Math Problems - Layout Preserved

# Question 1

On the first day of a school camp, there were 396 children. 27 boys left the camp on the second day. If there were twice as many boys as girls who remained at the camp, how many boys were there on the first day of the camp?

# Question 2

On Monday, Farmer Tom collected three times as many eggs as Farmer Jack. On Tuesday, Farmer Tom sold 160 eggs. Farmer Jack then had twice as many eggs as Farmer Tom. How many eggs did Farmer Jack have?

# Question 3

When George is 15 years old, his sister is 8 years old and his father is 45 years old. How old will George's sister be when George is half his father's age?

# Question 4

Linda and Serene had an equal number of balloons. After Linda used 16 balloons, Serene had 3 times as many balloons as Linda. How many balloons did Serene have?

# Question 5

Jennifer had a party. She wanted to give an equal number of balloons to her six friends. If one of her friends did not turn up for the party, the rest would be able to receive another 2 balloons each. How many balloons did Jennifer have?

# Question 6

Anna had three times as many beads as Zoe. They had 480 beads altogether. Mrs Taylor gave an equal number of beads to each of them. Zoe then had half the number of beads that Anna had. How many beads did Mrs Taylor give them?

# Question 7

Helen had to arrange some chairs in a fixed number of rows. She estimated that there were more than 30 but fewer than 70 chairs. If she put 8 chairs in one row, she would be 7 chairs short. If she put 7 chairs in one row, she would have 2 chairs left. How many chairs were there?

# Question 8

Zack and Mandy shared 120 sweets. After Zack gave Mandy 10 sweets, he had twice as many sweets as Mandy. How many sweets did each of them have at first?

# Question 9

A basket contained 4 times as many blue balls as red balls. After 21 blue balls were taken away, there were twice as many red balls as blue balls. How many balls were there in the basket at first?

# Question 10

Nancy had 1/3 as much money as Ben. Lucy had $20 more than Ben. They had $132 altogether. How much did each of them have?

# Question 11

There were three parcels, A, B and C. The mass of Parcel B was 3/4 kg less than the mass of Parcel A. The mass of Parcel C was 2/3 kg more than the mass of Parcel B. If the mass of Parcel A was 4½ kg, what was the mass of Parcel C?

# Question 12

Mr Rice spent 1/5 of his salary on food and 2/3 on clothing. Half of the remaining amount was given to his wife and he saved the rest. If he had saved $520, what was Mr Rice’s salary?

# Question 13

Sam had some marbles. He gave 1/7 of them to his brother. 2/3 of the remaining marbles were given to his cousin. The rest were kept in a box. If 48 marbles were kept in the box, how many more marbles did Sam give to his cousin than to his brother?

# Question 14

Mrs Anderson bought 60 eggs. She used 2/5 of them to bake cakes. She used some eggs to bake cookies. She had 12 eggs left. How many eggs did she use for baking cookies?

# Question 15

2/7 of the members in a country club are men. 1050 women in the country club are below 50 years old. If there are 960 more women than men in the country club, how many women are above 50 years old?

# Question 16

Stephanie had a total of 80 pieces of $2 and $10 notes. After spending 2/5 of her $2 notes and 8 pieces of her $10 notes, she had an equal number of $2 and $10 notes left. How much money did Stephanie have at first?

# Question 17

3/5 of the animals on a farm are ducks and the rest are chickens. 1/5 of the chickens are brown and the rest are white. If there are 24 white chickens, how many more ducks than chickens are there on the farm?

# Question 18

Susan earns $2450 a month. She spends 2/5 of it and saves the rest. Andy earns $800 less than Susan. He spends $180 more than Susan each month and saves the rest. How much more can Susan save than Andy in half a year?

# Question 19

On Monday, a shopkeeper sold 12½ kg of flour. He sold 5/6 kg more flour on Tuesday than on Monday. On Wednesday, he sold 1½ kg less flour than on Tuesday. He then had 1/3 kg of flour left in his shop. How much flour did he have at first?

