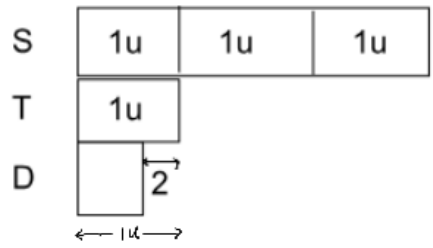
Chapter 1: Whole Numbers Part A - Static Models

Part 1: **Basic Keywords for Models**

(a) Multiplication

Keywords	Step-By-Step
Sam has **5 Times** of Tim.	Back is always 1 unit → Tim 1 box Front is the number of units (5 units) → Sam 5 boxes
Sam has **twice** of Tim.	Back is always 1 unit → Tim 1 box Front is the number of units (2 units) → Sam 2 boxes
Sam has **thrice** of Tim.	Back is always 1 unit → Tim 1 box Front is the number of units (3 units) → Sam 3 boxes
Sam has **as much as** Tim.	Back is always 1 unit → Tim 1 box Front is the <u>same</u> number of units (1 units) → Sam 1 box
A Car **cost as much as** 4 Bicycles	Price of 1 Car = 4 Bicycles 1x(4u) 4x(1u) Put units for each item so both sides cost are same → 1 car is 4u and 1 bicycle is 1u in price

(b) Add or Subtract

Keywords	Step-By-Step
Sam has **5 More** than Tim.	1) Draw a chubby rectangle cut into 2 2) Add extra [5] to Sam who has more
Sam has **5 Less** than Tim.	1) Draw a chubby rectangle cut into 2 2) Erase a small portion out by [5] from Sam who has less
(Combined) Sam has **Thrice** of Tim. Don has **2 Less** than Tim.	

Part 2: **Teacher's Handwritten Notes**

MCQ Questions

(a) **Adding / Minusing Values**

43 thousands and 8 tens is the same as _____

(1) 438
(2) 4380
(3) 43 008
(4) 43 080

43 0 8 0

Which number below is 1.5 less than 4.87?

(1) 3.37
(2) 4.72
(3) 5.02
(4) 6.37

4.87 − 1.50 = 3.37

Thirty-four thousand and sixty-two in figures is _____

(1) 34 620
(2) 34 602
(3) 34 062
(4) 3462

34 0 62

Gareth spent $20.45 on a shirt. He spent $12.25 more on a belt than the shirt. How much money did Gareth spend on the shirt and belt altogether?

shirt $20.45
belt 20.45 + 12.25 = 32.70
Total = 20.45 + 32.70 = 53.15

70 000 + 1000 + 900 + 5 = _____.

(1) 71 950
(2) 71 905
(3) 71 095
(4) 70 195

70 000 + 1 000 + 900 + 5 = 71 905

Lana is 43.5 kg. Her brother is 5.6 kg lighter than her. What is their total mass?

(1) 37.9 kg
(2) 49.1 kg
(3) 81.4 kg
(4) 92.6 kg

43.5 − 5.6 = 37.9
37.9 + 43.5 = 81.4

9.3 – 0.77 = _____

8.53

What is 190 tens more than 79 090?

= 190 × 10 = 1900

(1) 70 990
(2) 79 280
(3) 80 280
(4) 80 990

79 090 + 1 900 = 80 990

Find the sum of 0.35 and 4 tenths.

0.40

Total = 0.35 + 0.40 = 0.75

(1) 0.39
(2) 0.75
(3) 4.35
(4) 40.35

5.3 – 0.61 = _____

4.69

60 000 + 4 000 + 800 + 7 = _____

(1) 64 870
(2) 64 807
(3) 64 087
(4) 60 487

60 000 + 4 000 + 800 + 7 = 64 807

The difference between the two numbers is 6.18. Given the larger number is 8.03, find the value of the smaller number.

8.03 − ☐ = 6.18
8.03 − 6.18 = 1.85

Ans: 1.85

The table below shows the entrance fees to the Singapore Zoo.

	Monday to Friday	Saturday and Sunday
Adult	$48	$58
Child (3 to 12 years old)	$33	$43
Senior Citizen (60 years old and above)	$20	$25

On Sunday, Mr and Mrs Fong, their ten-year-old child and sixty-five-year-old mother visited the Singapore Zoo. How much did the family pay for the entrance fees altogether?

$58 + $58 + $43 + $25 = $184

Ans: $ 184

Patrick bought 4 cupcakes. He gave the cashier some money and received $3.60 as change. Given that each cupcake cost $2.85, how much did he give the cashier?

2.85 × 4 = 11.4
11.4 + 3.6 = 15

(b) Rounding

Which of the following numbers when rounded to the nearest ten becomes 72 500?

(1) 72 444 = 72 440
(2) 72 496 = 72 500
(3) 72 506 = 72 510
(4) 72 554 = 72560

The volume of water in a tank is 19 000 ℓ when rounded to the nearest thousand litres. Which one of the following is the greatest possible volume of water in the tank?

(1) 18 999 ℓ
(2) 19 099 ℓ
(3) 19 499 ℓ
(4) 19 999 ℓ

19 000
same 499 = 19 499

Which of the following when rounded to the nearest hundred gives 60 000?

(1) 59 599 ⇒ 59 600
(2) 59 951 ⇒ 60 000
(3) 60 070 ⇒ 60 100
(4) 60 140 ⇒ 60 100

Round 31.76 to the nearest whole number.

(1) 30
(2) 31
(3) 32
(4) 35

+1 00 ⇒ 32

28 549 rounded to the nearest hundred is _____.

stay 00

(1) 28 500 ⇒ 28 500
(2) 28 550
(3) 28 600
(4) 29 000

A tree is 5.9 m when its height is rounded to 1 decimal place. Which of the following could be the actual height of the tree?

