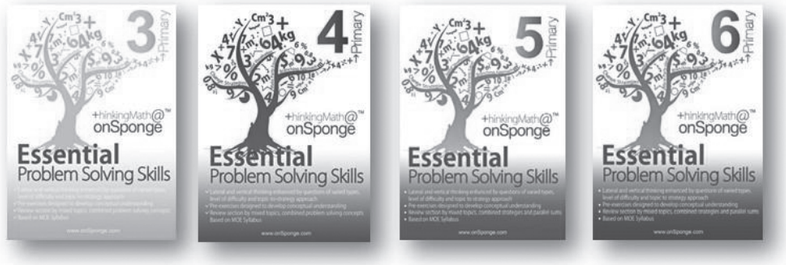
Website : www.onsponge.com
For enquiries, please visit http://www.onsponge.com/contactus

ISBN 978-981-08-2052-7

Printed in Singapore by Mainland Press Pte Ltd.

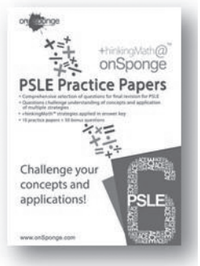
+hinkingMath@onSponge™ Series

Essential Problem Solving Skills (P3 to P6)



Conquer Problem Sums (P3 to P6)

PSLE Preparation (P6)



Visit **www.onsponge.com** to learn more about the +hinkingMath@onSponge series.

SpongeTips to Excel!

Solving problem sums can be enjoyable as the process helps you to:

- *Gain the knowledge and skills* to confidently solve problems in everyday life eg:
  - ✓ measuring your height and working out how much you've grown.
  - ✓ on car journeys - playing number-plate games, adding and subtracting with road signs, thinking about speed by dividing distance by time.
  - ✓ at the shops - weighing fruit and vegetables, budgeting with pocket money, working out the relative value of products by comparing prices and weight.
  - ✓ in the kitchen - with weighing and measuring, and temperature and timings.
  - ✓ making models and origami shapes.
- *Sharpen your thinking* so you can outwit your friends in riddles, puzzles and games.
- *Think creatively* for more ways to tackle a problem that will amaze your family members and friends.

To become an excellent problem sum solver, it's really easy. Simply use **BRISK**!

B*elieve in yourself*	No problem is too difficult for anyone including you! It may be challenging but that's what makes it interesting. Imagine playing an easy computer game…you will soon be bored! So brace up and tell yourself, "I can do it!"
R*ead to understand*	Never rush through a question even if it looks really easy because you might just miss the important point or fall into the trap set by the author/examiner (Yes, they do set traps!). Read every sentence of the entire problem until you understand and know what you are going to solve.
I*dentify key facts*	All information found in the problem is important. It gives clues to help you solve the problem just like a detective would need clues to solve a mystery. Line by line as you read through, list the facts given in the problem to help guide and lead you to the solution.
S*queeze and write*	You need all the clues to solve the problem. So 'squeeze' out every possible clue from the problem sum and write them one at a time, point by point, onto the empty space provided. Do you know every correct clue/fact stated on the paper will score you points? So go on….'squeeze' and write!
K*eep questioning*	For every fact you have written out, ask yourself, "Is there a computation here that I must make that will lead me closer to the solution?" If the answer is yes, then work it out, check the working and if it is accurate, you are one step closer to the solution. Else, move to the next fact and repeat the process. Before you know it, there's the solution! Once you have arrived at your solution, don't be in a hurry to move on. Take one more look to see if the answer is logically correct. Should the answer look illogical e.g. "There are 2⅓ boys in the class", then you will have to go back and repeat the steps of **BRISK** until you arrive at an answer that is logical based on the facts given.

Final Answers for P4 Conquer Problem Sums

Chapter 1 Whole Numbers

Unit 1.1 – Divisibility Test

Qn 1 (a) 431 and 569 (b) 712 and 611
(c) 342 (d) 324 and 521
(e) 441 and 621

Unit 1.2 – Divisor, Quotient and Remainder

Qn 1 Quotient = 616 Remainder = 5
Qn 2 Quotient = 279 Remainder = 2
Qn 3 Quotient = 664 Remainder = 4
Qn 4 77
Qn 5 986
Qn 6 942
Qn 7 455
Qn 8 1427
Qn 9 2 more
Qn 10 $110
Qn 11 18 packets

Unit 1.3 – Highest Common Factor (HCF)

Qn 1 8
Qn 2 12
Qn 3 5
Qn 4 8
Qn 5 15

Unit 1.4 – Distribution involving Multiplication and Division

Qn 1 9
Qn 2 7
Qn 3 14
Qn 4 20
Qn 5 32
Qn 6 18
Qn 7 10

Unit 1.5 – Word Problems involving Common Factors

Qn 1 (a) 8 bags
(b) 5 candy bars + 6 chocolate bars
Qn 2 (a) 6 bags (b) 31 items
Qn 3 (a) 30 people (b) 9 items
Qn 4 (a) 20 cm (b) 20 tiles
Qn 5 (a) 30 cm (b) 20 tiles
Qn 6 (a) 20 cm (b) 20 smaller pieces

Unit 1.6 – Lowest Common Multiple (LCM)

Qn 1 19 October
Qn 2 8.13 p.m.
Qn 3 (a)11.01 p.m. (b) 60 times
Qn 4 8
Qn 5 30
Qn 6 23 sweets
Qn 7 26 chocolates
Qn 8 17 balloons
Qn 9 40
Qn 10 60 books

Unit 1.7 – More Than/Less Than (External Unchanged Type I)

Qn 1 69 sweets
Qn 2 165 marbles
Qn 3 $1425
Qn 4 90 stickers
Qn 5 300 cookies
Qn 6 $90

Unit 1.8 – More Than/Less Than (External Unchanged Type II)

Qn 1 48 boys
Qn 2 60 stickers
Qn 3 63 sweets
Qn 4 300 swimmers

Unit 1.9 – More Than/Less Than (External Unchanged Type III)

Qn 1 240 chickens
Qn 2 96 cookies
Qn 3 45 egg tarts
Qn 4 54 men

Unit 1.10 – Equal Stage (Type I - Beginning)

Qn 1 22 boys
Qn 2 27 cards
Qn 3 $68
Qn 4 56 students
Qn 5 84 apples
Qn 6 108 boys

Unit 1.11 – Equal Stage(Type II - End)

Qn 1 $24
Qn 2 12 stickers
Qn 3 12 members
Qn 4 48 boys
Qn 5 65 oranges
Qn 6 91 marbles

Unit 1.12 – Equal Stage (Type III - Internal Transfer)

Qn 1 L = $140; I = $560
Qn 2 J = 36 marbles; D = 72 marbles
Qn 3 126 pies
Qn 4 S = $16; D = $80

Unit 1.13 – Multiple Quantities (More than/Less than)

Qn 1 $18
Qn 2 $50
Qn 3 $32
Qn 4 $144
Qn 5 5 kg
Qn 6 $72
Qn 7 $34
Qn 8 $24
Qn 9 $30

Unit 1.14 – Number of Units and Value of Units

Qn 1 20 plates
Qn 2 12 chickens
Qn 3 32 welders
Qn 4 30 girls
Qn 5 80 children
Qn 6 40 questions

Unit 1.15 – Repeated Identity (Type I)

Qn 1 26 stickers
Qn 2 $1050
Qn 3 15 red balls
Qn 4 28 dolls
Qn 5 160 people

Unit 1.16 – Repeated Identity (Type II)

Qn 1 28 stickers
Qn 2 50 bottle caps
Qn 3 28 red balls
Qn 4 22 buttons
Qn 5 24 green balloons

Unit 1.17 – Repeated Identity (Type III)

Qn 1 200 cards
Qn 2 320 boys
Qn 3 220 green balls
Qn 4 84 stickers
Qn 5 44 sweets

Chapter 2 Fraction

Unit 2.1 – Addition & Subtraction of Fractions (Type I)

Qn 1 (a) $\frac{1}{2}$ (b) $\frac{1}{2}$
Qn 2 (a) $\frac{4}{11}$ (b) 55 cm

Qn 3 (a) $\frac{1}{3}$ (b) 36 students

Qn 4 (a) $\frac{3}{7}$ (b) \$63

Qn 5 (a) $\frac{6}{13}$ (b) \$52

Qn 6 144 cm

Unit 2.2 – Addition & Subtraction of Fractions (Type II)

Qn 1 $\frac{11}{24}$ Qn 2 $\frac{11}{35}$

Qn 3 60 pies Qn 4 240 cm

Qn 5 4000 m Qn 6 609 apples

Unit 2.3 – Addition & Subtraction of Fractions (Type III)

Qn 1 $\frac{1}{6}$ kg Qn 2 $\frac{4}{9}$ kg

Qn 3 1500 g Qn 4 $\frac{15}{25}$ kg

Unit 2.4 – Part-Whole Relationship (Type I)

Qn 1 \$105 Qn 2 48 students

Qn 3 560 people Qn 4 \$250

Qn 5 84 balls

Unit 2.5 – Part-Whole Relationship (Type II)

Qn 1 500 pies Qn 2 160 pages

Qn 3 540 fruits Qn 4 300 stickers

Qn 5 48 students Qn 6 50 cookies

Qn 7 450 chocolates Qn 8 \$2660

Qn 9 4 boxes

Unit 2.6 – Part-Whole Relationship (Type III)

Qn 1 (a) $\frac{9}{20}$ (b) \$40

Qn 2 (a) $\frac{4}{21}$ (b) \$126

Qn 3 (a) $\frac{1}{7}$ (b) \$84

Qn 4 42 Pies Qn 5 \$4620

Qn 6 280 Students

Unit 2.7 – Comparison of Different Quantities

Qn 1 15kg Qn 2 20cm

Qn 3 8 Sweets Qn 4 \$400

Unit 2.8 – Equal Stage (Type I)

Qn 1 32 Pens Qn 2 150 Boys

Qn 3 36 Cups Qn 4 70 Blue Balls

Qn 5 100 Students Qn 6 420 Muffins

Unit 2.9 – Equal Stage (Type II)

Qn 1 56 sweets Qn 2 42 cookies

Qn 3 \$24 Qn 4 50 pebbles

Qn 5 60 books

Unit 2.1 0 – Equal Stage (Type III)

Qn 1 \$306 Qn 2 42 girls

Qn 3 30 pencils Qn 4 36 men

Qn 5 30 more Qn 6 25 more

Qn 7 120 English books Qn 8 300 apples

Qn 9 \$490 Qn 10 450 boys

Unit 2.11 – External Unchanged (Type I)

Qn 1 20 square cookies Qn 2 240 chickens

Qn 3 140 cups Qn 4 48 men

Unit 2.1 2 – External Unchanged (Type II)

Qn 1 660 mℓ Qn 2 24 children

Qn 3 64 students Qn 4 45 fruits

Qn 5 240 marbles

Unit 2.1 3 – Repeated Identity

Qn 1 16 bananas Qn 2 158 chocolates

Qn 3 224 people Qn 4 272 balls

Chapter 3 Angles

Unit 3.1 – Naming Angles

Qn 1 $\angle ABC; \angle BCD$ Qn 2 $\angle TUW; \angle WXY$

Qn 3 $\angle ACB; \angle CDE$ Qn 4 $\angle AEC; \angle BDC$

Qn 5 $\angle WXY; \angle UTW$ Qn 6 $\angle UYT; \angle UWZ$

Qn 7 $\angle AFE; \angle EBC$

Unit 3.2 – Measuring Angles

Qn 1 (a) $\angle a = 27°$ (b) $\angle a = 130°$

(c) $\angle a = 87°$ (d) $\angle a = 57°$

(e) $\angle a = 140°$ (f) $\angle a = 102°$

Qn 2 $\angle ABD = 49°; \angle CBD = 131°$
$\angle ABD + \angle CBD = 180°$

Qn 3 $\angle EFH = 71°; \angle GFH = 109°$
$\angle EFH + \angle GFH = 180°$

Qn 4 $\angle EFH = 73°; \angle EFJ = 107°$
$\angle EFH + \angle EFJ = 180°$

Qn 5 (a) $\angle DCE = 52°; \angle ECB = 38°$
$\angle DCE + \angle ECB = 90°$

(b) $\angle DCE = 34°; \angle ECB = 56°$
$\angle DCE + \angle ECB = 90°$

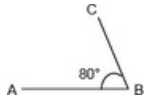
(c) $\angle DCA = 30°; \angle ACB = 60°$
$\angle DCA + \angle ACB = 90°$

Qn 6 $\angle w = 80°; \angle x = 140°; \angle y = 26°; \angle z = 68°$

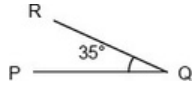
Qn 7 $\angle a = 317°; \angle b = 128°; \angle c = 130°; \angle d = 67°$

Unit 3.3 – Constructing Angles

Qn 1

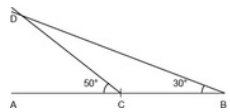


Qn 2

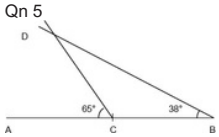


Qn 3

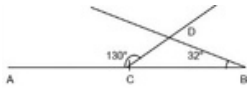
Qn 4



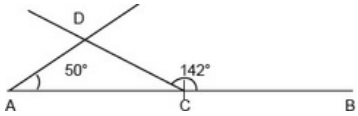
Qn 5



Qn 6

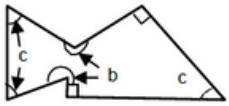


Qn 7



Unit 3.4 – Fraction of Right Angles

Qn 1	(a) 180	(b) 90
	(c) 270	(d) 720
Qn 2	4 angles	
Qn 3	(a) 2	(b) 6
	(c) 3	
Qn 4	(a) 0	(b) 4
	(c) 3	(d) 2
	(e) 2	
Qn 5	(a) 2	(b)&(c)



Chapter 4 Decimals

Unit 4.1 – Identifying Decimal Places

Qn 1	(a) tenths	(b) hundredths
	(c) thousandths	(d) ones
	(e) hundredths	(f) thousandths
	(g) tenths	(h) thousandths
Qn 2	(a) 0.007; 7 thousandths	
	(b) 0.04; 4 hundredths	
	(c) 0.3; 3 tenths	
	(d) 0.006; 6 thousandths	
Qn 3	(a) 5.634	(b)120.64
	(c) 1.212	(d) 2.562
	(e) 4.125	(f) 211.62
	(g) 421.754	(h) 44.92
	(i) 72.132	(j) 1.314

Unit 4.2 – Comparing and Ordering Decimals

Qn 1 0.65	Qn 3 45.327	Qn 5 12.124
Qn 2 95.59	Qn 4 29.102	Qn 6 124.05

Qn 7 13.405
Qn 8 0.25, 0.254, 0.42
Qn 9 0.304, 0.340, 0.403
Qn 10 0.571, 0.715, 0.751
Qn 11 12.415, 12.421, 12.541
Qn 12 26.721, 27.261, 27.621
Qn 13 16.457, 16.475, 16.754
Qn 14 81.542, 105.524, 108.452

Unit 4.3.1 – Converting Fractions into Decimals (Tenths)

Qn 1	0.6	Qn 2	0.8
Qn 3	1.7	Qn 4	2.1
Qn 5	5.2	Qn 6	6.0
Qn 7	0.2	Qn 8	0.5
Qn 9	1.3	Qn 10	1.7
Qn 11	1.8	Qn 12	2.6

Unit 4.3.2 – Converting Fractions into Decimals (Hundredths)

Qn 1	0.06	Qn 2	0.25
Qn 3	0.40	Qn 4	1.24
Qn 5	0.28	Qn 6	0.35
Qn 7	1.04	Qn 8	3.02
Qn 9	5.2	Qn 10	4.25
Qn 11	0.75	Qn 12	0.48
Qn 13	1.68	Qn 14	3.4
Qn 15	1.34	Qn 16	2.48

Unit 4.3.3 – Converting Fractions into Decimals (Thousandths)