# Question 20

2/7 of the toy cars in a box are silver. 1/10 of the remainder are yellow and the rest are black. If there are 28 silver toy cars, how many black toy cars are there in the box?

# Question 21

Andrew and Ryan shared some chocolates. Andrew gave away 1/4 of his chocolates. 1/4 of the given chocolates were taken by Ryan. Ryan then had the same number of chocolates as Andrew. If Andrew gave away 12 chocolates, how many chocolates did each of them have at first?

# Question 22

Boxes A and B contained 112 pencils. When 1/5 of the pencils in box A were transferred to box B, both boxes contained the same number of pencils. How many more pencils were there in box A than in box B at first?

# Question 23

Andrea spent 1/5 of her salary on food and 1/10 on transport. She gave the remaining amount to her three brothers equally. One of her brothers spent all his money on a radio that cost $86 and a watch that cost $145 respectively. What was Andrea’s salary?

# Question 24

Ann and James had some stickers. After Ann gave James 1/4 of her stickers, James had twice as many stickers as Ann. If they had a total of 117 stickers, how many stickers did each of them have in the beginning?

# Question 25

Mrs Brown gave 4/7 of her money to her son. He spent 2/5 of the money on a pair of shoes and the rest on two books that cost $18 each. How much did Mrs Brown have at first?

# Question 26

Ray sold 2/3 of the charity tickets that Cindy sold. Cindy sold 3/4 of the charity tickets that Gina sold. Each charity ticket cost $2. The children collected a total of $648. How many charity tickets did Gina sell?

# Question 27

There were 3/4 as many sweets in box A as in box B. 1/2 of the sweets in box A and 3/8 of the sweets in box B were removed. There were then 152 sweets left in both boxes altogether. How many sweets were there in each box at first?

# Question 28

After their shopping trip, Mike spent 3/5 of his money, Evon spent 1/2 of hers and Sue spent $50. They then had the same amount of money left. If the total amount of money left was $54, what was the total amount of money Mike and Sue had at first?

# Question 29

A baker sold twice as many buns on Sunday than on Saturday. On Monday, he sold 1/4 of the buns he sold on Sunday. If he sold a total of 1260 buns during the three days, how many buns did he sell on Sunday?

# Question 30

Joan and Alan had some money. 2/3 of Joan’s money was 1/2 of what Alan had. If Alan spent all his money on a book that cost $45 and a wallet that cost $98, how much did Joan and Alan have altogether?

# Question 31

Boxes A and B contained 150 marbles altogether. When 1/3 of the marbles in box A were transferred to box B and 12 marbles were taken out from box B, there were twice as many marbles in box B than in box A. How many marbles were there in box B in the beginning?

# Question 32

During a sale, Betty bought a watch at 3/5 its normal price. She then had $220 left. If she had bought the watch at its normal price, she would be $10 short. What was the normal price of the watch?

# Question 33

Mr Smith sold 1/4 of his eggs on Monday and 1/4 of the remainder on Tuesday. The rest were sold on Wednesday. If he sold 144 eggs on Wednesday, how many eggs did he have in the beginning?

# Question 34

Sam could buy 4 magazines and 3 books with all his money. He decided to buy 2 magazines and a book. He then had $84 left. If a magazine cost 1/3 the price of a book, how much did Sam have at first?

# Question 35

A farmer sold some eggs in the morning. He then packed the remaining eggs into 15 cartons with 25 eggs in each carton. If the number of eggs he sold was 3/5 of the number of eggs he packed, how many eggs did the farmer have at first?

# Question 36

There were some candles in a box. 1/3 of the candles were green. There were twice as many blue candles as red candles and 1/4 as many yellow candles as red candles. If there were 24 red candles, how many candles were there in the box altogether?