(1) 5.84 m = 5.8
(2) 5.88 m = 5.9
(3) 5.95 m = 6.0
(4) 5.99 m = 6.0

Jeremy thought of a decimal number with 3 decimal places. When he rounded the number to the nearest hundredth, the value was 10.05. Find the greatest possible value of the decimal number Jeremy thought of.

10.05_

10.054 ⇐ greatest: same + 499 back
smallest: −1 + 50 back

Round 117.65 to the nearest whole number.

+1 00
118

(c) Common Factors and Multiples

Which one of the following pairs of numbers have 3 and 9 as their common factors?

numbers are able to be divided by 3 & 9 with no remainder!

(1) 9 and12
(2) 18 and 21
(3) 21 and 27
(4) 27 and 36 ✓

Janet's age is a multiple of 7 this year. Next year, her age will be a multiple of 6. Which one of the following is Janet's age this year?

(1) 14
(2) 35
(3) 42
(4) 49

7, 14, 21, 28, 35, 42, 49
+1 → 8, 15, 22, 29, 36, 43, 50
multiple of 6!

What is the ~~second~~ common multiple of 4 and 6?

4: 4, 8, 12, 16, 20, 24, 28 ✓
6: 6, 12, 18, 24 ✓

(1) 12
(2) 16
(3) 24
(4) 30

Some factors of 52 are 1, 2, 4 and 52. What are the other two factors of 52?

52 = 1 × 52
2 × 26
4 × 13

Xiao Hui had more than 10 and fewer than 40 candies. When she packed the candies in bags of 7, she was left with 2 candies. When she packed them in bags of 3, she had no candies left. How many candies did Xiao Hui have?

multiples of 7: 7, 14, 21, 28, 35
+2 → 9, 16, 23, 30, 37
multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39

Ans: 30

(d) Units

The table below shows the favourite colour of some children.

Colour	Black	Blue	Purple	Red
Number of children	30	19	12 (1u)	? (3u)

The number of children who like red is three times the number of children who like purple. How many children are there altogether?

(1) 36
(2) 61
(3) 65
(4) 97 ✓

1u → 12
3u → 36
Total = 36 + 12 + 30 + 19
= 78 + 19 = 97

(e) Timing

When it is 09 00 in Singapore, it is 10 30 in Australia.
Mr Kim makes a call at 14 50 from Singapore to his wife who is in Australia.
What is the time in Australia when Mr Kim calls his wife?

(1) 04 20
(2) 13 20
(3) 15 50
(4) 16 20 ✓

1hr 30mn faster in australia!
0900 → 1030
1450 (SG) → 1550 (1hr) → 1600 (10mn) → 1620 (20mn) Australia

A bus departed from Singapore and arrived in Kuala Lumpur at 13 40.
The bus ride took 5 hours and 30 minutes.
At what time did the bus depart from Singapore?

(1) 07 10
(2) 07 40
(3) 08 10 ✓
(4) 08 40

0810 → (5 hrs) 1310 → (30mn) 1340

A movie started at 11 35 and ended at 14 10.
How long was the movie?

25min 2hrs 10min
1185 1200 1400 1410

Ans: 2 h 35 min

Mr Ng took a flight from Singapore to Japan. He boarded the plane at 23 39 and reached Japan at 06 22 the next day. How long was the flight?

(1) 6 h 17 min
(2) 6 h 43 min
(3) 7 h 17 min
(4) 7 h 43 min

21min 6hr 22min
2339 2400 (0000) 0600 0622

6h 43 min

Liana started doing a science quiz at 12.42 p.m. There were 8 questions in this quiz. For the first 3 questions, Liana took 6 minutes to complete each question. For the remaining questions, she took 7 minutes to complete each question. At what time did Liana complete the quiz? Express your answer using the 24-hour clock.

Total time taken: (3x6) + (5x7)
= 18 + 35
= 53

18min 35min
12.42pm 1300 (1260) 1335

The time shown on the clock is 20 minutes faster than the actual time. What is the actual time?

7 min 13min
(4.53pm) 5pm 5.13pm
(4.60pm)

Hayley's dance lesson is 2 h 30 min long. It started at 11 45.
What time did it end?

(1) 02 15
(2) 09 15
(3) 13 45
(4) 14 15

1hr 1hr 15min 15min
11 45 1245 1345 1400 1415

Sera was in school from 07 30 to 14 00.
How long was she in school?

30mm 2hr 2hr
0730 0800 1200 1400

Total = 4h 30min

Mrs Tan watched a movie which ended at 01 15. The movie lasted for 2h 30 min. What time did the movie start?
Express your answer in 24h-clock.

15min 1hr 1hr 15min
2235 2300 (2260) 0000 (2400) 0100 0115

Coreen took 50 minutes to complete her work. She finished her work at 12 00.
Express her starting time using the 12-hour clock.

(1) 11.10 a.m.
(2) 11.50 a.m.
(3) 12.50 a.m.
(4) 12.50 p.m.

50min
1110am 1200
= 1160

Mr Lee started working on his project at 8.45 a.m. He took a 40-minute lunch break. Then, he continued working on the project till he finished it at 5.30 p.m.

(a) How long did Mr Lee spend working on his project?

15min 25min 5min 1hr 5hr
8.45am 9am 9.25am 9.30am 12.30pm 5.30pm

(b) Mr Lee reached the gym at 5.45 p.m. He exercised for 1 hour 40 minutes before driving home. He reached home at 7.50 p.m. How long did he take to drive home?

1hr 15min 25min 25mm
5.45pm 6.45pm 7pm 7.25pm 7.50pm

Yan Ling started reading at 4.20 p.m. She read for 1 h 35 min. What time did she stop reading?

1hr 35min
4.20pm 5.20pm 5.55pm

Ans: 5.55 p.m.