Qn 1	0.006	Qn 2	0.008
Qn 3	0.042	Qn 4	0.035
Qn 5	0.482	Qn 6	0.125
Qn 7	1.234	Qn 8	4.256
Qn 9	0.006	Qn 10	0.012
Qn 11	0.035	Qn 12	0.324
Qn 13	0.525	Qn 14	4.256
Qn 15	2.032	Qn 16	6.25
Qn 17	2.75	Qn 18	5.375
Qn 19	6.625	Qn 20	5.192

Unit 4.4 – Rounding

Qn 1	34	Qn 2	9
Qn 3	2	Qn 4	12
Qn 5	13	Qn 6	34
Qn 7	24.5	Qn 8	84.1
Qn 9	22.0	Qn 10	15.3
Qn 11	9.9	Qn 12	5.5
Qn 13	37.82	Qn 14	15.05
Qn 15	5.21	Qn 16	31.35

Unit 4.5 – Converting Decimals into Fractions

Qn 1	$\frac{24}{25}$	Qn 2	$\frac{43}{50}$
Qn 3	$12\frac{3}{5}$	Qn 4	$42\frac{41}{50}$
Qn 5	$3\frac{1}{4}$	Qn 6	$8\frac{4}{25}$
Qn 7	$37\frac{101}{125}$	Qn 8	$112\frac{173}{500}$
Qn 9	$2\frac{12}{25}$	Qn 10	$134\frac{9}{500}$

Qn 11 $1\frac{21}{25}$ Qn 12 $45\frac{4}{5}$

Qn 13 $4\frac{9}{20}$ Qn 14 $4\frac{6}{25}$

Unit 4.6 – Addition and Subtraction of Decimals

Qn 1	12.29	Qn 2	27.12
Qn 3	8.72	Qn 4	2.64
Qn 5	85.8	Qn 6	24.74
Qn 7	146.85	Qn 8	237.97
Qn 9	95.31	Qn 10	173.9
Qn 11	62	Qn 12	12.49
Qn 13	56.86	Qn 14	74.28
Qn 15	36.54	Qn 16	15.2
Qn 17	$23.90	Qn 18	$9.50
Qn 19	$9.60		

Unit 4.7 – Multiplication of Decimals

Qn 1	$2764	Qn 2	$3.78
Qn 3	$487.80	Qn 4	211.36 m
Qn 5	8.75*l*	Qn 6	$32.80
Qn 7	$92	Qn 8	$40.90

Unit 4.8 – Division of Decimals

Qn 1	1.6	Qn 2	1.5
Qn 3	6.25	Qn 4	2.5
Qn 5	$24.50	Qn 6	$5.25
Qn 7	24.2 kg	Qn 8	$5.80
Qn 9	$9.80		

Unit 4.9 – Number Patterns on Decimals

Qn 1

1	0.326	0.0326	0.00326	32.6	326	3260
2	2.345	0.2345	0.02345	234.5	2345	23450
3	0.034	0.0034	0.00034	3.4	34	340
4	0.2012	0.02012	0.002012	20.12	201.2	2012
5	6.34	0.634	0.0634	634	6340	63400

Qn 2

(a) 2.3, 2.8 (b) 3.1, 3.9
(c) 14.04, 14.08 (d) 5.5, 6.1
(e) 6.20, 6.30 (f) 8.30, 8.55
(g) 4.29, 4.47

Qn 3

(a) 1.41, 1.45 (b) 2.65, 2.05
(c) 3.31, 3.41 (d) 14.5, 13.3
(e) 3.30, 3.45 (f) 13.8, 9.3
(g) 2.64, 4.14

Chapter 5 Area and Perimeter

Unit 5.1 – Finding Area and Perimeter with Given Sides

Qn 1 (a) Area = 21 cm²; Perimeter = 20 cm
(b) Area = 52 cm²; Perimeter = 34 cm
(c) Area = 216 cm²; Perimeter = 60 cm

Qn 2 (a) Area = 49 cm²; Perimeter = 28 cm
(b) Area = 225 cm²; Perimeter = 60 cm
(c) Area = 169 cm²; Perimeter = 52 cm

Unit 5.2 – Finding Sides with Given Area or Perimeter

Qn 1 (a) Breadth = 8 cm; Perimeter = 34 cm
(b) Breadth = 10 cm; Perimeter = 50 cm
(c) Breadth = 21 cm; Perimeter = 50 cm
(d) Breadth = 15 cm; Perimeter = 50 cm

Qn 2 (a) Breadth = 3 cm; Perimeter = 12 cm
(b) Breadth = 8 cm; Perimeter = 32 cm
(c) Breadth = 6 cm; Perimeter = 24 cm
(d) Breadth = 5 cm; Perimeter = 20 cm

Qn 3 (a) Breadth = 6 cm; Area = 36 cm²
(b) Breadth = 11 cm; Area = 121 cm²
(c) Breadth = 16 cm; Area = 256 cm²
(d) Breadth = 14 cm; Area = 196 cm²

Unit 5.3 – Area and Perimeter of Composite Figures (Basic)

Qn 1 Area = 196 cm²; Perimeter = 72 cm
Qn 2 Area = 184 cm²; Perimeter = 84 cm
Qn 3 Area = 160 cm²; Perimeter = 56 cm
Qn 4 Area = 260 cm²; Perimeter = 72 cm
Qn 5 Area = 124 cm²; Perimeter = 48 cm
Qn 6 Area = 292 cm²; Perimeter = 80 cm

Unit 5.4 – Area and Perimeter with Proportional Figures

Qn 1	48cm	Qn 2	40cm
Qn 3	24cm	Qn 4	30cm
Qn 5	56cm		

Unit 5.5 – Area and Perimeter of Squares Using Guess and Check

Qn 1	49m²	Qn 2	64m²
Qn 3	63m²	Qn 4	144m²
Qn 5	132m²	Qn 6	144cm²
Qn 7	64cm²	Qn 8	44cm
Qn 9	66cm		

Unit 5.6 – Area and Perimeter of Composite Figures (Intermediate)

Qn 1 72m² Qn 2 64m²

Qn 3 112m² Qn 4 36m²

Qn 5 1300m² Qn 6 34m

Qn 7 34m Qn 8 30m²

Qn 9 28m²

Qn 10 Area = 264m²; Perimeter = 84m

Qn 11 Area = 764m²; Perimeter = 156cm

Qn 12 Area = 248m²; Perimeter = 80m

Qn 13 Area = 428m²; Perimeter = 114m

Unit 5.7 – Area Using Cut and Paste

Qn 1 25cm² Qn 2 21cm²

Qn 3 21cm² Qn 4 22cm²

Qn 5 16cm² Qn 6 18cm²

Qn 7 18cm² Qn 8 20cm²

Chapter 6 Graphs

Unit 6.1 – Table and Bar Graphs

Qn 1 (a) Number of boys: 12; 24; 18; 24
Number of girls: 24; 22; 14; 18
Total number of pupils: 36; 36; 32; 42

(b) Class 5B (c) 78

(d) 78 (e) 29

Qn 2 (a) 12;14; 18; 9 (b) 30

(c) 2 (d) 7

Qn 3 (a) Number of swimmers: 32; 26; 34; 28
Number of non-swimmers: 8, 14, 6, 12

(b) 40 (c) 6

(d) 6

Qn 4 (a) 1; 18; 20; 25; 23; 18; 17

(b) 2 p.m. (c) 6 p.m.; 8 p.m.

(d) 12 p.m.; 2 p.m. (e) 13°C

Qn 5 (a) March: $9000; $7000; $12000; $8000
April: $7000; $9000; $22000; $10000
May: $16000; $13000; $7000; $12000

(b) Mike (c) Imran

(d) $131000

Qn 6 (a) 2022: 12; 11; 4; 5; 14
2023: 10; 8; 6; 7; 11

(b) 2022 (c) Feb 2023

(d) Jan 2022 (e) 56 days

Unit 6.2 – Interpreting Line Graphs

Qn 1 (a) 12 p.m. (b) 4
(c) 13 (d) 22
(e) 4

Qn 2 (a) $16000 (b) 2007
(c) $20000

Qn 3 (a) 48kg (b) April or May
(c) 38kg (d) June

Qn 4 (a) 100 (b) 60
(c) 12 (d) 22

Qn 5 (a) 75 (b) 14
(c) Friday (d) 33

Qn 6 (a) 37.7°C
(b) 11 a.m., 2 p.m., and 4 p.m.
(c) 9 a.m. to 10 a.m., 2 p.m. to 3 p.m.
(d) 7 hours, from 10 a.m. to 5 p.m.

Unit 6.3 – Reading and Interpreting Pie Charts

Qn 1 (a) 10 (b) 12 (c) 40 (d) $\frac{1}{5}$

Qn 2 (a) 80 (b) 35 (c) 15

Qn 3 (a) 240 (b) 84 (c) $\frac{1}{10}$

Qn 4 (a) $\frac{3}{20}$ (b) $\frac{3}{20}$ (c) 500 (d) 100

Qn 5 (a) 16 (b) 4 (c) 20 (d) 80

Chapter 7 Review Questions

Unit 7 – Review Questions

Qn 1 $14 Qn 2 67°

Qn 3 $45

Qn 4 (a) See full solutions (b) 22 chairs

(c) 42 chairs (d) Figure 63

Qn 5 $40 Qn 6 $384

Qn 7 $320 Qn 8 $510

Qn 9 117 more Qn 10 576cm²

Qn 11 510 girls Qn 12 $11\frac{1}{6}$ kg

Qn 13 $80

Qn 14 (a) 32 pupils (b) 104 tables

Qn 15 33 tickets Qn 16 380 marbles

Qn 17 $3.50 Qn 18 45 stamps

Qn 19 128cm Qn 20 $316

Qn 21 A=72 marks; C=92 marks; D=83 marks

Qn 22 S=80 cookies; J=120 cookies; B=72 cookies

Qn 23 $1440 Qn 24 350g

Qn 25 1.05kg

Qn 26 (a) 38 pupils (b) 232 swets

Qn 27 (a) 36 tiles (b) 84 tiles

Qn 28 137 stickers Qn 29 $3

Qn 30 $125 Qn 31 $64

Qn 32 (a) 20 footballs (b) $675

Qn 33 520 tarts Qn 34 16 pies

Qn 35 66 stickers Qn 36 140 apples

Qn 37 34 more Qn 38 125cm

Qn 39 4 more Qn 40 195 coins

P4 Full Solutions

Note: In all solutions, u represents Units

Chapter 1 Whole Numbers

Unit 1.1 – Divisibility Test

Qn 1
(a)431 and 569 (b)712 and 611 (c)342
(d)324 and 521 (e)441 and 621

Unit 1.2 – Divisor, Quotient and Remainder

Qn 1

$$7\overline{)4317}$$
-42
11
-7
47
-42
5

Quotient = 616
Remainder = 5

Qn 2

$$9\overline{)2513}$$
-18
71
-63
83
-81
2

Quotient = 279
Remainder = 2

Qn 3

$$8\overline{)5316}$$
-48
51
-48
36
-32
4

Quotient = 664
Remainder = 4

Qn 4
$12 \times 6 + 5 = 72 + 5 = 77$

Qn 5
$123 \times 8 + 2 = 984 + 2 = 986$

Qn 6
$104 \times 9 + 6 = 936 + 6 = 942$

Qn 7
$113 \times 4 + 3 = 452 + 3 = 455$

Qn 8
$203 \times 7 + 6 = 1421 + 6$
$= 1427$

Qn 9
$14 \times 8 + 6 = 118$
$12 \times 10 = 120$
$120 - 118 = 2$ more chairs

Qn 10
$434 \div 8 = 54$ remainder 2
Total she needs = 55 packets
$55 \times \$2 = \$110$
Miss Tan would need \$110.

Qn 11
$40 \times 6 = 240$
$240 \div 14 = 17$ remainder 2
Total packets needed = 18 packets

Unit 1.3 – Highest Common Factor (HCF)

Qn 1
actors of 24: 1, 2, 3, 4, 6, 8, 12, 24
Factors of 40: 1, 2, 4, 5, 8, 10, 20, 40
Common factors of 24 and 40 are 1, 2, 4 and 8.
Highest common factor of 24 and 40 is 8.

Qn 2

Factors of 36:1,2,3,4,6,9,12,18,36
Factors of 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
Common factors of 36 and 60 are 1, 2, 3, 4, 6 and 12.
Highest common factor of 36 and 60 is 12.

Qn 3

Factors of 45: 1, 3, 5, 9, 15, 45
Factors of 80: 1, 2, 4, 5, 8, 10, 16, 20, 40, 80
Common factors of 45 and 80 are 1 and 5.
Highest common factor of 45 and 80 is 5.

Qn 4
Factors of 16: 1, 2, 4, 8, 16
Factors of 40: 1, 2, 4, 5, 8, 10, 20, 40
Common factors of 16 and 40 are 1, 2, 4 and 8.
Highest common factor of 16 and 40 is 8.

Qn 5
Factors of 90: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90
Factors of 75: 1, 3, 5, 15, 25, 75
Common factors of 75 and 90 are 1, 3, 5 and 15.
Highest common factor of 75 and 90 is 15.

Unit 1.4 – Distribution involving Multiplication and Division

Qn 1 9 Qn 2 7 Qn 3 14 Qn 4 20
Qn 5 32 Qn 6 18 Qn 7 10

Unit 1.5 – Word Problems on Common Factors

Qn 1

2	40 48
2	20 24
2	10 12
	5 6

(a) Maximum number of bags $= 2 \times 2 \times 2$
= 8 bags
(b) In each bag = **5 candy bars +**
6 chocolate bars

Qn 2

2	36 60 90
3	18 30 45
	6 10 15

(a) Maximum number of goodie bags
$= 2 \times 3$
= 6 bags
(b) In each bag = 6 packets of sweets
+10 bars of chocolates
+15 packets of biscuits
31 items

Qn 3

2	60 90 120
3	30 45 60
5	10 15 20
	2 3 4

(a) Total people catered to
$= 2 \times 3 \times 5$
= 30 people
(b) Total items each person can take
= 2 sticks of satays
+ 3 cups of jelly
+ 4 cupcakes

Qn 4

2	80 100
2	40 50
5	20 25
	4 5

(a) Largest possible length of each tile
$= 2 \times 2 \times 5$
= 20 cm
(b) Number of tiles needed $= 4 \times 5$
= 20 tiles

Qn 5

2	120 150
3	60 75
5	20 25
	4 5

(a) Largest possible length of each side of the tile $= 2 \times 3 \times 5$
= 30 cm
(b) Maximum number of tiles $= 4 \times 5$
= 20 tiles

Qn 6

10	80 140 180
2	8 14 18
	4 7 9

(a) Greatest possible length
$= 10 \times 2$
= 20 cm
(b) Smaller pieces $= 4 + 7 + 9$
= 20

Unit 1.6 – Lowest Common Multiple (LCM)

Qn 1

LCM of 3 and 5 is 15.

4th October $\xrightarrow{15 \text{ days later}}$ 19th October

They would meet again on **19th October**

Qn 2

2 | 30 36	LCM of 36 and 30
2 | 15 18	= 3 × 2 × 3 × 5 × 2
3 | 15 9	= 180 seconds = 3 minutes
3 | 5 3	
5 | 5 1	8.10 p.m. $\xrightarrow{3 \text{ minutes later}}$ **8.13 p.m.**
1 1	

Qn 3

2 | 10 12 15	LCM of 10, 15 and 12
5 | 5 6 15	= 2 × 5 × 3 × 2
3 | 1 6 3	= 60 seconds = 1 minute
2 | 1 2 1	(a) 11 p.m. $\xrightarrow{1 \text{ minute later}}$ **11.01 p.m.**
1 1 1	(b) Since 1 h = 60 min = **60 times**

Qn 4

2 | 2 4 8	Shortest length
2 | 2 2 4	= LCM of 2, 4 and 8
2 | 2 1 2	= 2 × 2 × 2
1 1 1	= **8**

Qn 5

LCM of 2, 3 and 5 = 2 × 3 × 5
= **30**

Qn 6

Groups of 5 = 3 extra
Groups of 8 = 7 extra
Groups of 5: 5, 10, 15, 20, 25, 30, 35, 40
(Add 3): 8, 13, 18, (23), 28, 33, 38, 43
Groups of 8: 8, 16, 24, 32, 40, 48, 56, 64
(Add 7): 15, (23), 31, 39, 47, 55, 63, 71
Clara has **23 sweets**.