# Question 37

There were twice as many oranges as apples in a box and three times as many pears as apples. When 1/4 of the oranges were eaten, there were 21 oranges left in the box. How many pieces of fruit were there in the box at first?

# Question 38

Elaine had some sweets. When she ate 2/7 of them and gave 36 sweets to her brother, she had 2/7 of the sweets left. How many sweets did she have at first?

# Question 39

Jug A contained 35/12 l of water. Jug A contained 12/3 l less water than jug B. Jug C contained 5/6 l less water than jug B. The water in the three jugs was poured into a container. How much water was there in the container in the end?

# Question 40

Mrs Crawford baked some pies. She gave 1/3 of them to her neighbour. She then gave 5/12 of the remainder to a children’s home. The rest of the pies were packed into 25 boxes with 14 pies in each box. How many pies did Mrs Crawford bake altogether?

# Question 41

Sandy spent 3/5 of her money in a toy shop on a teddy bear for $38 and a toy train for $46. The remaining money was then spent on 5 similar books. How much did each book cost?

# Question 42

Jeff sold 120 oranges on Friday. He sold 100 fewer oranges on Friday than on Saturday. The number of oranges he sold on Sunday was three times the number he sold on Friday. If he had 2/7 of the oranges left, how many oranges did he have at first?

# Question 43

There were 120 more eggs in box A than in box B. There were 2/3 as many eggs in box C than in box B. When half of the eggs in box B were sold, there were 222 eggs left in box B. How many eggs were there altogether?

# Question 44

Alfred had 72 mugs. He sold some of them for $144. He then had 7/8 of the mugs left. How much would he get if he had sold all the mugs?

# Question 45

There were some chicken wings and fishballs in a pack. After 2/7 of the chicken wings were taken out from the pack, there were 3/10 as many chicken wings as fishballs in the pack. If there were 50 fishballs, how many chicken wings were there in the pack at first?

# Question 46

There were half as many yellow T-shirts as blue T-shirts in a box and 15 more green

T-shirts than blue T-shirts. There were 27 yellow T-shirts. How many T-shirts were left in the box when 4/5 of the T-shirts were taken out?

# Question 47

There were some pears in boxes A and B. When 1/3 of the pears were taken out from box A and 5/9 of the pears were taken out from box B, there was an equal number of pears in both boxes. If 84 pears were taken out, how many pears were there in both boxes at first?

# Question 48

Agnes had a total of 135 balloons. There were three times as many red balloons as green balloons, twice as many blue balloons as green balloons and some purple balloons. When 12 green balloons burst, there were 1/3 as many green as purple balloons left. Find the total number of purple and green balloons Agnes had at first.

# Question 49

Michael paid $14 for 3 similar mangoes and a durian. The durian cost $2 more than each mango. What was the total cost of 5 mangoes and 4 durians?

# Question 50

A blouse costs half as much as a shirt. If the total cost of 3 similar blouses and a shirt is

$200, what is the cost of 7 blouses and 4 shirts?

# Question 51

Colin paid $12 for 4 buns and 4 cakes. 3 buns cost as much as 2 cakes. What was the total cost of 6 buns and 9 cakes?

# Question 52

The total cost of a radio, a clock and a blender is $215. The radio costs $35 more than the blender. The blender costs $45 more than the clock. What is the cost of the radio?

# Question 53

Betty had twice as much money as Johnson. After Betty spent $350, she had $25 less than Johnson. Find the total amount of money they had at first.

# Question 54

Connie and Alice had an equal amount of money at first. Connie gave Alice $126 and Alice had 4 times as much money as Connie in the end. How much money did Connie have at first?

# Question 55

Terence and Winnie had a total of 27 coins. When Terence gave Winnie 1/4 of his coins, she had twice as many coins as him. Winnie then found out that she had twice as many twenty-cent coins as ten-cent coins. How much money did she have in the end?