(f) Identify value of digits

Which of the following decimals is the smallest?

(1) 4.070
(2) 4.180
(3) 4.032
(4) 4.850

(3)

In the number 41.32, the digit _____ is in the hundredths place.

(1) 1
(2) 2
(3) 3
(4) 4

In which of the following numbers does the digit 4 stand for 4 tenths?

(1) 14.53
(2) 23.84
(3) 30.42
(4) 48.06

In which of the following numbers does the digit 7 stand for 7 tenths?

(1) 413.75
(2) 371.54
(3) 237.68
(4) 123.17

(1)

Write 5 thousandths as a decimal.

0.005

Paper 2
Questions

(a) Writing out in numbers

Write fifteen thousand and thirty-six in figures.

15036

Ans: 15036

Write eleven thousand and thirty-five in figures.

11035

Ans: 11035

(b) Number Patterns (1 line)

Write the missing number in the number pattern below.

14 000, 13 400, 12 800, 12 200, _____, 11 000

+600 +600 +600 +600

Ans: 11600

Fill in the blank with the correct number in the number pattern below.

875 , 845 , 815 , 785 , 755

+30 +30 +30

(c) Factors and Multiples

Use all the digits given below to form the greatest odd number.

2	9	4	8	5

last number odd!
and rest of numbers largest to smallest

98425

Some factors of 32 are 1, 2, 4 and 32.
What are the other two factors of 32?

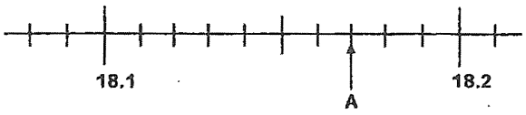
$32 = 1 \times 32$
2×16
4×8

Hidayah needs to pack some books into boxes of 3 or 8. The number of books is fewer than 50. What is the greatest number of books that Hidayah has to pack?

Multiple of 8 : 8, 16, 24, 32, 40, 48
↳ also divisible by 3

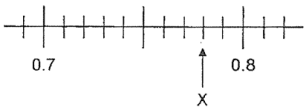
(d) Number Line

Write the decimal represented by A.



10 gaps → 0.10
1 gap → 0.01
7 gaps → 0.07 Ans: 18.17

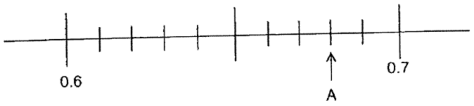
Write the decimal represented by X.



0.78

10 gaps → 0.10
1 gap → 0.01
8 gaps → 0.08

Write the decimal represented by A.



10 gaps → 0.10
1 gap → 0.01
8 gaps → 0.08

Ans: 0.68

(e) Multiplication and Division

Find the value of 20.7 ÷ 7.
Round your answer to the nearest hundredths.

2.957
7) 20.700
-14
67
-63
40
-35
50
-49
1

⇒ 2.957 ≈ 2.96

Ans: 2.96

11.78 × 6 = _____

(1) 70.68
(2) 66.78
(3) 66.68
(4) 17.78

14 4
11.78
× 6
70.68

7.06 + 2 = _____

2.00
+ 7.06
9.06

What is the remainder when 1120 is divided by 9?

124
9) 1120
-9
22
-18
40
-36
R4

Find the value of 7.52 × 8 .

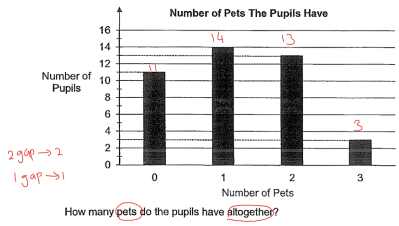
4 1
7.52
× 8
60.16

Mrs Lee mixed 1.4 ℓ of orange syrup with 3.16 ℓ of water.
She poured the mixture equally into 4 bottles.
How many litres of the mixture were there in each bottle?

1.4 + 3.16 = 4.56

4.56 ÷ 4 = 1.14

The bar graph below shows the number of pets a class of pupils has at home.



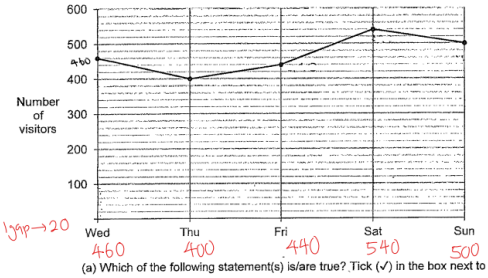
2 gap → 2
1 gap → 1

How many pets do the pupils have altogether?

Total ⇒ (14 x 1) + (13 x 2) + (3 x 3)
= 14 + 26 + 9 = 49

(f) **Units**

The line graph shows the number of visitors at a museum last week. Study the line graph and answer questions 38 and 39.



1 gap → 20
460 400 440 540 500

(a) Which of the following statement(s) is/are true? Tick (✓) in the box next to the correct statement(s).

1.	420 visitors were at the museum on Friday.	
2.	The total number of visitors who were at the museum on Saturday and Sunday was 1040.	✓
3.	There were 60 fewer visitors at the museum on Thursday than on Wednesday.	✓

(b) The number of visitors on Sunday was 5 times the number of visitors on Monday. How many visitors were at the museum on Monday?

5u → 500
1u → 100

During a travel fair, 958 people attended it on the first day.
On the second day, there were 3 times as many people as on the first day.
(a) How many people attended the travel fair on the second day?
(b) What is the total number of people who attended the fair for the two days?

(a) 958 x 3 = 2874

(b) 2874 + 958 = 3832

Benny is thinking of a two-digit number.
The digit in its ones place is twice the digit in its tens place.
Indicate with a tick (✓) if the following statements about the two-digit number are true or false.