Qn 7

Groups of 4: 4, 8, 12, 16, 20, 24, 28, 32
(Add 2): 6, 10, 14, 18, 22, (26), 30, 34
Groups of 7: 7, 14, 21, 28, 35, 42, 49, 56
(Subtract 2): 5, 12, 19, (26), 33, 40, 47, 54
Loraine has **26 chocolates**.

Qn 8

Groups of 6: 6, 12, 18, 24, 30, 36, 42, 48
(Add 5): 11, (17), 23, 29, 35, 41, 47, 53
Groups of 5: 5, 10, 15, 20, 25, 30, 35, 40
(Subtract3): 2, 7, 12, (17), 22, 27, 32, 37
Michael has **17 balloons.**

Qn 9

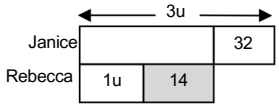
LCM of 5th and 8th = **40**

Qn 10

2 | 4 5 6	LCM of 4, 6 and 5
2 | 2 5 3	= 2 × 2 × 3 × 5
3 | 1 5 3	= 60
5 | 1 5 1	Minimum number of books = **60**
1 1 1	

Unit 1.7 – More Than/Less Than (External Unchanged - Type I

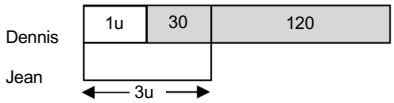
Qn 1



2u = 32 + 14
= 46
1u = 23
Number of sweets Janice had at first = 23 × 3
= 69

Janice had **69 sweets** at first.

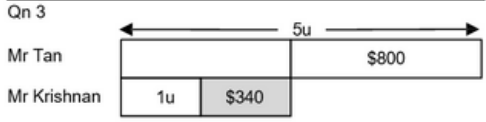
Qn 2



2u = 150 – 120 = 30
1u = 30 ÷ 2 = 15
Number of marbles Dennis had at first = 15 + 150
= 165

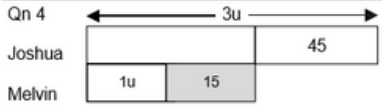
Dennis had 165 marbles at first.

Qn 3



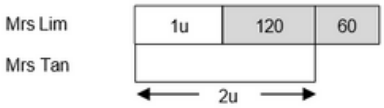
4u = $800 + $340 = $1140
1u = $1140 ÷ 4 = $285
Mr Tan at first = 5u
= 5 × $285
= **$1425**

Qn 4



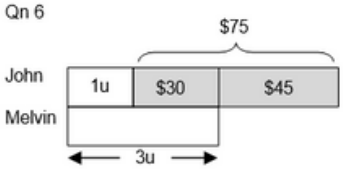
2u = 15 + 45 = 60
1u = 60 ÷ 2 = 30
Number of stickers Joshua had at first = 3u
= 3 × 30
= **90**

Qn 5



1u = 180 - 60 = 120
Number of cookies Mrs Lim baked at first = 1u + 180
= 120 + 180
= **300**

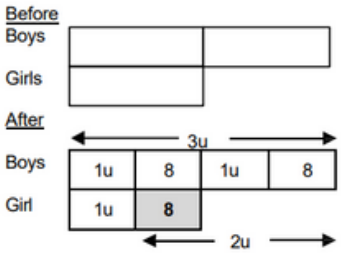
Qn 6



2u = $75 – $45 = $30
1u = $30 ÷ 2 = $15
John at first = $15 + $75
= **$90**

Unit 1.8 – More Than/Less than (External Unchanged - Type II)

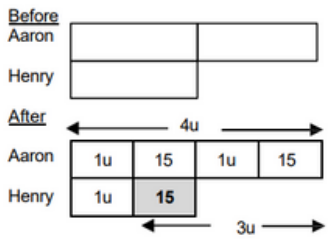
Qn 1



2u = 1u + 8 + 8
1u = 8 + 8 = 16

Number of boys at the party = 16 × 3 = **48**

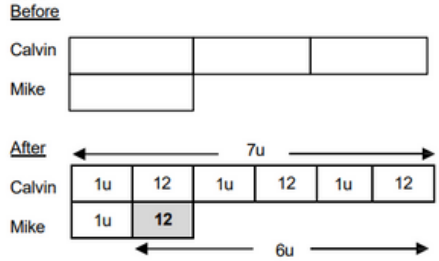
Qn 2



3u = 1u + 15 + 15
2u = 15 + 15 = 30
1u = 30 ÷ 2 = 15

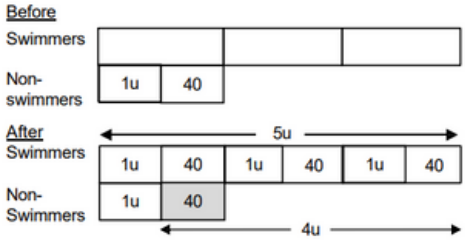
Number of stickers Aaron had = 4u
= 4 × 15
= **60**

Qn 3



6u = 2u + 12 + 12 + 12
4u = 12 + 12 + 12 = 36
1u = 36 ÷ 4 = 9
Number of sweets Calvin had = 7u
= 7 × 9
= **63**

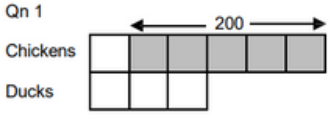
Qn 4



2u = 40 + 40 + 40 = 120
1u = 120 ÷ 2 = 60
Number of swimmers at the carnival = 5u
= 5 × 60
= **300**

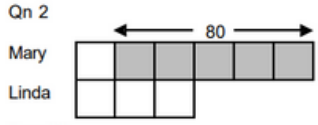
Unit 1.9 – More Than/Less Than (External Unchanged - Type III)

Qn 1



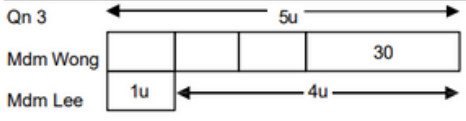
5u = 200
1u = 200 ÷ 5 = 40
Chickens at first = 6u
= 6 × 40
= **240**

Qn 2



5u = 80
1u = 80 ÷ 5 = 16
Number of cookies Mary baked at first = 6u
= 6 × 16
= **96**

Qn 3



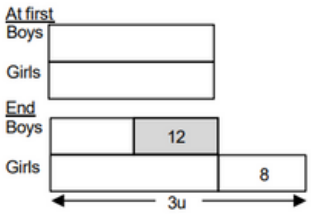
2u = 30
1u = 30 ÷ 2 = 15
Number of egg tarts Mdm Wong had at first = 3u
= 3 × 15
= **45**

Qn 4

5u = 45
1u = 45 ÷ 5 = 9
Number of men at the party at first = 6u
= 6 × 9
= **54**

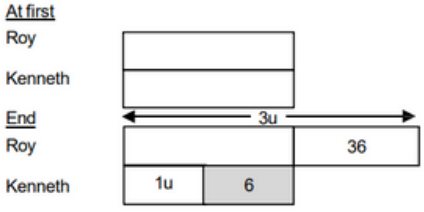
Unit 1.10 – Equal Stage (Type I - Beginning)

Qn 1



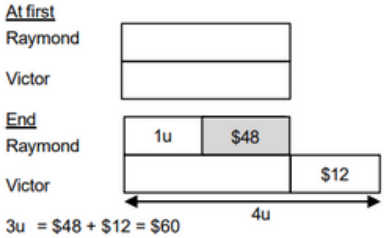
2u = 12 + 8 = 20
1u = 20 ÷ 2 = 10
Number of boys at the party at first
= 1u + 12
= 10 + 12
= **22**

Qn 2



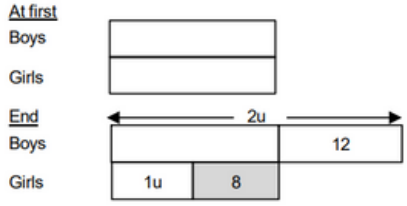
2u = 36 + 6 = 42
1u = 42 ÷ 2 = 21
Number of cards each had at first = 21 + 6
= **27**

Qn 3



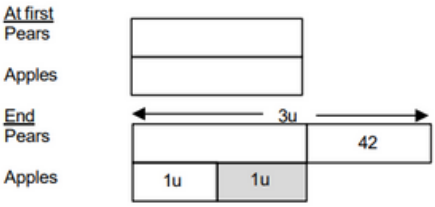
3u = $48 + $12 = $60
1u = $60 ÷ 3 = $20
Amount of money each of them had at first
= $20 + $48
= **$68**

Qn 4



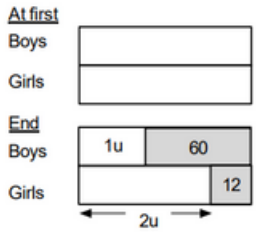
1u = 8 + 12 = 20
Girls at first = 20 + 8 = 28
Total numbers of students in the class = 28 × 2
= **56**

Qn 5



2u = 1u + 42
1u = 42
Number of apples at first = 2 × 42
= **84**

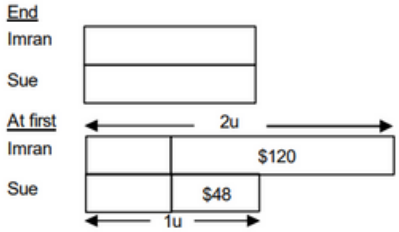
Qn 6



1u = 60 – 12 = 48
Number of boys at first = 48 + 60
= **108**

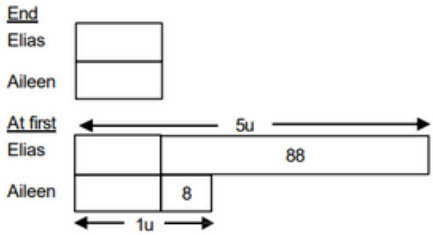
Unit 1.11 – Equal Stage (Type II - End)

Qn 1



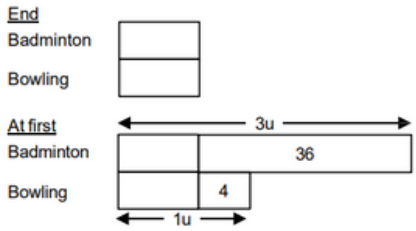
1u = $120 – $48 = $72
Each left = $72 – $48
= **$24**

Qn 2



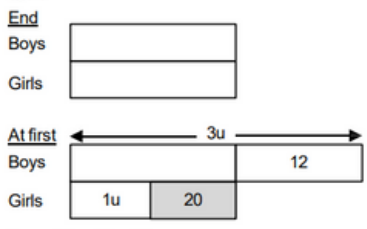
4u = 88 – 8 = 80
1u = 80 ÷ 4 = 20
Number of stickers each had in the end = 20 – 8
= **12**

Qn 3



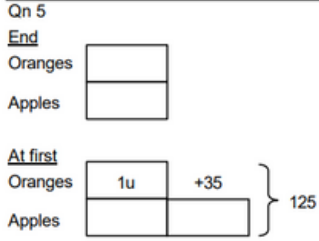
2u = 36 – 4 = 32
1u = 32 ÷ 2 = 16
Number of members left in each club = 16 – 4
= **12**

Qn 4



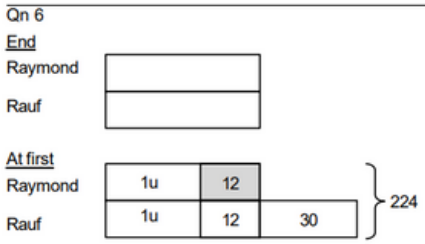
2u = 20 + 12 = 32
1u = 32 ÷ 2 = 16
Number of boys at first = 16 × 3
= **48**

Qn 5



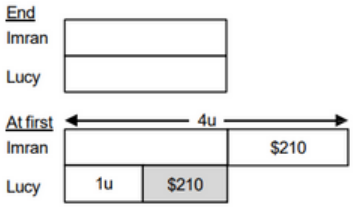
3u = 125 – 35 = 90
1u = 90 ÷ 3 = 30
Number of oranges at first = 30 + 35
= **65**

Qn 6



2u = 224 – 12 – 30
= 182
1u = 182 ÷ 2
= 91
Raymond at first = **91**

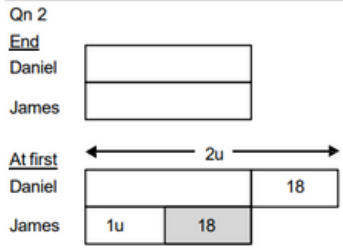
Qn 1



3u = $210 × 2 = $420
1u = $420 ÷ 3 = $140

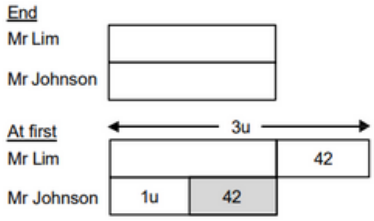
Each at first, Lucy = **$140**
Imran = 4 × $140
= **$560**

Qn 2



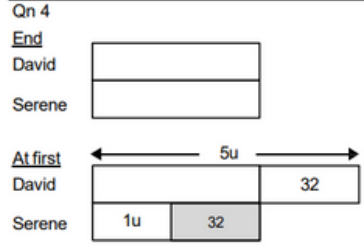
1u = 18 + 18
= 36
Each at first, James = **36**
Daniel = 2 × 36
= **72**

Qn 3



2u = 42 + 42 = 84
1u = 84 ÷ 2 = 43
Number of pies Mr Lim had at first = 3 × 42
= **126**

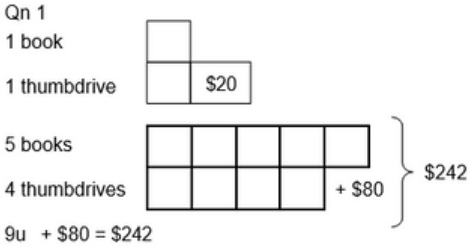
Qn 4



4u = 32 + 32 = 64
1u = 64 ÷ 4 = 16
Each at first, Serene = **$16**
David = 5 × $16
= **$80**

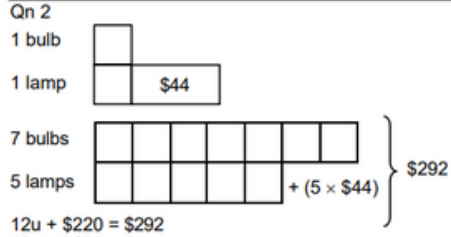
Unit 1.13 – Multiple Quantities (More than/Less than)

Qn 1



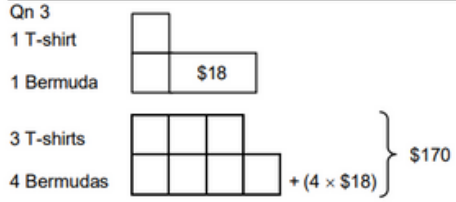
9u + $80 = $242
9u = $162
1u = $162 ÷ 9
= $18
Cost of 1 book is **$18.**

Qn 2



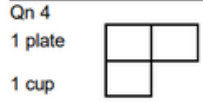
12u + $220 = $292
12u = $72
1u = $72 ÷ 12 = $6
A lamp costs = $44 + $6
= **$50**

Qn 3



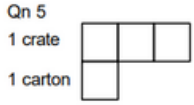
7u + $72 = $170
7u = $98
1u = $98 ÷ 7 = $14
Cost of 1 Bermudas = $14 + $18
= **$32**

Qn 4



6 plates = 6 × 2u = 12
8 cups = 8 × 1u = 8u
20u = $120
1u = $120 ÷ 20
= $6
12 plates cost = 12 × 2 × $6
= **$144**

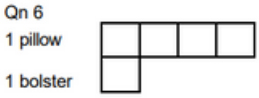
Qn 5



5 cartons = 5u
7 crates = 21u
} 130kg

26u = 130kg
1u = 130kg ÷ 26
= 5kg
Mass of 1 carton = **5 kg**

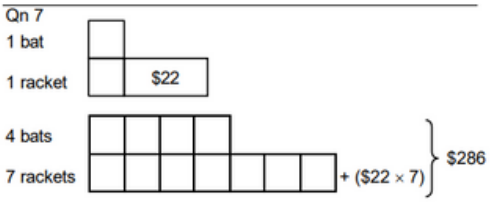
Qn 6



3 pillows = 12u
8 bolsters = 8u
} $360

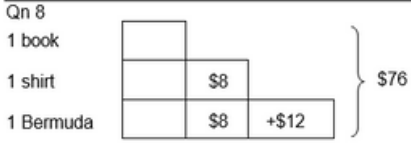
20u = $360
1u = $360 ÷ 20
= $18
Cost of 1 pillow = 4 × $18
= **$72**