# Question 56

Hazel had enough money to buy 25 chocolate cookies. Each chocolate cookie cost as much as 2 butter cookies. Hazel borrowed another $6 from her mother to buy 20 chocolate cookies and 20 butter cookies. How much money did Hazel have at first?

# Question 57

A book costs three times as much as a pen. 5 similar pens cost as much as a photo frame. If 3 similar photo frames cost $74.25, what is the total cost of a book, a pen and a photo frame?

# Question 58

For every T-shirt that Joel sells, he will receive $12. He will receive another $5 for every set of 10 T-shirts he sells. If he sells 100 T-shirts, he will receive an additional $50 bonus. How many T-shirts does Joel have to sell to receive $1372 in total?

# Question 59

4 boxes of coloured pencils cost as much as 3 boxes of paint. Natalie had just enough money to buy 7 boxes of paint and 2 boxes of coloured pencils. If a box of paint cost

$5.40, how much would Natalie have left if she only bought 5 boxes of paint?

# Question 60

Jeffrey had 4 times as many twenty-cent coins as ten-cent coins and 1/3 as many fifty-cent coins as ten-cent coins. If he had 2 fifty-cent coins, how much money would he have left if he spent $2.75 on a pair of socks?

# Question 61

Michael had some flowers. He sold 2/3 of them at 90¢ each and the rest at 50¢ each. Fanny sold the same number of flowers at 80¢ each, collecting a total of $7.20. How much did Michael collect?

# Question 62

When Nelly bought 5 pencils, she spent the same amount as Benjamin who bought 3 pens. If Benjamin spent 2/7 of his money buying the pens and he had $45 left, what was the total cost of a pencil and a pen?

# Question 63

Ron earns $12 an hour on weekdays and twice as much on weekends. Ron works 8 hours a day on weekdays and 5 hours a day on Saturdays and Sundays. How much will he earn in 2 weeks if he works every day?

# Question 64

The cost of a magazine and 2 books is $34. The cost of 3 magazines and 4 books is $76. If Tasha buys 13 magazines and 9 books, how much money does she spend?

# Question 65

An apple and two oranges cost $2.30. Two apples and an orange cost $2.50. What is the cost of 4 apples and 6 oranges?

# Question 66

Mrs Bellamont sold twice as many butter cookies as chocolate chip cookies and twice as many chocolate chip cookies as coconut cookies. Each box of 4 cookies was sold for

$4.50. 80 chocolate chip cookies were sold. How much would Mrs Bellamont collect from the sale of all the cookies?

# Question 67

The total mass of Gilbert and Sean was 124 kg. If Sean lost 1/4 of his mass, he would be 45 kg. How much heavier was Gibert compared to Sean?

# Question 68

4 parcels, A, B, C and D have a total mass of 100.75 kg. Parcel A weighs 12.45 kg more than parcel B. Parcel B weighs 8.4 kg less than parcel C. Parcel C weighs 24.2 kg. How much heavier is parcel D than parcel C?

# Question 69

Box A was 3.45 kg heavier than box B. When 1.2 kg of items in box A was removed, box A became four times as heavy as box B. What was the mass of box A in the beginning?

# Question 70

The mass of a box is 45 kg when it is full. When half of the items in the box are taken out, the mass of the remaining items and the box is 33 kg. What is the mass of 6 empty boxes?

# Question 71

9 small squares are used to form a large square. If each side of a small square is 7 cm, what is the area of the large square?

# Question 72

The area of a square is 81 cm². Find the perimeter of the unshaded portion.

# Question 73

The perimeter of a rectangle is 288 cm. The length is three times the breadth. Find the area of the rectangle.

# Question 74

A wire was cut and 2/3 of it was bent to form a square. The remaining length of the wire was bent to form a rectangle. The area of the square was 36 cm². What was the length of the wire at first?

# Question 75

Jenny draws a picture on a piece of paper with a border of 4 cm around the picture. The length of the paper is 24 cm. If the breadth of the picture is 8 cm, find the area of the border.