Statement	True	False
The number is an even number.	✓	
The number can be divided exactly by 5.		✓

ie. 12, 24, 36, 48

1u, 2u (even)

The total mass of 2 packets of sugar and 2 packets of flour was 6.54 kg.
The mass of 1 packet of flour was twice as heavy as 1 packet of sugar.
What was the mass of a packet of flour?

(2u) (4u)

6u → 6.54
1u → 1.09
2u → 2.18

The table below shows the mass of meat sold by a butcher in a day.

Meat	Mass of meat sold (kg)
Beef	55.5
Mutton	? (1u)
Chicken	? (2u)
Total	246

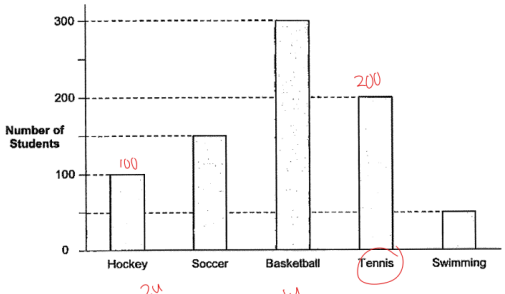
a) If the butcher sold twice as much chicken as mutton, what is the mass of the chicken sold?

b) If the cost of 1 kilogram of chicken is $9, what was the total amount collected from the sale of the chicken?

(a) 3u = 246 − 55.5
= 190.5
1u = 63.5
2u = 127

(b) 1kg → $9
127kg → 127 × 9
= $1143

The graph below shows the favourite sport of some students.

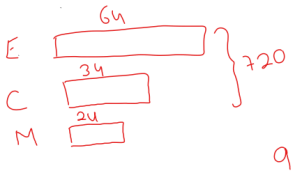


Which sport is twice as popular as hockey?

(1) Tennis
(2) Soccer
(3) Basketball
(4) Swimming

(1)

In a library, there were English, Chinese and Malay books.
The number of English and Chinese books was 720.
The English books were twice as many as the Chinese books and three times as many as the Malay books.
Find the total number of books in the library.



9u → 720
1u → 80
11u → 880

A total of 2590 adults and children attended a family event on one weekend. 1770 adults attended the event. The number of adults at the event was three times as many as the number of boys.

(a) How many children were there at the event?

2590 − 1770 = 820

(b) How many girls were at the event?

3u → 1770
1u → 590

girls = children − boys
= 820 − 590 = 230

The total mass of 3 children is 115.9 kg. John weighs twice as heavy as Amelia. Max is 8.4 kg heavier than John.

(a) What is Amelia's mass?

J 2u
A 1u
M 2u + 8.4 } 115.9

5u = 115.9 − 8.4 = 107.5
1u = 21.5

Ans: (a) 21.5 kg [2]

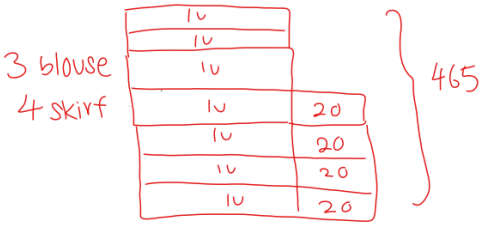
(b) What is the difference between Amelia's and Max's mass?

Max ⇒ 2u + 8.4
= (2 × 21.5) + 8.4 = 51.4

difference = 51.4 − 21.5 = 29.9

(g) More/Less than + More than 1

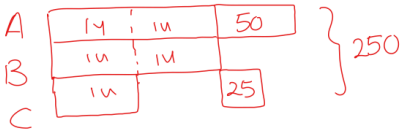
Ms Chai bought 3 blouses and 4 skirts for $465.
Each skirt costs $20 more than a blouse.
What is the cost of 1 blouse?



Total − extra numbers
7u = 465 − 80
= 385

1u = 55

Shop A has 50 apples more than Shop B. Shop A has twice as many apples as Shop C. Given that shops A, B and C have 250 apples altogether, how many apples does Shop C have?

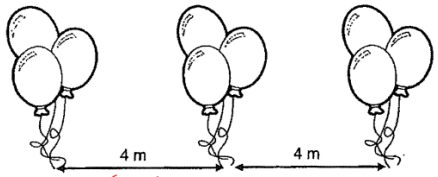


5u = 250 − 50 − 25 = 175
1u = 35
C ⇒ 35 + 25 = 60

Ans: 60

(h) Gaps and items

Eliza places each group of 3 balloons 4 m apart along the corridor. The corridor is 32 m long. How many balloons does Eliza needs in all to decorate the corridor?



3 balloons (1 set) → 2 gaps
9 balloons (3 sets) → 8 gaps

no. of gaps = 32 ÷ 4
= 8

total balloons = 9 × 3 = 27

Part 3: **Intensive Drills (Basic Models)**

Q1a) **Short Questions:**

Write the missing number in the number pattern below.

_____ , 11 387, 10 137, 8887, 7637

Ans: _____

Q1c) 39 948 rounded to the nearest hundred is ____.

(1) 39 000
(2) 39 900
(3) 39 950
(4) 40 000

Ans: _____

Q1e) Use all the digits below to form the biggest 4-digit odd number. Each digit can only be used once.

| 2 | 0 | 9 | 4

Ans: _____

Ans: 12637, option 2, 9420

Q1b) 4 thousands, 33 hundreds and 3 ones is the same as _____.

(1) 4036
(2) 4333
(3) 7303
(4) 7330

Ans: _____

Q1d) 9 ten thousands, 20 tens and 3 ones is the same as _____.

(1) 9023
(2) 9203
(3) 90 023
(4) 90 203

Ans: _____

Q1f) Write sixty thousand, two hundred and five in numerals.