Qn 7



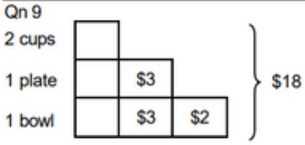
11u + $154 = $286
11u = $132
1u = $132 ÷ 11
= $12
Cost of 1 racket = $12 + $22
= **$34**

Qn 8



3u + $28 = $76
3u = $48
1u = $48 ÷ 3
= $16
1 T-shirt costs = $16 + $8
= **$24**

Qn 9



4u + $8 = $18
4u = $10
1u = $10 ÷ 4
= $2.50
12 cups = 12 × $2.50
= **$30**

Unit 1.14 – Number of Units and Value of Units

Qn 1

	No.	×	Value ($)	=	Total cost
Plates	4u	×	7	=	28u
Cups	1u	×	4	=	4u
					32u

32u = $160
1u = $160 ÷ 32
= 5
Total number of plates = 4u
= 4 × 5
= **20**

Qn 2

	No.	×	Value	=	Total cost
Horses	3u	×	4	=	12u
Chickens	1u	×	2	=	2u
					14u

14u = 168
1u = 168 ÷ 14
= 12
Total number of chickens = 1u
= **12**

Qn 3

	No.	×	Value ($)	=	Total cost
Welders	4u	×	35	=	140u
Painters	1u	×	20	=	20u
					160u

160u = 1280
1u = 1280 ÷ 160
= 8
Total number of welders employed = 4u
= 4 × 8
= **32**

Qn 4

	No.	×	Value	=	Total balloons
Girls	5u	×	5	=	25u
Boys	1u	×	4	=	4u
					29u

29u = 174
1u = 174 ÷ 29
= 6
Number of girls = 5u
= 5 × 6
= **30**

Qn 5

	No.	×	Value ($)	=	Total
Adults	1u	×	8	=	8u
Children	20u	×	5	=	100u
					108u

108u = 432
1u = 432 ÷ 108
= 4
Total number of children = 20u
= 20 × 4
= **80**

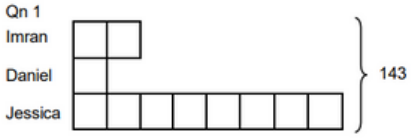
Qn 6

	No.	×	Value (points)	=	Total
Correct Qn	5u	×	3	=	15u
Wrong Qn	1u	×	(–) 2	=	(–) 2u
Difference					13u

13u = 104
1u = 104 ÷ 13
= 8
Number of questions answered correctly
= 5u
= 5 × 8
= **40**

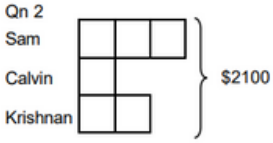
Unit 1.15 – Repeated Identity (Type I)

Qn 1



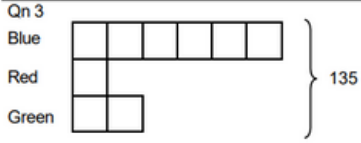
11u = 143
1u = 143 ÷ 11
= 13
Number of stickers Imran has = 2u
= 2 × 13
= **26**

Qn 2



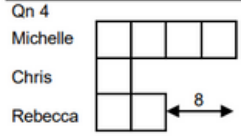
6u = $2100
1u = $2100 ÷ 6
= $350
Amount of money that Sam had = 3u
= 3 × $350
= **$1050**

Qn 3



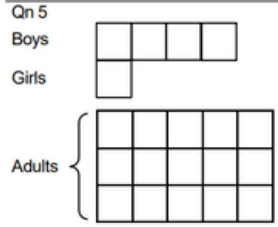
9u = 135
1u = 135 ÷ 9
= 15
Number of red balls in the bag = **15**

Qn 4



2u = 8
1u = 8 ÷ 2
= 4
Total dolls collected = 7u
= 7 × 4
= **28**

Qn 5

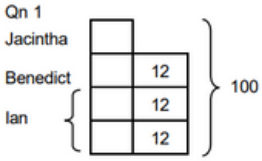


Difference between adults and boys = 11u
11u = 88
1u = 88 ÷ 11 = 8

Total number of people at the fun fair = 20u
= 20 × 8
= **160**

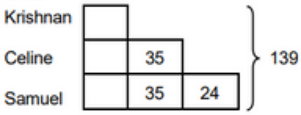
Unit 1.16 – Repeated Identity (Type II)

Qn 1



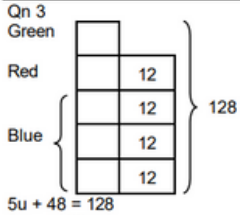
4u + 36 = 100
4u = 64
1u = 64 ÷ 4
= 16
Number of stickers Benedict has = 16 + 12
= **28**

Qn 2



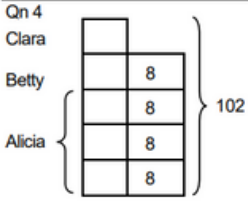
3u + 94 = 139
3u = 45
1u = 45 ÷ 3 = 15
Total number of bottle caps Celine collected = 15 + 35
= **50**

Qn 3



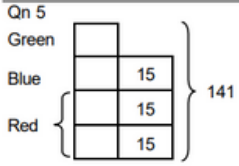
5u + 48 = 128
5u = 80
1u = 80 ÷ 5 = 16
Total number of red balls in the bag = 16 + 12
= **28**

Qn 4



5u + 32 = 102
5u = 70
1u = 70 ÷ 5 = 14
Total number of buttons Betty had = 14 + 8
= **22**

Qn 5



4u + 45 = 141
4u = 96
1u = 96 ÷ 4 = 24
Total green balloons = **24**

Unit 1.17 – Repeated Identity (Type III)

Qn 1

Daniel + Elias = 240
Cindy + Elias = 320
Difference between Cindy and Daniel = 320 – 240
= 80

Cindy	=	3u
Daniel	=	1u
Difference		2u

2u = 80
1u = 80 ÷ 2 = 40
Number of cards Daniel have = 1u = 40
Number of cards Elias have = 240 – 40
= **200**

Qn 2

Difference in students = Difference in girls
Difference: 3u = 420 – 225
= 195
1u = 195 ÷ 3
= 65 (Girls in Campsite A)
Number of boys in Campsite A = 225 – 65
= 160
Total number of boys in both campsites = 160 × 2
= **320**

Qn 3

Difference in red and blue balls = 3u – 1u
= 2u
2u = 320 – 180
= 140
1u = 140 ÷ 2 = 70
Number of green balls in a bag = 180 – 70 = 110
Total number of green balls in both bags = 110 × 2
= **220**

Qn 4

John + Benedict = 124
Henry + Benedict = 284
Difference between John and Henry = 284 – 124
=160

Henry	=	5u
John	=	1u
Difference		4u

4u = 160
1u = 160 ÷ 4 = 40
Number of cards John has = 1u = 40
Number of cards Benedict has = 124 – 40
= **84**

Qn 5

Serene + Tommy = 130
Tommy + Clara = 141
Serene + Clara = 99

Twice of (Serene + Tommy + Clara) = 370
Serene + Tommy + Clara = 370 ÷ 2
= 185
Serene = 185 – 141
= **44**

Chapter 2 Fraction

Unit 2.1 – Addition & Subtraction of Fractions (Type I)

Qn 1

(a) $1 - \frac{5}{12} - \frac{1}{12} = \frac{6}{12}$

$= \frac{1}{2}$

He gave $\frac{1}{2}$ of his sweets in all.

(b) $1 - \frac{1}{2} = \frac{1}{2}$

He had $\frac{1}{2}$ of his sweets left.

Qn 2

$1 - \frac{3}{11} - \frac{4}{11} = \frac{4}{11}$

$\frac{4}{11}$ pole = 20cm

(a) $\frac{4}{11}$ of the pole was painted green.

$\frac{1}{11}$ pole = 20cm ÷ 4

= 5cm

(b) Length of the pole = 11 × 5cm

= **55 cm**

Qn 3

(a) $1 - \frac{2}{9} - \frac{4}{9} = \frac{3}{9}$

$= \frac{1}{3}$

$\frac{1}{3}$ of the class likes soccer.

(b) Total students in the class = 3 × 12

= **36**

Qn 4

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

(a) She did not spend $\frac{3}{7}$ of her money.

$\frac{3}{7}$ total = $27

$\frac{1}{7}$ total = $27 ÷ 3

= $9

(b) Total at first = 7 × $9

= **$63**

Qn 5

$1 - \frac{4}{13} - \frac{3}{13} = \frac{6}{13}$

(a) She had $\frac{6}{13}$ of her money left.

$\frac{6}{13}$ total = $24

$\frac{1}{13}$ total = $24 ÷ 6

= $4

(b) Total at first = 13 × $4

= **$52**

Qn 6

$\frac{7}{12} - \frac{5}{12} = \frac{2}{12}$

$= \frac{1}{6}$

$\frac{1}{6}$ ribbon = 24 cm

Total at first = 6 × 24 cm

= **144 cm**

Unit 2.2 – Addition & Subtraction of Fractions (Type II)

Qn 1

$\frac{1}{3} + \frac{1}{8} = \frac{8}{24} + \frac{3}{24}$

$= \frac{11}{24}$

He spent $\frac{11}{24}$ of his money.

Qn 2

$1 - \frac{2}{5} - \frac{2}{7} = 1 - \frac{14}{35} - \frac{10}{35}$

$= \frac{11}{35}$

She had $\frac{11}{35}$ of her salary left.

Qn 3

$1 - \frac{1}{6} - \frac{1}{4} = 1 - \frac{2}{12} - \frac{3}{12}$

$= \frac{7}{12}$

$\frac{7}{12}$ total = 35 pies

$\frac{1}{12}$ total = 35 pies ÷ 7

= 5 pies

Total at first = 12 × 5 pies

= **60 pies**

Qn 4

$1 - \frac{1}{4} - \frac{3}{8} = 1 - \frac{2}{8} - \frac{3}{8}$

$= \frac{3}{8}$

$\frac{3}{8}$ total = 90 cm

$\frac{1}{8}$ total = 90 cm ÷ 3

= 30 cm

Original length = 8 × 30 cm

= **240 cm**

Qn 5

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

$= \frac{7}{20}$

$\frac{7}{20}$ total = 1400 m

$\frac{1}{20}$ total = 1400 m ÷ 7

= 200 m

Entire track = 20 × 200 m

= **4000 m**

Qn 6

$1 - \frac{1}{3} - \frac{3}{7} = 1 - \frac{7}{21} - \frac{9}{21}$

$= \frac{5}{21}$

$\frac{5}{21}$ total = 145

$\frac{1}{21}$ total = 145 ÷ 5

= 29

Total apples at first = 21 × 29

= **609**

Unit 2.3 – Addition & Subtraction of Fractions (Type III)

Qn 1

Difference in mass $= \frac{1}{2}\text{ kg} - \frac{1}{3}\text{ kg}$

$= \frac{3}{6}\text{ kg} - \frac{2}{6}\text{ kg}$

$= \mathbf{\frac{1}{6}\text{ kg}}$

Qn 2

Weight of pencil box $= \frac{8}{9}\text{ kg} - \frac{2}{3}\text{ kg}$

$= \frac{8}{9}\text{ kg} - \frac{6}{9}\text{ kg}$

$= \frac{2}{9}\text{ kg}$

Difference in mass $= \frac{2}{3}\text{ kg} - \frac{2}{9}\text{ kg}$

$= \frac{6}{9}\text{ kg} - \frac{2}{9}\text{ kg}$

$= \mathbf{\frac{4}{9}\text{ kg}}$

Qn 3

Difference $= \frac{1}{3} - \frac{1}{5}$

$= \frac{5}{15} - \frac{3}{15}$

$= \frac{2}{15}$

$\frac{2}{15}$ cake $= 200\text{ g}$

$\frac{1}{15}$ cake $= 200\text{ g} \div 2$

$= 100\text{ g}$

Total cake $= 15 \times 100\text{ g}$

$= \mathbf{1500\text{ g}}$

Qn 4

Mass of cup $= \frac{2}{3}\text{ kg} - \frac{2}{5}\text{ kg}$

$= \frac{10}{15}\text{ kg} - \frac{6}{15}\text{ kg}$

$= \frac{4}{15}\text{ kg}$

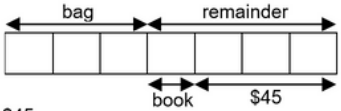
Difference in mass $= \frac{2}{5}\text{ kg} - \frac{4}{15}\text{ kg}$

$= \frac{6}{15}\text{ kg} - \frac{4}{15}\text{ kg}$

$= \mathbf{\frac{2}{15}\text{ kg}}$

Unit 2.4 – Part-Whole Relationship (Type I)

Qn 1



3u = $45

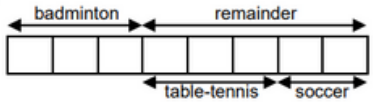
1u = $45 ÷ 2 = $15

Total amount of money at first = 7u

= 7 × $15

= **$105**

Qn 2



Difference between badminton and soccer = 1u

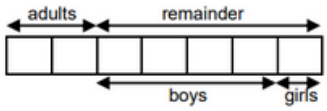
= 6

Total in class = 8u

= 8 × 6

= **48**

Qn 3



Difference between adults and girls = 1u

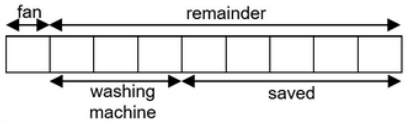
= 80

Total at the party = 7u

= 7 × 80

= **560**

Qn 4



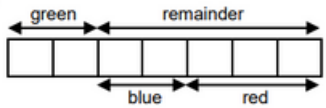
5u = $1250

1u = $1250 ÷ 2

= $250

Total spent on fan = **$250**

Qn 5



Difference between red and green = 1u

= 12

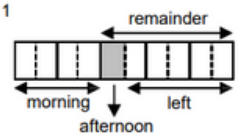
Total in the bag = 7u

= 7 × 12

= **84**

Unit 2.5 – Part-Whole Relationship (Type II)

Qn 1



5u = 250

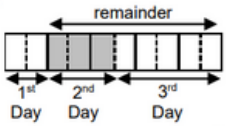
1u = 250 ÷ 5 = 50

Total = 10u

= 10 × 50

= **500**

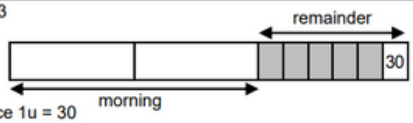
Qn 2



Difference between the 1st and 3rd day = 3u
= 48

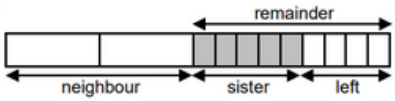
1u = 48 ÷ 3 = 16
Total pages of book = 10u
= 10 × 16
= **160**

Qn 3



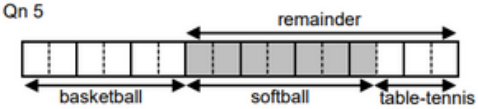
Since 1u = 30
Remainder = 6u
= 6 × 30
= 180
Total at first = 3 × 180
= **540**

Qn 4



4u = 80
1u = 80 ÷ 4 = 20
Total = 15u
= 15 × 20
= **300**

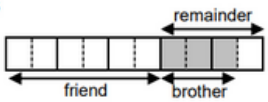
Qn 5



Difference between basketball and table tennis = 3u
= 9

1u = 9 ÷ 3 = 3
Total in the class = 16u
= 16 × 3
= **48**

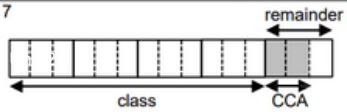
Qn 6



Difference between friend and brother = 3u
= 15

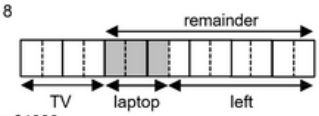
1u = 15 ÷ 3 = 5
Total cookies she baked at first = 10u
= 10 × 5
= **50**

Qn 7



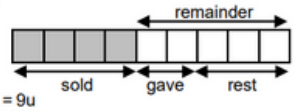
1u = 30
Total = 15u
= 15 × 30
= **450**

Qn 8



7u = $1330
1u = $1330 ÷ 7
= $190
Total = 14u
= 14 × $190
= **$2660**

Qn 9

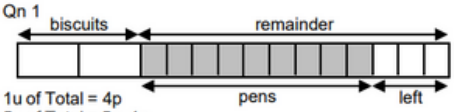


Total = 9u
9u = 360
1u = 360 ÷ 9
= 40
Rest = 3u
= 3 × 40
= 120
Number of boxes = 120 ÷ 30
= **4**

Unit 2.6 – Part-Whole Relationship (Type III)

Note: u represents units and p represent parts.