# Question 76

The perimeter of a square is half the area of a rectangle. A wire is bent to form 3 such squares and 2 such rectangles. 20 cm of wire is left. If the length of the rectangle is 15 cm and its breadth is 12 cm, find the length of the wire.

# Question 77

The perimeter of rectangle EFGH is 180 cm. YH is twice GZ. If EF is 24 cm and YH is 12 cm, what is the area of rectangle ABCD?

# Question 78

Mr Cox wants to put a fence around his garden. His garden is in the shape of two similar rectangles and three similar squares. If it costs $23 to fence two metres of his garden, how much will Mr Cox have to pay to fence the entire garden?

# Question 79

Mr Richard is five times as old as his son now. In 8 years' time, their total ages will be 58 years. (a) What is his son's present age? (b) How old will Mr Richard be in 8 years' time?

# Question 80

Jane and Mark had $240 altogether. When Jane gave Mark half of her money, Mark had four times as much money as Jane. (a) How much did Jane have at first? (b) How much did Mark have at first?

# Question 81

Mrs Fleming spent 1/3 of her money on a handbag and 3/4 of the remainder on jewellery. She then saved the rest. If she spent $450 on a bracelet and $90 on a pair of earrings, (a) how much money did she save? (b) how much money did she have at first?

# Question 82

Sean had some money. He used 2/3 of it to buy a watch and spent 3/4 of the remainder on a wallet. If the watch cost $65 more than the wallet, (a) how much money had Sean left?

(b) how much money did Sean have at first?

# Question 83

1/3 of the books on a shelf are English books. 1/2 of the remainder are Chinese books and the rest are Malay books. 1/4 of the Chinese books are torn. If 54 Chinese books are not torn, (a) how many Malay books are there? (b) how many books are there altogether?

# Question 84

Two numbers are written on a piece of paper. 1/5 of the first number is 12 more than 1/2 of the second number. The sum of the two numbers is 221. (a) What is the first number? (b) What is the second number?

# Question 85

Gracia had some pens. 2/5 of the pens were blue and 1/6 of the remainder were black. The rest were red and green. There were 12 more red pens than blue pens. If there were 24 green pens, (a) how many red and blue pens did Gracia have? (b) how many pens did Gracia have altogether?

# Question 86

The total number of oranges in cartons A and B was 324. When 3/7 of the oranges in carton A were sold, there were twice as many oranges in carton A than in carton B. (a) How many oranges were there in carton A at first? (b) How many oranges were there in

carton B at first?

# Question 87

On Monday, Mr Hall sold 246 lemons and Mr Clement sold half as many lemons as Mr Hall. On Tuesday, Mr Hall sold 83 lemons and Mr Clement sold some lemons. The total number of lemons sold by Mr Clement over the two days was 4/7 the number that Mr Hall sold. (a) How many lemons did Mr Clement sell on Tuesday? (b) How many lemons did both men sell altogether on both days?

# Question 88

Cleo and Diana were given the same amount of money each day. Cleo spent 4/7 of her money and Diana spent 2/3 of her money every day. They then saved the rest of their money. After a week, Cleo saved $56 more than Diana. (a) How much money did Cleo spend a day? (b) How much money did Diana spend a day?

# Question 89

A box of apples costs 2/7 the price of a box of oranges. There are 1/3 as many apples as oranges in one box. If there are 90 oranges in one box and an orange costs 70¢, (a) how much does a box of apples cost? (b) how many apples are there in one box?

# Question 90

Katherine and Leslie had a total of 140 sweets. When Leslie gave Katherine 1/4 of his sweets and Katherine ate 5 of her sweets, Katherine had twice as many sweets as Leslie.

(a) How many sweets did Leslie have at first? (b) How many sweets did Katherine have at first?

# Question 91

There were some pears and apples in a box. If 4 pears were taken out from the box, there would be an equal number of pears and apples in the box. If 7 pears were taken out from the box, there would be 4/5 as many pears as apples in the box. (a) How many apples were there in the box at first? (b) How many pears were there in the box at first?