Ans: _____

Ans: option 3, option 4, 60205

Q2) Uncle Jack bought 63 boxes of pens. There were 9 pens in each box.
He repacked the pens into smaller packets of 5 each.
How many pens were left unpacked?

Ans: 2 pens left unpacked.

Q3) Sarah bought some pears and packed them into boxes of 15. After packing the pears into 125 such boxes, she had 7 pears left.
(a) How many pears did Sarah buy?
(b) How many more pears must Sarah buy so that she can have 180 such boxes of pears?

Ans: (a) 1882 pears (b) 818

Q4) When a number is divided by 3, it has a quotient of 1351 and a remainder of 2. What is the number?

Ans: 4055

Q5) Intensive Drills for **Multiples & Factors**:

1. How many numbers between 30 and 50 are multiples of 4?

Ans: 5 numbers

2. How many numbers between 10 and 60 are common multiples of 6 and 9?

Ans: 3 numbers *(Tip: find 1st common multiple then multiple from there)*

3. How many numbers between 35 and 70 are multiples of 8?

Ans: 4 numbers

4. How many numbers between 10 and 40 are common multiples of 2 and 3?

Ans: 5 numbers

5. How many even numbers between 10 and 90 are multiples of 7?

Ans: 6 numbers

6. How many odd numbers between 5 and 30 are multiples of 3?

Ans: 4 numbers

7. I am thinking of a 1-digit even number smaller than 5. It is a factor of 6. What is the number that I am thinking of?

Ans: 2

8. I am thinking of a 2-digit odd number. It is between 10 and 30. It is a multiple of 7. What is the number that I am thinking of?

Ans: 21

9. I am thinking of a 1-digit odd number. It is a factor of 24. It is not 1. What is the number that I am thinking of?

Ans: 3

10. I am thinking of a 2-digit even number. It is a multiple of 9. It is between 20 and 90. The digit in the tens place is smaller than the digit in the ones place. What is the number that I am thinking of?

Ans: 36

11. I am thinking of a 2-digit number. It is a common multiple of 5 and 9. The digit in one place is smaller than the digit in the tens place. What is the number that I am thinking of?

Ans: 45

12. I am thinking of a 2-digit number. It is a common multiple of 2 and 7. It is between 20 and 60. The digit in the tens place is twice that of the digit in the ones place. What is the number that I am thinking of?

Ans: 42

13. I am thinking of a 2-digit number. It is a factor of 32. It is a multiple of 8. It is neither 8 nor 32. What is the number that I am thinking of?

Ans: 16

14. Z is a 1-digit number. 12 and 18 are common multiples of 3 and Z. Z is greater than 3. What is the number Z?

Ans: 6

15. Y is a 1-digit odd number. 28 and 42 are common multiples of 14 and Y. Y is not 1. What is the number Y?

Ans: 7

16. X is a 1-digit number. 3 is a common factor of 12 and X. What is the largest possible value of the number X?

Ans: 6

17. C is a 2-digit number. It is smaller than 50. 8 is a common factor of 24 and C. What is the largest possible value of the number C?

Ans: 48

18. B is a 2-digit number. 7 is a common factor of 28 and B. What is the smallest possible value of the number B?

Ans: 14

19. D is a 1-digit number. When I divide D by 3, there is no remainder. When I divide D by 4, the remainder is 1. What is the number D?

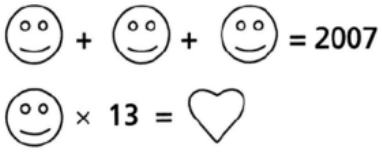
Ans: 9

20. E is a 2-digit number. It can be divided exactly by 5. When I add 3 to the number, it can be divided exactly by 7. It is greater than 40 but smaller than 90. What is the number E?

Ans: 60

Q6) Intensive Drills for **Multiplication and Division**:

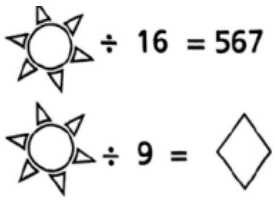
1.



Find the value of ♡. Round the answer to the nearest hundred.

Ans: 8700

2.



Find the value of ♢. Round the answer to the nearest hundred.

Ans: 1000

3.

△ × △ = 16

9264 ÷ △ = ✚

Find the value of the cross.

Ans: 2291

4. The sum of two numbers is 2307. The difference between the two numbers is 509. Find the two numbers.

Ans: 1408 and 899

5. Fill in the missing values

(a)

		6	9	
×		□	5	
	□	4	5	
2	7	6	0	
3	1	0	5	

(b)

		4	0	7
×		3	□	
	3	6	6	3
1	□	2	1	0
1	□	8	7	3

(c)

		□	3	8
×			7	2
	1	8	7	6
□	5	6	6	0
□	7	5	3	6

(d)

		5	□	4
×			5	2
	1	1	0	8
2	7	□	0	0
2	8	□	0	8

Ans: (a) 4, 3 (b) 9, 2, 5 (c) 9, 6, 6 (d) 5, 7, 8

6. Michael and Benjamin had $1300 altogether. Benjamin had 3 times as much as Michael.
(a) How much money did Michael have?
(b) How much more money did Benjamin have than Michael?

Ans: (a) $325 (b) $650

7. Amy has $89. Mabel has 4 times as much money as Amy. Sharon has 5 times as much money as Amy. How much money do the three girls have altogether?

Ans: $890

8. There are 258 oranges. There are twice as many oranges as pears. There are 3 times as many pears as apples. How many fruits are there altogether?

Ans: 430 fruits

9. Jia Po has twice as much money as Jason. Mandy has twice as much money as Jia Po. Jia Po has $820. How much more money does Mandy have than Jason?

Ans: $1230

10. During a carnival at the museum, there were 4 times as many adults as boys. There were also twice as many girls as boys. There were 378 more adults than girls. How many children were there?