Qn 1



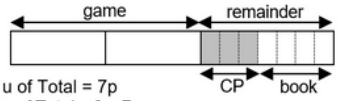
1u of Total = 4p
5u of Total = 5 × 4p
= 20p

(a) He spent $\frac{9}{20}$ of his money on pens.

Money left = 12p – 9p
= 3p
3p = $6
1p = $6 ÷ 3 = $2
20p = 20 × $2
= $40

(b) Max had **$40** at first.

Qn 2



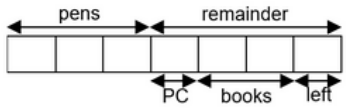
1u of Total = 7p
3u of Total = 3 × 7p
= 21p

(a) She spent $\frac{4}{21}$ of her money on the book.

4p = 24
1p = $24 ÷ 4 = $6
21p = 21 × $6
= $126

(b) Daphne had **$126** at first.

Qn 3

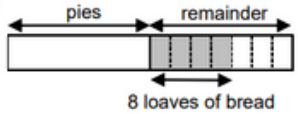


(a) Fraction of money left = $\frac{1}{7}$

1u = $12
7u = 7 × $12
= $84

(b) Serene had **$84** at first.

Qn 4

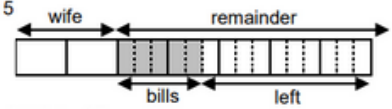


1u of Total = 7p
2u of Total = 14p

4p = 8 loaves of bread
1p = 2 loaves of bread
7p = 14 loaves of bread

1 loaf of bread = 3 pies
14 loaves of bread = 42 pies
Esther bought **42 pies**.

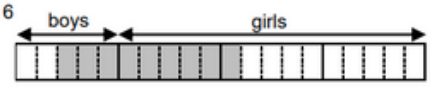
Qn 5



5u of Total = 15p
1u of Total = 3p
7u of Total = 21p

10p = $2200
1p = $2200 ÷ 10
= $220
21p = 21 × $220
= $4620
Mr Imran's salary was **$4620.**

Qn 6



6u of Girls and 3u of boys did not know how to swim.
Swimmers = 20u – 9u = 11u
11u = 154
1u = 154 ÷ 11
= 14
20u = 20 × 14
= 280
There were **280 students** altogether at the event.

Unit 2.7 – Comparison of Different Quantities

Qn 1

1 box = 3u
1 crate = 5u

2 boxes = 6u
4 crates = 20u
} 130kg

Total mass = 26u
26u = 130 kg
1u = 130 kg ÷ 26
= 5 kg
Mass of 1 box of onions = 3u
= 3 × 5 kg
= **15 kg**

Qn 2

1 wire = 1u
1 ribbon = 3u

6 wires = 6u
3 ribbons = 9u
} 300 cm

Total = 15u
15u = 300 cm
1u = 300 cm ÷ 15
= 20 cm
Length of a wire = **20 cm**

Qn 3

1 girl = 1u
1 boy = 4u

8 girls = 8u
6 boys = 24u
} 256

Total = 32u
32u = 256
1u = 256 ÷ 32
= 8
No. of sweets received by each girl = **8**

Qn 4

1 radio = 3u
1 computer = 5u

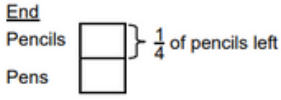
7 radios = 21u
4 computers = 20u
} $3280

Total = 41u
41u = $3280
1u = $3280 ÷ 41
= $80
Cost of computer = 5u
= 5 × $80
= **$400**

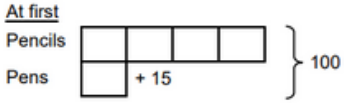
Unit 2.8 – Equal Stage (Type I)

Qn 1

<u>End</u>

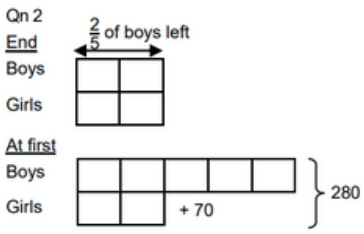


<u>At first</u>



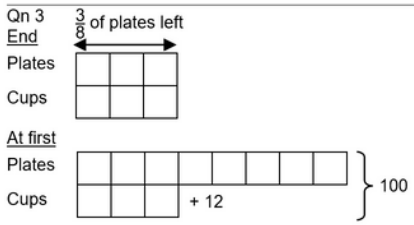
5u + 15 = 100
5u = 85
1u = 85 ÷ 5 = 17
Total pens at first = 17 + 15
= **32**

Qn 2



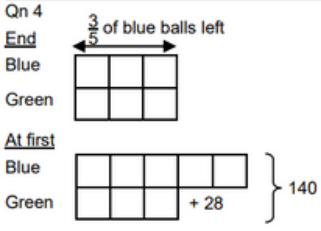
$7u + 70 = 280$
$7u = 210$
$1u = 210 \div 7 = 30$
Total boys at first $= 5u$
$= 5 \times 30$
$= \mathbf{150}$

Qn 3



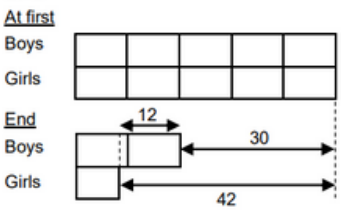
$11u + 12 = 100$
$11u = 88$
$1u = 88 \div 11 = 8$
Total cups at shop at first $= 3u + 12$
$= 3 \times 8 + 12$
$= \mathbf{36}$

Qn 4



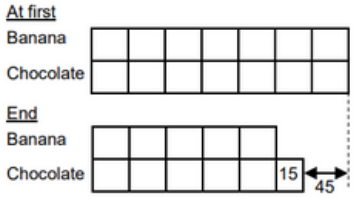
$8u + 28 = 140$
$8u = 112$
$1u = 112 \div 8$
$= 14$
Total blue balls at first $= 5u$
$= 5 \times 14$
$= \mathbf{70}$

Qn 5



$3u = 42 - 12$
$= 30$
$1u = 30 \div 3 = 10$
Total number of students at first $= 10u$
$= 10 \times 10$
$= \mathbf{100}$

Qn 6



$2u = 45 + 15$
$= 60$
$1u = 60 \div 2$
$= 30$
Total number of muffins at first $= 14u$
$= 14 \times 30$
$= \mathbf{420}$

Unit 2.9 – Equal Stage (Type II)

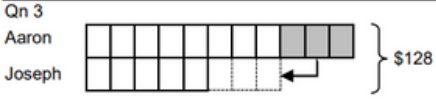
Qn 1

$10u = 280$
$1u = 280 \div 10 = 28$
Number of sweets Gerald must give Daniel $= 2u$
$= 2 \times 28$
$= \mathbf{56}$

Qn 2

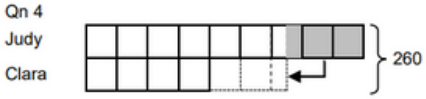
$8u = 112$
$1u = 112 \div 8 = 14$
Number of cookies Mrs Krishnan must give Mrs Tan
$= 3u$
$= 3 \times 14$
$= \mathbf{42}$

Qn 3



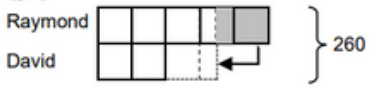
$16u = \$128$
$1u = \$128 \div 16 = \$8$
Aaron must give to Joseph $= 3u$
$= 3 \times \$8$
$= \mathbf{\$24}$

Qn 4



$13u = 260$
$1u = 260 \div 13$
$= 20$
Number of pebbles Judy must give to Clara $= 2\frac{1}{2}u$
$= 2\frac{1}{2} \times 20$
$= \frac{5}{2} \times 20$
$= \mathbf{50}$

Qn 5



7u = 280
1u = 280 ÷ 7
= 40
Number of books Raymond must give David = $1\frac{1}{2}$ u
$= 1\frac{1}{2} \times 40$
$= \frac{3}{2} \times 40$
= **60**

Unit 2.10 – Equal Stage (Type III)

Qn 1
$\frac{3}{4}$ of Chelsia = $\frac{2}{3}$ of Benson
$\frac{6}{8}$ of Chelsia = $\frac{6}{9}$ of Benson
Chelsia = 8u
Benson = 9u
Difference = 1u
= $18
Total sum of Chelsia + Benson = 17u
= 17 × $18
= **$306**

Qn 2
$\frac{4}{7}$ of girls = $\frac{2}{3}$ of boys
$\frac{4}{7}$ of girls = $\frac{4}{6}$ of boys
Girls = 7u
Boys = 6u
Total = 13u
= 78
1u = 78 ÷ 13
= 6
Total girls = 7u
= 7 × 6
= **42**

Qn 3
$\frac{3}{5}$ of pencils = $\frac{2}{5}$ of pens
$\frac{6}{10}$ of pencils = $\frac{6}{15}$ of pens
Pencils = 10u
Pens = 15u
Total = 10u + 15u
= 25u
25u = 75
1u = 75 ÷ 25
= 3
Pencils = 10u
= 10 × 3
= **30**

Qn 4
$\frac{3}{4}$ of men = $\frac{1}{7}$ of women
$\frac{3}{4}$ of men = $\frac{3}{21}$ of women
Men = 4u
Women = 21u
Total = 4u + 21u
= 25u
25u = 225
1u = 225 ÷ 25
= 9
Total men = 4u
= 4 × 9
= **36**

Qn 5
$\frac{3}{4}$ of boys = $\frac{2}{3}$ of girls
$\frac{6}{8}$ of boys = $\frac{6}{9}$ of girls
Boys = 8u
Girls = 9u
Total = 8u + 9u
= 17u
17u = 510
1u = 510 ÷ 17
= 30
Difference between boys and girls = 1u
= **30**

Qn 6
$\frac{2}{5}$ of blue = $\frac{3}{5}$ of red
$\frac{6}{15}$ of blue = $\frac{6}{10}$ of red
Blue = 15u
Red = 10u
Total = 15u + 10u
= 25u
25u = 125
1u = 125 ÷ 25
= 5
Difference between blue and red = 5u
= 5 × 5
= **25**

Qn 7
$\frac{3}{4}$ of english = $\frac{2}{7}$ of chinese
$\frac{6}{8}$ of english = $\frac{6}{21}$ of chinese
English = 8u
Chinese = 21u
Total = 8u + 21u
= 29u
29u = 435
1u = 435 ÷ 29
= 15
English total = 8u
= 8 × 15
= **120**

Qn 8

$\frac{3}{8}$ of oranges = $\frac{2}{5}$ of apples

$\frac{6}{16}$ of oranges = $\frac{6}{15}$ of apples

Oranges = 16u
Apples = 15u
Total = 16u + 15u
= 31u
31u = 620
1u = 620 ÷ 31
= 20
Apples = 15u
= 15 × 20
= **300**

Qn 9

$\frac{1}{4}$ of Esther = $\frac{3}{7}$ of Kevin

$\frac{3}{12}$ of Esther = $\frac{3}{7}$ of Kevin

Esther = 12u
Kevin = 7u
Difference = 5u
5u = $350
1u = $350 ÷ 5
= $70
Kevin = 7u
= 7 × $70
= **$490**

Qn 10

$\frac{2}{5}$ of boys = $\frac{3}{8}$ of girls

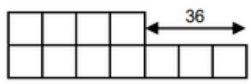
$\frac{6}{15}$ of boys = $\frac{6}{16}$ of girls

Boys = 15u
Girls = 16u
Difference = 1u
= 30
Boys at first = 15u
= 15 × 30
= **450**

Unit 2.11 – External Unchanged (Type I)

Qn 1

<u>At first</u>



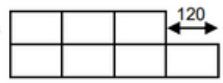
3u = 36
1u = 36 ÷ 3
= 12
Number of square-shaped cookies = 4u
= 4 × 12
= 48
Number of oval-shaped cookies = 7u
= 7 × 12
= 84

<u>End</u>

Oval = 3u
Square = 1u
Since oval-shaped cookies remained the same; 3u = 84
1u = 84 ÷ 3
= 28
Number of square-shaped cookies in the end = 1u
= 28
Number of square-shaped cookies removed = 48 – 28
= **20**

Qn 2

<u>At first</u>



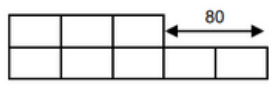
1u = 120
Number of chickens = 3u
= 3 × 120
= 360
Number of ducks = 4u
= 4 × 120
= 480

<u>End</u>

Ducks = 4u
Chickens = 1u
Since the number of ducks remained the same; 4u = 480
1u = 480 ÷ 4
= 120
Number of chickens in the end = 1u
= 120
Number of chickens sold = 360 – 120
= **240**

Qn 3

<u>At first</u>



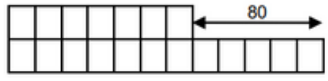
2u = 80
1u = 80 ÷ 2
= 40
Number of plates = 3u
= 3 × 40
= 120
Number of cups = 5u
= 5 × 40
= 200

<u>End</u>

Plates = 2u
Cups = 1u
Since the number of plates remained the same; 2u = 120
1u = 120 ÷ 2 = 60
Number of cups in the end = 1u
= 60
Number of cups sold = 200 – 60
= **140**

Qn 4

<u>At first</u>



5u = 80
1u = 80 ÷ 5
= 16
Men = 7 × 16
= 112
Women = 12 × 16
= 192

<u>End</u>

Men = 1u
Women = 3u
Since women remain the same, 3u = 192
1u = 192 ÷ 3
= 64
Number of men who left halfway = 112 – 64
= **48**

Unit 2.12 – External Unchanged (Type II)

Qn 1

At first		End	
Orange	= 3u	Orange	= 1u × 3 = 3u
Water	= 7u	Water	= 4u × 3 = 12u

Increase in water used = 12u – 7u
= 5u

5u = 1100 mℓ
1u = 1100 mℓ ÷ 5
= 220 mℓ
Amount of syrup used = 3u
= 3 × 220 mℓ
= **660 mℓ**

Qn 2

At first		End	
Children	= 3u × 4 = 12u	Children	= 4u × 3 = 12u
Adults	= 4u × 4 = 16u	Adults	= 5u × 3 = 15u

Decrease in adults = 16u – 15u
= 1u

1u = 2
Number of children in the bus = 12u
= 12 × 2
= **24**

Qn 3

At first		End	
Boys	= 4u × 3 = 12u	Boys	= 3u × 4 = 12u
Girls	= 3u × 3 = 9u	Girls	= 5u × 4 = 20u

Increase in girls = 20u – 9u
= 11u

11u = 22
1u = 22 ÷ 11
= 2
Number of students in the end = 32u
= 32 × 2
= **64**

Qn 4

At first		End (conditional)	
Oranges	= 1u × 3 = 3u	Oranges	= 3u
Pears	= 2u × 3 = 6u	Pears	= 2u

Decrease in pears = 6u – 2u
= 4u

4u = 20
1u = 20 ÷ 4
= 5
Total = 3u + 6u
= 9u
= 9 × 5
= **45**

Qn 5

At first		End	
Red	= 1u × 5 = 5u	Red	= 3u × 4 = 12u
Blue	= 3u × 3 = 9u	Blue	= 5u × 4 = 20u

Increase in red = 6u – 5u
= 1u

1u = 12
Total = 5u + 15u
= 20u
= 20 × 12
= **240**

Unit 2.13 – Repeated Identity

Qn 1

Banana	= 1u × 2	Banana	= 2u	15u
Chocolate	= 5u × 2	Chocolate	= 10u	
Banana	= 2u	Blueberry	= 3u	
Blueberry	= 3u			

15u = 120
1u = 120 ÷ 15
= 8
Total number of bananas = 2u
= 2 × 8
= **16**

Qn 2

Serene	= 4u × 4	Serene	= 16u	79u
Melvin	= 7u × 4	Melvin	= 28u	
Melvin	= 4u × 7	Esther	= 35u	
Esther	= 5u × 7			

Difference between Serene and Esther = 35u – 16u
= 19u

19u = 38
1u = 38 ÷ 19
= 2
Total number of chocolates = 79u
= 79 × 2
= **158**

Qn 3

Boys	= 1u × 5	Boys	= 5u	28u
Girls	= 3u × 5	Girls	= 15u	
Adults	= 2u × 4	Adults	= 8u	
Children	= 5u × 4			

Difference between adults and boys = 8u – 5u
= 3u

3u = 24
1u = 24 ÷ 3
= 8
Total number of people = 28u
= 28 × 8
= **224**

Qn 4

Red	= 3u × 3	Red	= 9u	34u
Blue	= 5u × 3	Blue	= 15u	
Green	= 2u × 5	Green	= 10u	
Blue	= 3u × 5			

Difference between green and red balls = 10u – 9u
= 1u

1u = 8
Total number of balls = 34u
= 34 × 8
= **272**

Chapter 3 Angles

Unit 3.1 – Naming Angles

Qn 1

∠ABC ∠BCD

Qn 2

∠TUW ∠WXY

Qn 3

∠ACB ∠CDE

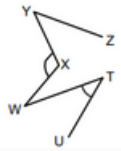
Qn 4

∠AEC ∠BDC

Qn 5

(a) ∠WXY

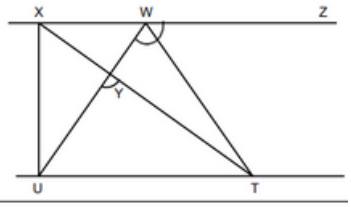
(b) ∠UTW



Qn 6

(a) ∠UYT

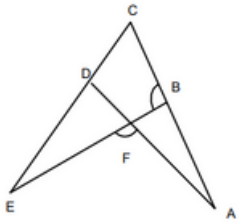
(b) ∠UWZ



Qn 7

(a) ∠AFE

(b) ∠EBC



Unit 3.2 – Measuring Angles

Qn 1

(a) ∠a = *27°* (b) ∠a = *130°*

(c) ∠a = *87°* (d) ∠a = *57°*

(e) ∠ABC = *140°* (f) ∠XYZ = *102°*

Qn 2

∠ABD = *49°* ∠CBD = *131°* ∠ABD + ∠CBD = *180°*

Qn 3

∠EFH = *71°* ∠GFH = *109°* ∠EFH + ∠GFH = *180°*

Qn 4

∠EFH = *73°* ∠EFJ = *107°* ∠EFH + ∠EFJ = *180°*

Qn 5

(a) ∠DCE = *52°* ∠ECB = *38°*
∠DCE + ∠ECB = *90°*

(b) ∠DCE = *34°* ∠ECB = *56°*
∠DCE + ∠ECB = *90°*

(c) ∠DCA = *30°* ∠ACB = *60°*
∠DCA + ∠ACB = *90°*

Qn 6

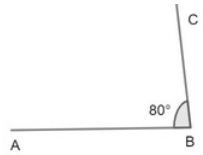
∠w = *80°* ∠x = *140°* ∠y = 26° ∠z = 68°

Qn 7

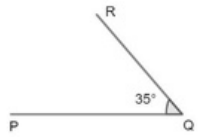
∠a = *317°* ∠b = *128°* ∠c = 130° ∠d = 67°

Unit 3.3 – Constructing Angles

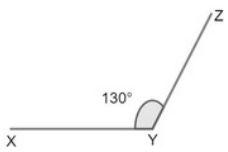
Qn 1



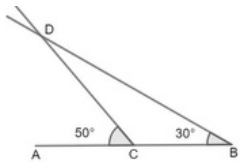
Qn 2



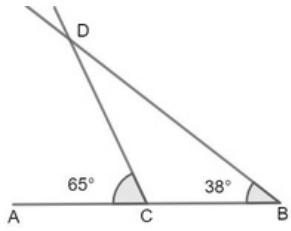
Qn 3



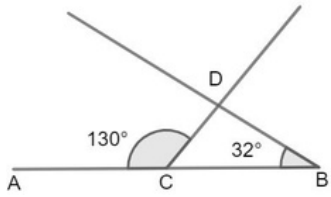
Qn 4



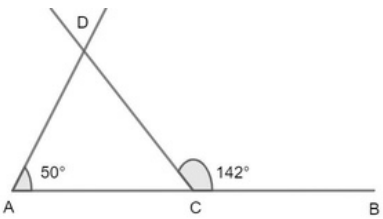
Qn 5



Qn 6



Qn 7



Unit 3.4 – Fraction of Right Angles

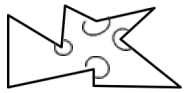
Qn 1

(a) $\frac{1}{2}$ - turn = *180°* (b) $\frac{1}{4}$ - turn = *90°*

(c) $1\frac{3}{4}$ - turn = *270°* (d) 2 - turns = *720°*

Qn 2

There are 4 angles.

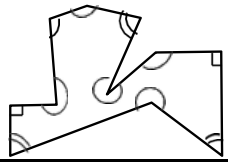


Qn 3

(a)2

(b)6

(c)3



Qn 4

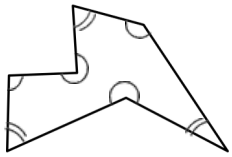
(a)0

(b)4

(c)3

(d)2

(e)2



Qn 5

(a)2

Chapter 4 Decimals

Unit 4.1 – Identifying Decimal Places

Qn 1

(a) tenths (b) hundredths

(c)thousandths (d) ones

(e) hundredths (f) thousandths

(g) tenths (h) thousandths

Qn 2

(a) 0.007 / 7 thousandths (b) 0.04 / 4 hundredths

(c)0.3 / 3 tenths (d) 0.006 / 6 thousandths

Qn 3

(a) 5 + 0.6 + 0.03 + 0.004 = 5.634

(b) 120 + 0.6 + 0.04 = 120.64

(c) 1.2 + 0.012 = 1.212

(d) 2.5 + 0.05 + 0.012 = 2.562

(e) 4.0 + 0.12 + 0.005 = 4.125

(f) 210 + 1.2 + 0.42 = 211.62

(g) 420 + 1.7 + 0.054 = 421.754

(h) 42 + 2.8 + 0.12 = 44.92

(i) 72 + 0.13 + 0.002 = 72.132

(j) 1.29 + 0.024 = 1.314

Unit 4.2 – Comparing and Ordering Decimals

Qn 1 0.65 Qn 2 95.59 Qn 3 45.327

Qn 4 29.102 Qn 5 12.124 Qn 6 124.05

Qn 7 13.405 Qn 8 0.25, 0.254, 0.42

Qn 9 0.304, 0.340, 0.403

Qn 10 0.571, 0.715, 0.751

Qn 11 12.415, 12.421, 12.541

Qn 12 26.721, 27.261, 27.621

Qn 13 16.457, 16.475, 16.754

Qn 14 81.542, 105.524, 108.452

Unit 4.3.1 – Converting Fractions into Decimals (Tenths)

Qn 1 0.6 Qn 2 0.8 Qn 3 1.7 Qn 4 2.1

Qn 5 5.2 Qn 6 6.0 Qn 7 0.2 Qn 8 0.5

Qn 9 1.3 Qn 10 1.7 Qn 11 1.8 Qn 12 2.6

Unit 4.3.2 – Converting Fractions into Decimals (Hundredths)

Qn 1 0.06 Qn 2 0.25 Qn 3 0.40 Qn 4 1.24

Qn 5 0.28 Qn 6 0.35 Qn 7 1.04 Qn 8 3.02

Qn 9 5.2 Qn 10 4.25 Qn 11 0.75 Qn 12 0.48

Qn 13 1.68 Qn 14 3.4 Qn 15 1.34 Qn 16 2.48

Unit 4.3.3 – Converting Fractions into Decimals (Thousandths)

Qn 1 0.006 Qn 2 0.008 Qn 3 0.042

Qn 4 0.035 Qn 5 0.482 Qn 6 0.125

Qn 7 1.234 Qn 8 4.256 Qn 9 0.006

Qn 10 0.012 Qn 11 0.035 Qn 12 0.324

Qn 13 0.525 Qn 14 4.256 Qn 15 2.032

Qn 16 6.25 Qn 17 2.75 Qn 18 5.375

Qn 19 6.625 Qn 20 5.192

Unit 4.4 – Rounding

Qn 1 34 Qn 2 9 Qn 3 2 Qn 4 12

Qn 5 13 Qn 6 34 Qn 7 24.5 Qn 8 84.1

Qn 9 22.0 Qn10 15.3 Qn11 9.9 Qn12 5.5

Qn 13 37.82 Qn14 15.05 Qn15 5.21 Qn 16 31.35

Unit 4.5 – Converting Decimals into Fractions

Qn 1 $\frac{96}{100} = \frac{24}{25}$ Qn 2 $\frac{43}{50}$

Qn 3 $12\frac{16}{10} = 12\frac{3}{5}$ Qn 4 $42\frac{41}{50}$

Qn 5 $3\frac{1}{4}$ Qn 6 $8\frac{4}{25}$

Qn 7 $37\frac{101}{125}$ Qn 8 $112\frac{173}{500}$

Qn 9 $2\frac{12}{25}$ Qn 10 $134\frac{9}{20}$

Qn 11 $1\frac{21}{25}$ Qn 12 $45\frac{4}{5}$

Qn 13 $4\frac{9}{20}$ Qn 14 $4\frac{6}{25}$

Unit 4.6 – Addition and Subtraction of Decimals

Qn 1 12 + 0.25 + 0.04 = 12.29

Qn 2 26 + 0.8 + 0.32 = 27.12

Qn 3 8 + 0.2 + 0.52 = 8.72

Qn 4 2 + 0.4 + 0.24 = 2.64

Qn 5 0.9 + 84.9 = 85.8 Qn 6 0.24 + 24.5 = 24.74

Qn 7 146.85 Qn 8 237.97

Qn 9 95.31 Qn 10 173.9

Qn 11 63.2 – 1.2 = 62 Qn 12 12.8 – 0.31 = 12.49

Qn 13 56.86 Qn 14 74.28

Qn 15 36.54 Qn 16 15.2

Qn 17

Amount of change received = \$50.00 - \$18.30 - \$7.80
= \$23.90

Qn 18

Amount short of = \$85 - \$23.50 - \$30.20 - \$21.80
= \$9.50

Qn 19

Amount left = \$20 - \$4.50 - \$3.20 - \$2.70
= \$9.60

Unit 4.7 – Multiplication of Decimals

Qn 1 Amount received = 8 × \$345.50
= \$2764

Qn 2 Cost of parcel = 3 × \$1.26
= \$3.78

Qn 3 Amount paid = 9 × \$54.20
= **\$487.80**

Qn 4 Total length of cloth = 8 × 26.42m
= **211.36 m**

Qn 5 Amount of water stored = 7 × 1.25 ℓ
= **8.75 ℓ**

Qn 6 Changed received = \$100 – \$8.40 × 8
= **\$32.80**

Qn 7 Cost of bag = 4 × \$18.40
= \$73.60
Total cost = \$73.60 + \$18.40
= **\$92**

Qn 8 8 cups cost = 8 × \$2.30
= \$18.40
5 plates cost = \$4.50 × 5
= \$22.50
Total cost = \$18.40 + \$22.50
= **\$40.90**

Unit 4.8 – Division of Decimals

Qn 1 1.6 Qn 2 1.5 Qn 3 6.25 Qn 4 2.5

$$5\overline{)8.0}\quad 4\overline{)6.0}\quad 4\overline{)25.00}\quad 8\overline{)20.0}$$

Qn 5 Amount paid daily = \$196 ÷ 8
= **\$24.50**

Qn 6 Cost of each pen = \$42 ÷ 8
= **\$5.25**

Qn 7 Mass of each packet = 145.2 kg ÷ 6
= **24.2 kg**

Qn 8 2 magazines = 2 × \$4.50
= \$9
\$9 + \$6.20 = \$15.20
6 pens = \$50 − \$15.20
= \$34.80
1 pen = \$34.80 ÷ 6
= **\$5.80**

Qn 9

3 calculators = 3 × \$15.50
= \$46.50
\$46.50 + \$4.50 = \$51
5 towels = \$100 − \$51
= \$49
1 towel = \$49 ÷ 5
= **\$9.80**

Unit 4.9 – Number Patterns on Decimals

Qn 1

No.	Number	+10	+100	+1 000	×10	×100	×1 000
Eg	3.2	0.32	0.032	0.0032	32	320	3200
1	3.26	0.326	0.0326	0.00326	32.6	326	3260
2	23.45	2.345	0.2345	0.02345	234.5	2345	23450
3	0.34	0.034	0.0034	0.00034	3.4	34	340
4	2.012	0.2012	0.02012	0.002012	20.12	201.2	2012
5	63.4	6.34	0.634	0.0634	634	6340	63400

Qn 2

(a) 2.3, 2.8 (b) 3.1, 3.9

(c) 14.04, 14.08 (d) 5.5, 6.1

(e) 6.20, 6.30 (f) 8.30, 8.55

(g) 4.29, 4.47

Qn 3

(a) 1.41, 1.45 (b) 2.65, 2.05

(c) 3.31, 3.41 (d) 14.5, 13.3

(e) 3.30, 3.45 (f) 13.8, 9.3

(g) 2.64, 4.14

Chapter 5 Area and Perimeter

Unit 5.1 – Finding Area and Perimeter with Given Sides

Qn 1

(a) Area = 7 cm × 3 cm
= 21 cm²
Perimeter = (7 cm + 3 cm) × 2
= 20 cm

(b) Area = 13 cm × 4 cm
= 52 cm²
Perimeter = (13 cm + 4 cm) × 2
= 34 cm

(c) Area = 18 cm × 12 cm
= 216 cm²
Perimeter = (18 cm + 12 cm) × 2
= 30 cm × 2
= 60 cm

Qn 2

(a) Area = 7 cm × 7 cm
= 49 cm²
Perimeter = 7 cm × 4
= 28 cm

(b) Area = 15 cm × 15 cm
= 225 cm²
Perimeter = 15 cm × 4
= 60 cm

(c) Area = 13 cm × 13 cm
= 169 cm²
Perimeter = 13 cm × 4
= 52 cm

Unit 5.2 – Finding Sides with Given Area or Perimeter

Qn 1

(a) Breadth = 72 cm² ÷ 9 cm
= 8 cm
Perimeter = (9 cm + 8 cm) × 2
= 34 cm

(b) Breadth = 150 cm² ÷ 15 cm
= 10 cm
Perimeter = (15 cm + 10 cm) × 2
= 50 cm

(c) Length = 84 cm² ÷ 4 cm
= 21 cm
Perimeter = (21 cm + 4 cm) × 2
= 50 cm

(d) Length = 150 cm² ÷ 10 cm
= 15 cm
Perimeter = (15 cm + 10 cm) × 2
= 50 cm

Qn 2

(a) Length = 3 cm
Perimeter = 3 cm × 4
= 12 cm

(b) Length= 8 cm
Perimeter = 8 cm × 4
= 32 cm

(c) Length = 6 cm
Perimeter = 6 cm × 4
= 24 cm

(d) Length = 5 cm
Perimeter = 5 cm × 4
= 20 cm

Qn 3

(a) Length = 24 cm ÷ 4
= 6 cm
Area = 6 cm × 6 cm
= 36 cm²

(b) Length = 44 cm ÷ 4
= 11 cm
Area = 11 cm × 11 cm
= 121 cm²

(c) Length = 64 cm ÷ 4
= 16 cm
Area = 16 cm × 16 cm
= 256 ccm²

(d) Length = 56 cm ÷ 4
= 14 cm
Area = 14 cm × 14 cm
= 196 cm²

Unit 5.3 –Area and Perimeter of Composite Figure (Basic)