Ans: 567 children

11. At a furniture shop, two glass dining tables are sold at $1316. How much do ten glass dining tables cost?

Ans: $6580

12. A 3-day stay at a hotel cost Mr. Chan a total of $732. If the daily room charges remain the same, how much money would he have to pay if he had stayed for thirteen days?

Ans: $3172

13. A shopkeeper has 25 boxes of pencils. There are 12 pencils in each box. He ties all the pencils into bundles of 5. How many bundles of pencils will he get?

Ans: 60 bundles

14. At a supermarket, a worker unpacked 19 boxes of oranges. There were 48 oranges in each box. If the oranges were sold at 8 for $3, how much money did the worker collect altogether?

Ans: $342

15. Mrs. Fong bought some apples. The apples were sold at 6 for $4. She spent $16 on the apples. How many apples did she buy?

Ans: 24 apples

16. Mdm Shakila bought 35 pears. The pears were sold at 5 for $4. How much money did she spend on the pears?

Ans: $28

17. Fred has 3 times as much money as Sean. Edwin has twice as much money as Fred. So, Edwin has _____ times as much money as Sean.

Ans: 6 times

18. Jimmy has twice as many cards as Arvin. Jimmy has 4 times as many cards as Zack. So, Arvin has _____ times as many cards as Zack.

Ans: 2 times

19. Billy is twice as heavy as Nash. Tom is 3 times as heavy as the total mass of Billy and Nash. So, Tom is _____ times as heavy as Nash.

Ans: 9 times

20. Apples are sold at 5 for $3. Find the cost of 100 apples.

Ans: $60

21. Oranges are sold at 3 for $4. How many oranges can you buy with $60?

Ans: 45 oranges

22. The sum of two numbers is 540. The difference between the two numbers is 188. Find the smaller number.

Ans: 176

23. The sum of two numbers is 744. The larger number is 3 times the smaller number. Find the smaller number.

Ans: 186

Q7) Kellyn has twice as much money as Hilary. Patricia has $350 more than Kellyn. The three girls have $1125 altogether. How much money does Kellyn have?

Ans: $310

Q8) There are 2113 people at a concert. There are 5 times as many girls as boys. There are 377 more adults than boys. Find the number of girls at the concert.

Ans: 790 girls

Q9) Mr. Abdullah is twice as tall as his daughter. His daughter is 19 cm shorter than his son. The total height of Mr. Abdullah and his two children is 363 cm. How tall is his son? Give your answer in meters and centimeters.

Ans: 1m and 5cm

Q10) A boy has a total of 760 red, blue, and green marbles. He has 3 times as many green marbles as blue marbles. He has 45 fewer red marbles than blue marbles. How many green marbles does he have?

Ans: 483 green marbles

Q11) The total mass of boxes A, B, and C is 1085 g. Box A is 250 g lighter than box B. Box A is 190 g lighter than box C. How heavy is box C?

Ans: 405g

Q12) Foo Ming is 3 cm taller than Helmi. Kenny is 8 cm shorter than Helmi. Their total height is 412 cm. Find Helmi's height.

Ans: 139cm

Q13) Jane obtained 6 more marks for her Maths exam than for her Science exam. She also obtained 11 more marks for her English exam than for her Maths exam. Her total marks for the 3 subjects was 248. How many marks did she obtain for her English exam?

Ans: 92 marks

ANSWER KEY

Q2)

- Total pens = 63 × 9 = 567
- Number of full packets = 567 ÷ 5 = 113 remainder **2**.

Q3)

(a) How many pears did Sarah buy?

Solution:

- Pears packed = 125 × 15 = 1,875
- Total pears = 1,875 + 7 = **1,882**.

(b) How many more pears must Sarah buy to have 180 boxes of 15 pears?

- Pears required = 180 × 15 = 2,700
- Additional pears needed = 2,700 - 1,882 = **818**.

Q4)

Number = (3 × 1,351) + 2 = **4,055**.

Q5)

Q1 Multiples of 4: $32, 36, 40, 44, 48$ **Answer: 5 numbers**	Q2 Numbers: $18, 36, 54$ **Answer: 3 numbers**	Q3 Multiples of 8: $40, 48, 56, 64$ **Answer: 4 numbers**
Q4 Common multiple of 2 and 3: $\mathrm{LCM}(2, 3) = 6$. Numbers: $12, 18, 24, 30, 36$ **Answer: 5 numbers**	Q5 Multiples of 7: $14, 28, 42, 56, 70, 84$ **Answer: 6 numbers**	Q6 Odd multiples of 3: $9, 15, 21, 27$ **Answer: 4 numbers**
Q7 Factors of 6: $1, 2, 3, 6 \rightarrow$ Even and < 5: 2 **Answer: 2**	Q8 Odd multiples of 7: 21	Q9 Factors of 24: $1, 2, 3, 4, 6, 8, 12, 24 \rightarrow$ Odd factors: 3 **Answer: 3**

Q10

Multiples of 9: $27, 36, 45, 54, 63, 72, 81$ → Even numbers: $36, 54, 72$.
Tens place smaller than ones place: **36**.
Answer: 36

Q11

Common multiple of 5 and 9: $\text{LCM}(5, 9) = 45, 90$.
Only 45 satisfies the condition.

Q12

Common multiples of 2 and 7: $28, 42, 56$.
Tens place is twice the ones place: **42**.
Answer: 42

Q13

Factors of 32 that are multiples of 8: $8, 16, 32$.
Answer: **16**.