Qn 1

20 – 8 = 12
12 ÷ 2 = 6
16 – 6 = 10
10 ÷ 2 = 5
Area A = 16 cm × 6 cm
= 96 cm²
Area B = 10 cm × 6 cm
= 60 cm²
Area C = 8 cm × 5 cm
= 40 cm²
Total Area = 96 cm² + 60 cm² + 40 cm²
= **196 cm²**
Total Perimeter = (16cm + 20cm) × 2
= **72 cm**

Qn 2

Area A = 22 cm × 4 cm
= 88 cm²

Area B = 8 cm × 8 cm
= 64 cm²
Area C = 8 cm × 4 cm
= 32 cm²
Total Area = 88 cm² + 64 cm² + 32 cm²
= **184 cm²**
Total Perimeter = (22 cm + 4 cm + 16 cm) × 2
= **84 cm**

Qn 3

Area of big square = 14 cm × 14 cm
= 196 cm²
Area of 4 small squares = 4 ×3 cm × 3 cm
= 36 cm²
Area of remaining figure = 196 cm² - 36 cm²
= **160 cm²**
Perimeter of remaining figure = 4 ×14 cm
= **56 cm**

Qn 4

Area of big square = 18 cm × 18 cm
= 324 cm²
Area of 4 small squares = 4 ×4 cm × 4 cm
= 64 cm²
Area of remaining figure = 324 cm² - 64 cm²
= **260 cm²**
Perimeter of remaining figure = 4 ×18 cm
= **72 cm**

Qn 5

Area of rectangle = 14 cm × 10 cm
= 140 cm²
Area of 4 squares = 4 ×2 cm × 2 cm
= 16 cm²
Area of remaining figure = 140 cm² - 16 cm²
= **124 cm²**
Perimeter of remaining figure = (14 cm + 10 cm) × 2
= **48 cm**

Qn 6
Area of rectangle = 22 cm × 14 cm
= 308 cm²
Area of 4 squares = 4 × 2 cm × 2 cm
= 16 cm²
Area of remaining figure = 308 cm² - 16 cm²
= **292 cm²**
Perimeter of remaining figure
= (22 cm +14 cm) × 2 + 2 cm + 2 cm + 2 cm + 2 cm
= 72 cm + 8 cm
= **80 cm**

Unit 5.4 –Area and Perimeter with Proportional Sides

Qn 1

Length × Breadth = 108 cm²
3 units × 1 unit = 108 cm²
1 unit × 1 unit = 108 cm² ÷ 3
= 36 cm²
Breadth (1 unit) = 6 cm
Length = 3 × 6 cm
= 18 cm
Perimeter = (18 cm + 6 cm) × 2
= **48 cm**

Qn 2

Length × Breadth = 64 cm²
4 units × 1 unit = 64 cm²
1 unit × 1 unit = 64 cm² ÷ 4
= 16 cm²
Breadth (1 unit) = 4 cm
Length = 4 × 4 cm
= 16 cm
Perimeter = (16 cm + 4 cm) × 2
= **40 cm**

Qn 3

Length × Breadth = 27 cm²
3 units × 1 unit = 27 cm²
1 unit × 1 unit = 27 cm² ÷ 3
= 9 cm²
1 unit = 3 cm
Length = 3 × 3 cm
= 9 cm
Breadth = 3 cm
Perimeter = (9 cm + 3 cm) × 2
= **24 cm**

Qn 4
Breadth = 2 units
Length = 3 units
2 units × 3 unit = 54 cm²
1 unit × 1 unit = 54 cm² ÷ 6
= 9 cm²
1 unit = 3 cm
Breadth = 2 × 3
= 6 cm
Length = 3 × 3
= 9 cm
Perimeter = (6 cm + 9 cm) × 2
= **30 cm**

Qn 5
Breadth = 3 units
Length = 4 units
3 units × 4 unit = 192 cm²
1 unit × 1 unit = 192 cm² ÷ 12
= 16 cm²
1 unit = 4 cm
Breadth = 3 × 4
= 12 cm
Length = 4 × 4
= 16 cm
Perimeter = (12 cm + 16 cm) × 2
= **56 cm**

Unit 5.5 – Area and Perimeter of Squares using Guess and Check

Qn 1

Guess-and-Check:
100 – 49 = 51
(10 × 10) – (7 × 7) = 51
Area of big square = 100 m² (10 m × 10 m)
Area of garden = 100 m² - 51 m²
= **49 m²** (7 m × 7 m)

Qn 2

Guess-and-Check:
144 – 64 = 80
(12 × 12) – (8 × 8) = 80
Area of big square = 144 m² (12 m × 12 m)
Area of garden = 144 m² - 80 m²
= **64 m²** (8 m × 8 m)

Qn 3

Length of square garden = 36 m ÷ 4
= 9 m
Area of square garden = 9 m × 9 m
= 81 m²
Area of big square = 12 m × 12 m
= 144 m²
Area of path = 144 m² - 81 m²
= **63 m²**

Qn 4

Length of pool = 64 m ÷ 4
= 16 m
Area of swimming pool = 16 m × 16 m
= 256 m²
Area of square = 20 m × 20 m
= 400 m²
Area of border = 400 m² - 256 m²
= **144 m²**

Qn 5
Length of square garden = 8 m (8 m × 8 m = 64 m²)
Area of big square = (8 + 6) m × (8 + 6) m
= 14 m × 14 m
= 196 m²
Area of pathway = 196 m² - 64 m²
= **132 m²**

Qn 6
Length of small square = 8 cm (8 m × 8 m = 64 m²)
Length of big square = 8 cm + 4 cm
= 12 cm
Area of big square = 12 cm × 12 cm
= **144 cm²**

Qn 7
Since 64 – 16 = 48
Area of big square = **64 cm²**

Qn 8
Since 36cm² + 64cm² = 100 cm²
Length of small square = 6 cm
Length of big square = 8 cm
Total perimeter = (6 cm + 8 cm + 8 cm) × 2
= **44 cm**

Qn 9
Since 81 cm² + 144 cm² = 225 cm²
Length of small square = 9 cm
Length of big square = 12 cm
Total perimeter of figure = (12 cm + 12 cm + 9 cm) × 2
= **66 cm**

Unit 5.6 – Area and Perimeter of Composite Figures (Intermediate)

Qn 1
Area of garden = 9 m × 5 m
= 45 m²
Area of big rectangle = 13 m × 9 m
= 117 m²
Area of pathway = 117 m² - 45 m²
= **72 m²**

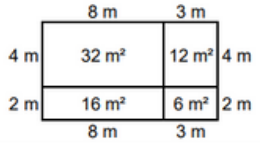
Qn 2
Area of garden = 13 m × 8 m
= 104 m²
Area of pond = 9 m × 4 m
= 36 m²
Area of pathway = 104 m² - 36 m²
= **68 m²**

Qn 3
Perimeter of garden = (2 units + 1 unit) × 2
= 6 units
6 units = 48 m
1 unit = 48 m ÷ 6
= 8 m
Area of garden = 16 m × 8 m
= 128 m²
Area of big rectangle = 20 m × 12 m
= 240 m²
Area of pathway = 240 m² - 128 m²
= **112 m²**

Qn 4
Area of pond = 3 units × 1 unit
= 48 m²
1 unit × 1 unit = 48 m² ÷ 3
= 16 m²
1 unit = 4 m
Length (pond) = 3 × 4 m
= 12 m
Breadth (pond) = 4 m
Area of big rectangle = 14 m × 6 m
= 84 m²
Area of pathway = 84 m² - 48 m²
= **36 m²**

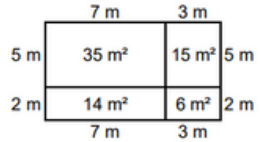
Qn 5
Area of field = 2 units × 1 unit
= 3200 m²
1 unit × 1 unit = 3200 m² ÷ 2
= 1600 m²
1 unit = 40 m
Length (field) = 2 × 40 m
= 80 m
Breadth (field) = 40 m
Area of big rectangle = 90 m × 50 m
= 4500 m²
Area of track = 4500 m² - 3200 m²
= **1300 m²**

Qn 6



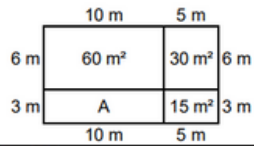
Perimeter of figure
= (6 m + 11 m) × 2
= **34 m**

Qn 7



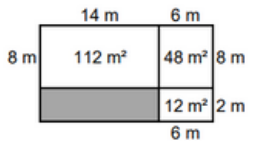
Perimeter of figure
= (10 m + 7 m) × 2
= **34 m**

Qn 8



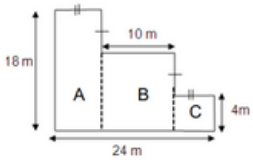
Area of A
= 10m × 3m
= **30 m²**

Qn 9



Shaded Area
= 14 m × 2 m
= **28 m²**

Qn 10



(24 – 10) ÷ 2 = 7 m
Area of A = 18 m × 7 m
= 126 m²
(18 – 4) ÷ 2 = 7 m
Area of B = 10 m × 11 m
= 110 m²
Area C = 7 m × 4 m
= 28 m²
Total area = 126 m² + 110 m² + 28 m²
= **264 m²**
Perimeter = (18 m + 24 m) × 2
= **84 m**

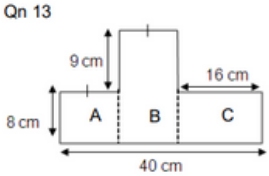
Qn 11

Area of rectangle = 40 cm × 24 cm
= 960 cm²
Area of square = 14 cm × 14 cm
= 196 cm²
Area of remaining figure = 960 cm² – 196 cm²
= **764 cm²**
Perimeter of figure = (40 cm + 24 cm) × 2 + 14 cm × 2
= 128 cm + 28 cm
= **156 cm**

Qn 12

24 ÷ 3 = 8 m
Area A = 16 m × 8 m
= 128 m²
Area B = 8 m × 10 m
= 80 m²
(16 - 6) ÷ 2 = 5 m
Area C = 8 m × 5 m
= 40 m²
Total Area = 128 m² + 80 m² + 40 m²
= **248 m²**
Total Perimeter = (24 m + 16 m) × 2
= **80m**

Qn 13

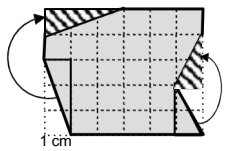


(40 − 16) ÷ 2 = 12 cm
Area of A = 8 cm × 12 cm
= 96 cm²
Area of B = 17 cm × 12 cm
= 204 cm²
Area of C = 16 cm × 8 cm
= 128 cm²
Total area = 96 cm² + 204 cm² + 128 cm²
= **428 cm²**
Total perimeter = (40 cm + 9 cm + 8 cm) × 2
= **114 cm**

Unit 5.7 – Area using Cut and Paste

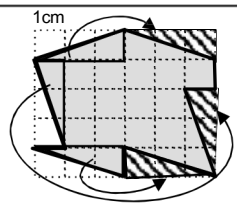
Qn 1

Area of shaded figure
= (6 × 5) – 5
= 25 squares
= 25 cm²



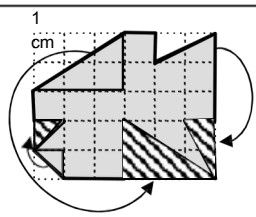
Qn 2

Area of shaded figure
= 21 squares
= 21 cm²



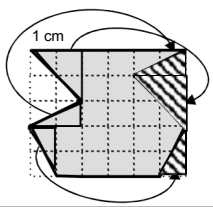
Qn 3

Area of shaded figure
= 21 squares
= 21 cm²



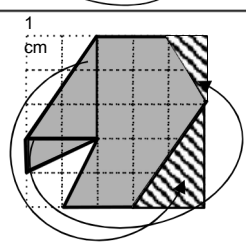
Qn 4

Area of shaded figure
= 22 squares
= 22 cm²



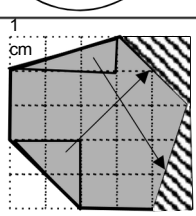
Qn 5

Area of shaded figure
= 16 squares
= 16 cm²

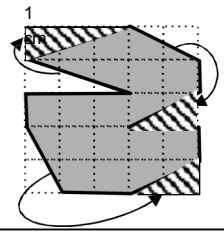


Qn 6

Area of Shaded figure
= 18 squares
= 18 cm²

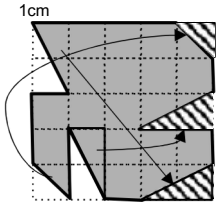


Qn 7



Area of shaded figure
= 18 squares
= 18 cm²

Qn 8



Area of shaded figure
= 20 squares
= 20 cm²

Chapter 6 Graphs

Unit 6.1 – Tables and Bar Graphs

Qn 1 (a)

	Class 5A	Class 5B	Class 5C	Class 5D
Number of boys	12	24	18	24
Number of girls	24	22	14	18
Total number of pupils	36	46	32	42

(b) Class 5B (c) 78 (d) 78

(e) Boys = 12 + 6
= 18
Girls = 24 – 3
= 21
Pupils = 18 + 21
= **39**

Qn 2 (a)

	Car	Public Bus	School Bus	MRT
Number of pupils	12	14	18	9

(b) 18 + 12 = **30**

(c) 14 – 12 = **2**

(d) 60 – 53 = **7**

Qn 3 (a)

	Class 4A	Class 4B	Class 4C	Class 4D
Number of swimmers	32	26	34	28
Number of non-swimmers	8	14	6	12

(b) 8 + 14 + 6 + 12 = **40**

(c) 34 – 28 = **6**

(d) 14 – 8 = **6**

Qn 4 (a)

	8 a.m.	10 a.m.	12 p.m.	2 p.m.	4 p.m.	6 p.m.	8 p.m.
Temperature (°C)	16	18	20	25	23	18	17

(b) **2 p.m.**

(c) **6 p.m.** and **8 p.m.**

(d) **12 p.m.** and **2 p.m.**

(e) 18°C – 5°C = **13°C**

Qn 5 (a)

	Ramesh	Imran	Mike	James
March	$9000	$7000	$12000	$8000
April	$7000	$9000	$22000	$10000
May	$16000	$13000	$7000	$12000

(b) Mike (c) Imran (d) $132 000

Qn 6 (a)

No. of rainy days	January	February	March	April	May
2022	12	11	4	5	14
2023	10	8	6	7	11

(b) **2022** (c) Feb 2023

(d) Jan 2022 (d) 56 days

Unit 6.2 – Interpreting Line Graphs

Qn 1(a) 12 pm (b) 4 (c) 13 (d) 22 (e) 4

Qn 2(a) $16 000 (b) 2007 (c)$24 000 – $4 000 = $20 000

Qn 3(a) 48 kg (b) April and May (c) 38 kg (d) June

Qn 4(a) Total = 8 + 14 + 18 + 34 + 26 = 100

(b) 34 + 26 = 60 (c) 26 – 14 = 12 (d) 8 + 14 = 22

Qn 5 (a) Total = 11 + 13 + 9 + 15 + 27 = 75

(b)27 – 13 = 14 (c) Friday (d) 11 + 13 + 9 = 33

Qn 6 (a) 37.7°C (b) 11 a.m., 2 p.m. and 4 p.m.
(c) 9 a.m. to 10 a.m., 2 p.m. to 3 p.m.
(d) 7 hours, from 10 a.m. to 5 p.m.

Unit 6.3 – Reading and Interpreting Pie Charts

Qn 1

$\frac{1}{2} - \frac{3}{10} = \frac{5}{10} - \frac{3}{10}$
$= \frac{2}{10}$

$\frac{2}{10}$ total = 8

$\frac{1}{10}$ total = 8 ÷ 2
= 4

$\frac{10}{10}$ total = 10 × 4
= 40

(a) Basketball = $\frac{1}{4} \times 40$
= **10**

(b) Badminton = $\frac{3}{10} \times 40$
= **12**

(c) Total pupils = **40**

(d) $\frac{8}{40} = \frac{\mathbf{1}}{\mathbf{5}}$

Qn 2

(a) Runners (4 × 200m relay) = $\frac{2}{5} \times 200$
= **80**

(b) Runners (4 × 100m relay) = $\frac{1}{4} \times 200$
= 50

Runners (200m) = (200 – 80 – 50) ÷ 2
= 70 ÷ 2
= **35**

(c) More = 50 – 35
= **15**

Qn 3

(a) Total = 2 × 120
= **240**

(b) Apples = 120 ÷ 2
= 60

Mangoes = (60 – 12) ÷ 2
= 24

Apples + Mangoes = 60 + 24
= **84**

(c) $\frac{24}{240} = \mathbf{\frac{1}{10}}$

Qn 4

$\frac{1}{2} - \frac{1}{5} = \frac{5}{10} - \frac{2}{10}$
$= \frac{3}{10}$

$\frac{3}{10}$ total = 150

$\frac{1}{10}$ total = 150 ÷ 3
= 50

$\frac{10}{10}$ total = 10 × 50
= 500

(a) $\frac{3}{10} \div 2 = \frac{3}{10} \times \frac{1}{2}$
$= \mathbf{\frac{3}{20}}$

(b) $\mathbf{\frac{3}{20}}$ (c) Total pupils = **500**

(d) Pupils (public bus) = $\frac{1}{5} \times 500$
= **100**

Qn 5

$1 - \frac{3}{10} - \frac{1}{4} - \frac{1}{4} = 1 - \frac{6}{20} - \frac{5}{20} - \frac{5}{20}$
$= \frac{4}{20}$
$= \frac{2}{10}$

$\frac{1}{4} - \frac{2}{10} = \frac{5}{20} - \frac{4}{20}$
$= \frac{1}{10}$

$\frac{1}{20}$ total = 4

$\frac{20}{20}$ total = 20 × 4
= 80

(a) Chinese = $\frac{2}{10} \times 80$
= **16**

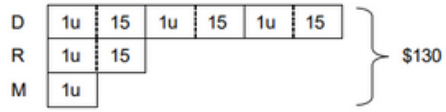
(b) **4 pupils**

(c) Math = $\frac{1}{4} \times 80$
= **20**

(d) **80 pupils**

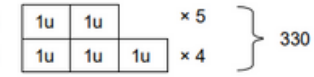
Unit 7 – Review

Qn 1



4 × $15 = $60
5u = $130 − $60
= $70
1u = $70 ÷ 5
= $14
Mark has **$14**.

Qn 2



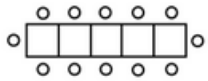
10u + $12u = 22u
22u = $330 ÷ 22
= $15
1u = 3 × $15
= **$45**

Qn 3

3u = 48°
1u = 48° ÷ 3
= 16°
∠c= 16° + 51°
= **67°**

Qn 4

(a)



(b) Total chairs = 10 × 2 + 2
= **22**

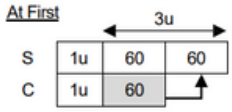
(c) Total chairs = 20 × 2 + 2
= **42**

(d) 128 – 2 = 126
Figure no. = 126 ÷ 2
= **63**

Qn 5

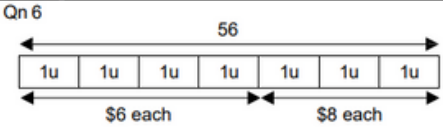
End

At First



3u = $60 + $60
= $120
1u = $120 ÷ 3
= $40
Caryn had **$40** at first.

Qn 6

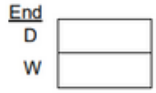


7u = 56
1u = 56 ÷ 7
= 8
4u = 4 × 8
= 32
3u = 3 × 8
= 24
Amount collected ($6 each) = 32 × $6
= $192

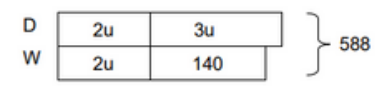
Amount collected ($6 each) = 24 × $8
= $192
Total collected = $192 + $192
= $384
The shopkeeper collected **$384** altogether.

Qn 7

End



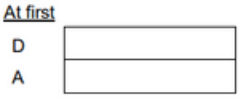
At first



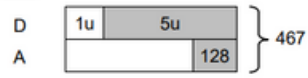
7u = 588 − 140
= 448
1u = 448 ÷ 7
= 64
5u = 5 × 64
= 320
Daniel had **$320** at first.

Qn 8

At first

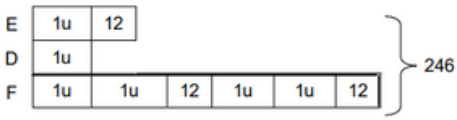


End



7u = 128 + 467
= 595
1u = 595 ÷ 7
= 85
6u = 6 × 85
= 510
Dennis had **$510** at first.

Qn 9



3 × 12 = 36
6u = 246 − 36
= 210
1u = 210 ÷ 6
= 35
3u = 3 × 35
= 105
3u + 12 = 105 + 12
= 117
Fion has **117 more** muffins than Eric.

Qn 10

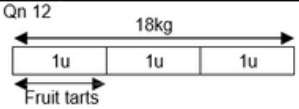
Length of 1 small square = 32 ÷ 4
= 8 cm
Length AB = 8 cm × 3
= 24 cm
Area = 24 cm × 24 cm
= **576 cm²**

Qn 11

At first	End
$G = 2u^{x3}$ (6u)	$G = 3u^{x2}$ (6u)
$B = 1u^{x3}$ (3u)	$B = 1u^{x2}$ (2u)

3u – 2u = 1u
1u = 85
6u = 6 × 85
= 510
There were **510 girls** in the school hall.

Qn 12



3u = 18
1u = 18 ÷ 3
= 6
Flour left = $12 - \frac{5}{6}$
$= 11\frac{1}{6}$
Chef Benedict had **$11\frac{1}{6}$ kg** of flour left.

Qn 13

<u>At first</u>

D		100
S		

<u>End</u>

		3u	
D	1u	35	100
S	1u	35	

3u = 100 + 35
= 135
1u = 135 ÷ 3
= 45
Serene at first = 45 + 35
= 80
Serene had **$80** at first.

Qn 14

Number of tables	Number of pupils
1	5
2	8
3	11

+3, +3

(a) No. of pupils = 15 × 3 + 2
= 47
47 pupils can be seated.

(b) 104 – 2 = 102
102 ÷ 3 = 34
34 tables can seat 104 pupils altogether.

Qn 15

No. of Adults	Adults (Cost)	No. of Children	Children (Cost)	Total Cost	Check
50	50 × 12 = 600	0	0	600	x
49	49 × 12 = 588	1	1 × 8 = 8	588 + 8 = 596	x
17	17 × 12 = 204	33	33 × 8 = 264	204 + 264 = 468	✓

600 – 596 = 4
Target difference = 600 – 468
= 132
No. of children = 132 ÷ 4
= 33
Mrs Krishnan bought **33 children tickets.**

Qn 16

W = $8u^{x2}$ (16u)
E = $5u^{x2}$ (10u)
E = $2u^{x5}$ (10u)
D = $1u^{x5}$ (5u)

W = 16u
E = 10u
D = 5u

Total = 16u + 10u + 5u
= 31u
31u = 930
1u = 930 ÷ 31
= 30
16u = 16 × 30
= 480
Winnie bought **480 marbles**.

Qn 17

9	9	9	11
E B	E B	E B	E E

38

2E = 38 – 9 – 9 – 9
= 11
E = 11 ÷ 2
= 5.50
B = 9 – 5.50
= 3.50
A pack of biscuits cost **$3.50.**

Qn 18

T	1u	12	1u	12	1u	12	213
J	1u	12					
P	1u						

4 × 12 = 48
5u = 213 – 48
= 165
1u = 165 ÷ 5
= 33
Jerry = 33 + 12
= 45
Jerry had **45 stamps.**

Qn 19

AB = 64 cm ÷ 4
= 16 cm
Perimeter = 8 × 16
= 128
The perimeter is **128 cm.**

Qn 20

<u>At first</u>

R	
K	

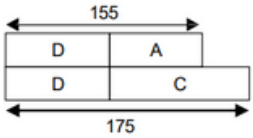
<u>End</u>

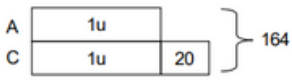
		280	
R	1u	144	136
K	1u	4u	136

4u = 280 – 136
= 144
1u = 144 ÷ 4
= 36
1u + 280 = 36 + 280
= 316
Each of them had **$316** at first.

Qn 21

A + D = 155
D + C = 175
A + C = 164



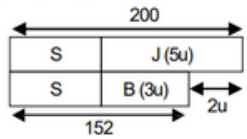


2u = 164 – 20
= 144
1u = 144 ÷ 2
= 72
A = 1u
= 72
C = 72 + 20
= 92
D = 155 – 72
= 83

Adam, Calvin and Dennis scored **72, 92 and 83 marks** respectively.

Qn 22

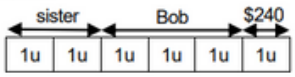
J + S = 200
B + S = 152



2u = 200 – 152
= 48
1u = 48 ÷ 2
= 24
B = 3 × 24
= 72
J = 5 × 24
= 120
S = 152 – 72
= 80

Sarah, Janice and Bernie baked **80, 120 and 72 cookies** respectively.

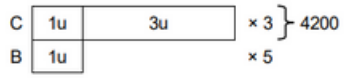
Qn 23



1u = 240
6u = 4 × 240
= 1440

Jordan had **$1440** at first.

Qn 24

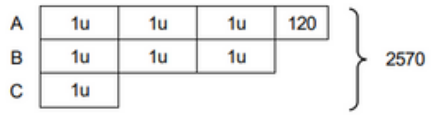


Mass of 1 cup = 4200 ÷ 3
= 1400

4u = 1400
1u = 1400 ÷ 4
= 350

The mass of each bowl is **350 g.**

Qn 25

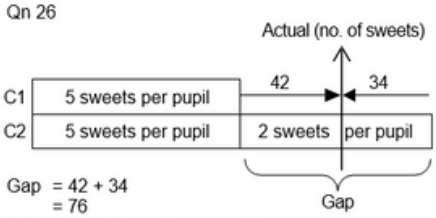


7u = 2570 – 120
= 2450
1u = 2450 ÷ 7
= 350
3u = 3 × 350
= 1050

1050 g = 1.05 kg

The mass of Parcel B is **1.05 kg.**

Qn 26



Gap = 42 + 34
= 76

Difference = 2 sweets per pupil

(a) No. of pupils = 76 ÷ 2
= 38

There are **38 pupils.**

(b) C1: 5 × 38 = 190
190 + 42 = 232
C2: 7 × 38 = 266
266 – 34 = 232 (checked)

Miss Goh has **232 sweets.**

Qn 27

(a) No. of squares in Pattern 1 = 2 × 4
= 8
No. of squares in Pattern 2 = 3 × 4
= 12
No. of squares in Pattern 8 = 9 × 4
= 36

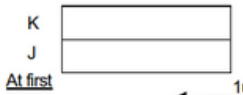
There are **36 tiles** in pattern 8.

(b) No. of squares in Pattern 20 = 21 × 4
= 84

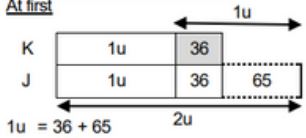
There are **84 tiles** in Pattern 20.

Qn 28

End

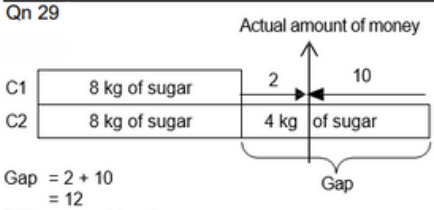


At first



1u = 36 + 65
= 101
101 + 36 = 137
Each of them had **137 stickers** at first.

Qn 29



Gap = 2 + 10
= 12
Difference = 4 kg of sugar
4 kg of sugar = 12
1 kg of sugar = 12 ÷ 4
= 3
1 kg of sugar cost **$3.**

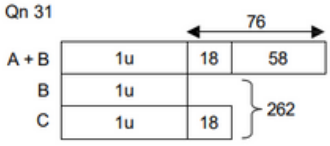
Qn 30

$\frac{1^{\times 4}}{2^{\times 4}} D = \frac{4}{5} W$

$\frac{4}{8} D = \frac{4}{5} W$

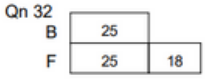
D = 8u
W = 5u
Difference = 8u – 5u
= 3u
3u = 75
1u = 75 ÷ 3
= 25
Winnie (at first) = 5 × 25
= 125
Winnie had **$125** at first.

Qn 31



A = 76 – 18
= 58
B + C = 320 – 58
= 262
2u = 262 – 18
= 244
1u = 244 ÷ 2
= 122
Difference = 122 – 58
= 64
Catherine had **$64 more** than Ally.

Qn 32

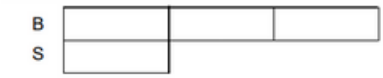


Items	Qty	×	Value ($)	Total value ($)
B	1u + 7	×	25	25u + 175
F	1u	×	43	43u
Total	2u + 7	×		68u + 175

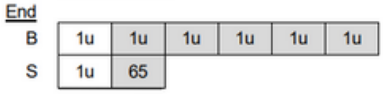
68u = 1535 – 175
= 1360
1u = 1360 ÷ 68
= 20
(a) He bought **20 footballs.**
(b) 25u = 25 × 20
= 500
500 + 175 = 675
Mr Lim spent **$675** on the basketballs.

Qn 33

At first



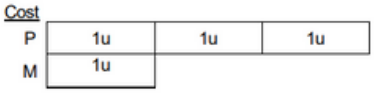
End



1u = 65
8u = 8 × 65
= 520
Mrs Gomez made **520 tarts** to sell.

Qn 34

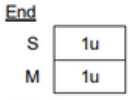
Cost



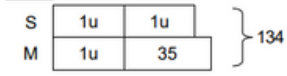
For every 3 muffins, Mrs Raj can buy 1 pie.
24 muffins = 8 pies
1u = 8 pies
2u = 16 pies
Mrs Raj could buy **16 pies** with the rest of the money.

Qn 35

End



At first



3u = 134 – 35
= 99
1u = 99 ÷ 3
= 33
2u = 2 × 33
= 66
Qunnie had **66 stickers** at first.

Qn 36

$\frac{1^{\times 2}}{3^{\times 2}} P = \frac{2}{5} A$

$\frac{2}{6} P = \frac{2}{5} A$

P = 6u
A = 5u
Difference = 6u – 5u
= 1u
1u = 28
5u = 5 × 28
= 140
Mrs Loh bought **140 apples.**

Qn 37

48 pens = 60 pencils
8 pens = 10 pencils

Since 8 pens = 10 pencils, pencils he had already bought
= 16 + 10
= 26
Difference = 60 – 26
= 34
James can buy **34 more** pencils.

Qn 38

Ribbon B = 1u
Ribbon A = 1u + 12
Ribbon C = 1u + 25
Ribbon D = 1u + 60

4u = 357 – 97
= 260
1u = 260 ÷ 4
= 65
Ribbon D = 65 + 60
= 125
The length of the longest ribbon is **125 cm**

Qn 39

Amount of money = 20 × 3
= 60
Cost of a bowl of ice cream = 3 – 0.5
= 2.5
No. of bowls = 60 ÷ 2.5
= 24
No. of bowls extra = 24 – 20
= 4
Melvin can buy **4 more** bowls of ice cream.

Qn 40

$\frac{1^{\times 3}}{3^{\times 3}} (20\text{ c}) = \frac{3}{4} (50\text{ c})$

$\frac{3}{9} (20\text{ c}) = \frac{3}{4} (50\text{ c})$

20 c = 9u
50 c = 4u

Items	Qty	×	Value (c)	Total value ($)
20 c	9u	×	20	180u
50 c	4u	×	50	200u
Total	13u			380u

380u = 5700
1u = 15
13u = 13 × 15
= 195
There was a total of **195 coins**