Q14

Factors of 12: $1, 2, 3, 4, 6, 12$
Factors of 18: $1, 2, 3, 6, 9, 18$
Common Factors: $1, 2, 3, 6$
Z > 3: 6
Answer: $Z = 6$

Q15

Factors of 28: $1, 2, 4, 7, 14, 28$
Factors of 42: $1, 2, 3, 6, 7, 14, 21, 42$
Common Factors: $1, 2, 7, 14$
Y (1-digit odd number): 7
Answer: $Y = 7$

Q16

Factors of 12: $1, 2, 3, 4, 6, 12$
Factors divisible by 3: $3, 6, 12$
1-digit numbers: $3, 6$
Largest 1-digit: 6
Answer: $X = 6$

Q17

Factors of 24: $1, 2, 3, 4, 6, 8, 12, 24$
Factors smaller than 50: $1, 2, 3, 4, 6, 8, 12, 16, 24, 48$
Largest factor smaller than 50: 48
Answer: $C = 48$

Q18

Factors of 28: $1, 2, 4, 7, 14, 28$
Smallest 2-digit factor: 14
Answer: $B = 14$

Q19

Step 1: List out multiples of 3 (1-digit numbers):
$3, 6, 9$

Step 2: List out multiples of 4 (1-digit numbers) and add 1:

- $4 + 1 = 5$
- $8 + 1 = 9$

Step 3: Find the common number between Step 1 and Step 2:
The common number is **9**.

Q20

Step 1: List out multiples of 5 between 40 and 90:
$45, 50, 55, 60, 65, 70, 75, 80, 85, 90$

Step 2: Add 3 to each number and check divisibility by 7:

- $45 + 3 = 48$ → Not divisible by 7
- $50 + 3 = 53$ → Not divisible by 7
- $55 + 3 = 58$ → Not divisible by 7
- $60 + 3 = 63$ → **Divisible by 7**
- $65 + 3 = 68$ → Not divisible by 7
- $70 + 3 = 73$ → Not divisible by 7
- $75 + 3 = 78$ → Not divisible by 7
- $80 + 3 = 83$ → Not divisible by 7
- $85 + 3 = 88$ → Not divisible by 7
- $90 + 3 = 93$ → Not divisible by 7

Step 3: The only valid number is 60.

Q6

Q1

1. **Step 1: Divide 2007 by 3**

$$2007 \div 3 = 669$$

2. **Step 2: Multiply the result by 13**

$$669 \times 13 = 8697$$

3. **Step 3: Round to the nearest hundred**

$$8697 \rightarrow 8700$$

Q2

1. **Step 1: Multiply 567×16:**

$$567 \times 16 = 9072$$

2. **Step 2: Divide the result by 9:**

$$9072 \div 9 = 1008$$

3. **Step 3: Round to the nearest hundred:**

$$1008 \rightarrow 1000$$

Q3

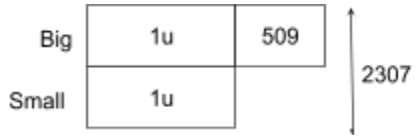
Step 1: Calculate $4 \times 4 = 16$:

This is given.

Step 2: Divide 9164 by 4:

$$9164 \div 4 = 2291$$

Q4

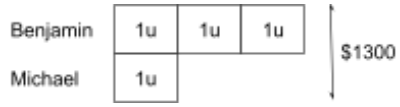


2307 - 509 = 1798 (2 units)
1 unit = **899**
Big = 899 + 509 = **1408**

Q5

Step 1: Multiply to ones
Step 2: Put tens value to next number
Step 3: + 0 when multiplied to tens value

Q6

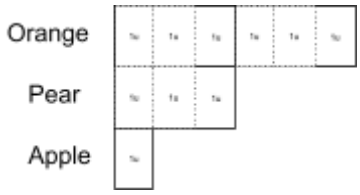


4 units = 1300
1 unit = **325**
Diff = 2 units = **650**

Q7

1 unit = 89
10u = **890**

Q8

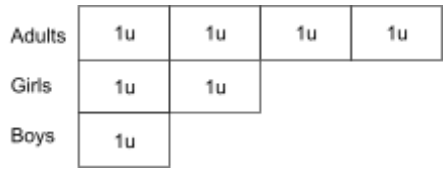


6 units = 258
1 unit = 43
10 units = **430**

Q9

2 units = 820
1 unit = 410
3 units = **1230**

Q10



2u = 378
1u = 189
3u = **567**

Q11

Cost of 10 tables: $\frac{1316}{2} \times 10 = 6580$

Q12

Daily cost: $\frac{732}{3} = 244$ Cost for 13 days: $244 \times 13 = 3172$

Q13

Total pencils: $25 \times 12 = 300$ Bundles: $\frac{300}{5} = 60$

Q14

Total oranges: $19 \times 48 = 912$ Sets of 8: $\frac{912}{8} = 114$Total amount: $114 \times 3 = 342$

Q15

1. **Step 1: Determine the number of groups of $4 in $16.**

Groups: $16 \div 4 = 4$

2. **Step 2: Calculate the total number of apples per group.**

Each group = 6 apples. Total apples: $4 \times 6 = 24$

Answer: 24 apples

Q16

1. $35 \div 5 = 7$ groups of 5 pears.
2. $7 \times 4 = 28$ dollars.

Answer: $28

Q17

1. **Sean:** $1u$
2. **Fred:** $3u$ (Fred has 3 times as much as Sean)
3. **Edwin:** $6u$ (Edwin has twice as much as Fred)

Answer: Sean = $1u$, Fred = $3u$, Edwin = $6u$

Q18

1. **Zack:** $1u$
2. **Arvin:** $2u$ (Arvin has 2 times as many as Zack)
3. **Jimmy:** $4u$ (Jimmy has 4 times as many as Zack)

Answer: Zack = $1u$, Arvin = $2u$, Jimmy = $4u$

Q19

1. **Nash:** $1u$
2. **Billy:** $2u$ (Billy is twice as heavy as Nash)
3. **Tom:** $9u$ (Tom is 3 times as heavy as the total mass of Billy and Nash, $2u + 1u = 3u$, so $3 \cdot 3u = 9u$)

Answer: Nash = $1u$, Billy = $2u$, Tom = $9u$

Q20

Sets of 5: $\frac{100}{5} = 20$ Total cost: $20 \times 3 = 60$

Q21

Sets of 3: $\frac{60}{4} = 15$ Total oranges: $15 \times 3 = 45$

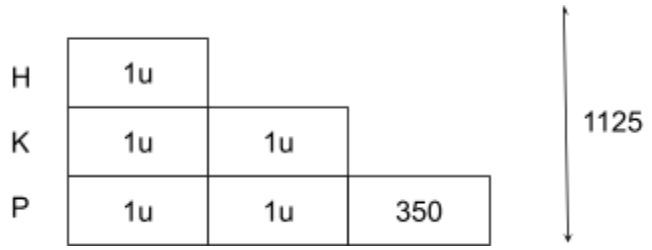
Q22

Smaller number: $\frac{540 - 188}{2} = 176$

Q23

4 units = 744
1 unit = **186**

Q7



Total = $1u + 2u + 2u + 350 = 1125$.

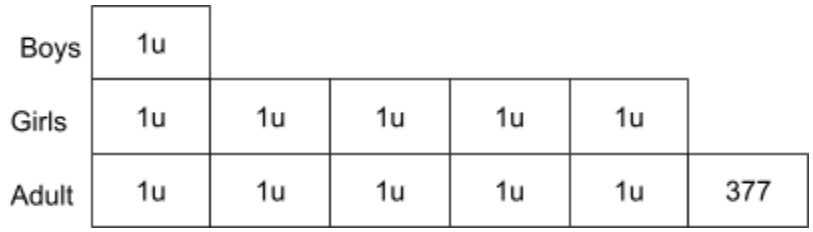
2. **Solve for u:**

$$5u + 350 = 1125 \quad \Rightarrow \quad 5u = 775 \quad \Rightarrow \quad u = 155$$

3. **Find Kellyn's amount:**

$$Kellyn = 2u = 2 \times 155 = 310$$

Q8



Total = $1u + 5u + 5u + 377 = 2113.$

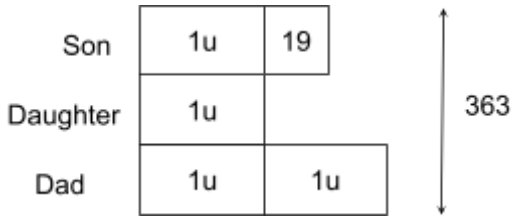
2. **Solve for u:**

$$11u + 377 = 2113 \quad \Rightarrow \quad 11u = 1736 \quad \Rightarrow \quad u = 158$$

3. **Find Girls:**

$$Girls = 5u = 5 \times 158 = 790$$

Q9



Total = $2u + 1u + (1u + 19) = 363.$

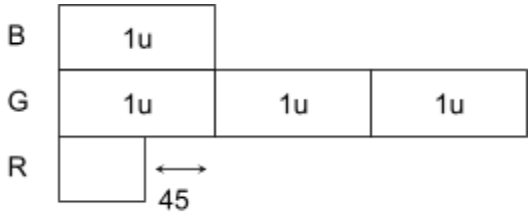
2. **Solve for u:**

$$4u + 19 = 363 \quad \Rightarrow \quad 4u = 344 \quad \Rightarrow \quad u = 86$$

3. **Find Son's Height:**

$$Son = 1u + 19 = 86 + 19 = 105\,\text{cm or } 1.05\,\text{m}.$$

Q10



Total = $1u + 3u + (1u - 45) = 760.$

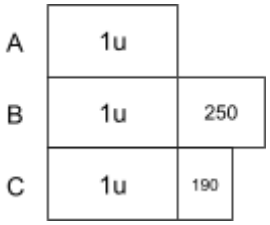
2. **Solve for u:**

$$5u - 45 = 760 \quad \Rightarrow \quad 5u = 805 \quad \Rightarrow \quad u = 161$$

3. **Find Green Marbles:**

$$Green = 3u = 3 \times 161 = 483$$

Q11



Total = $1u + (1u + 250) + (1u + 190) = 1085.$

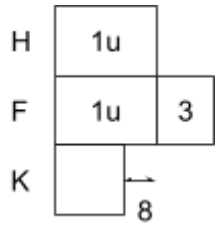
2. **Solve for u:**

$$3u + 440 = 1085 \quad \Rightarrow \quad 3u = 645 \quad \Rightarrow \quad u = 215$$

3. **Find Box C's Weight:**

$$BoxC = 1u + 190 = 215 + 190 = 405\,\text{g}.$$

Q12



Total = $1u + (1u + 3) + (1u - 8) = 412.$

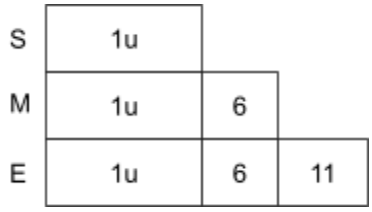
2. **Solve for u:**

$$3u - 5 = 412 \quad \Rightarrow \quad 3u = 417 \quad \Rightarrow \quad u = 139$$

3. **Find Helmi's Height:**

$$Helmi = 1u = 139\,\text{cm}.$$

Q13



Total = $1u + (1u + 6) + (1u + 6 + 11) = 248.$

2. **Solve for u:**

$$3u + 23 = 248 \quad \Rightarrow \quad 3u = 225 \quad \Rightarrow \quad u = 75$$

3. **Find English Marks:**

$$English = 1u + 6 + 11 = 75 + 6 + 11 = 92$$