# Question 92

There were some spectators at a tennis match. 1/3 of them belonged to the tennis club. 1/6 of those who did not belong to the club were adults and the rest were children. If there were 120 more children than adults who did not belong to the club, (a) how many people belonged to the tennis club? (b) how many spectators were there at the tennis match?

# Question 93

Five apples cost as much as two papayas. Mrs Lynch could buy 18 papayas. If she had bought 12 papayas, she would have $30 left. (a) How much did each papaya cost? (b) How much would three apples and three papayas cost?

# Question 94

Joey had some twenty-cent and ten-cent coins. When she used 1/3 of them, she had

$9.60 left. She used half as many twenty-cent coins as ten-cent coins. (a) How many twenty-cent coins did she use? (b) How many ten-cent coins did she use?

# Question 95

James spent 1/5 of his money on a pair of shoes and 1/10 on a book. He saved 2/7 of the remaining money and the rest of the money was given to and shared equally among his 8 brothers. If each brother received $5, (a) how much money did James have at first? (b) how much money did James spend?

# Question 96

Vivian and her brother had some money. After spending 2/5 of his money, her brother had

$78 left. Vivian spent 1/3 of her money and had the same amount of money left as her brother. (a) How much money did Vivian have at first? (b) How much money did Vivian’s brother have at first?

# Question 97

A piece of wire is cut into two equal pieces. One piece is bent to form two similar squares with sides 12 cm. The other piece is bent into three similar rectangles, each with a breadth of 6 cm. (a) Find the length of the piece of wire at first. (b) Find the area of each rectangle.

# Question 98

The figure shows 3 identical rectangles. The shaded areas where the rectangles overlap form squares of 25 cm² each. (a) Find the perimeter of the whole figure. (b) Find the total area of the unshaded parts.

# Question 99

Step 1: Draw a model Step 2: Find how many children remained at the camp Step 3: Find the number of girls at the camp Step 4: Find the number of boys there were on the first day of camp

# Question 100

Step 1: Draw a model Step 2: Find the number of years for George to be half of his father's age Step 3: Find his sister's age in 15 years' time

# Question 101

Step 1: Draw a model Step 2: Find the number of eggs Farmer Tom had left Step 3: Find the number of eggs Farmer Jack had

# Question 102

Step 1: Draw a model Step 2: Find the number of balloons Linda had after using 16 balloons Step 3: Find the number of balloons Serene had

# Question 103

Step 1: Draw a model 6 friends given out if 1 friend did not turn up Step 2: Find the number of balloons that would be given out if 1 friend did not turn up 5 x 2 = 10 Step 3: Find the number of balloons that Jennifer had 6 x 10 = 60 Jennifer had 60 balloons.

# Question 104

Method 1 Step 1: Use the 'Guess and Check' method to find the total number of chairs 8 chairs in 1 row Number of rows : 9 Total number of chairs : 65 Method 2 Step 1: Draw diagrams If she placed 7 chairs in one row, she would have 2 chairs left. If she placed 8 chairs in one row, she would be 7 chairs short. Step 2: Find the total number of chairs (see diagram on the left) 7 x 9 = 63 63 + 2 = 65 or Find the total number of chairs (see diagram on the right) 8 x 2 = 16 7 x 7 = 49 16 + 49 = 65 There were 65 chairs.

# Question 105

Step 1: Draw a model Zack Mandy Step 2: Find the number of sweets Mandy had in the end 3 units  120 1 unit  120 ÷ 3 = 40 Step 3: Find the number of sweets Mandy had at

first 40 - 10 = 30 Step 4: Find the number of sweets Zack had at first 2 units  2 × 40 = 80

80 + 10 = 90 Mandy had 30 sweets and Zack had 90 sweets at first.

# Question 106

Step 1: Draw a model Nancy Ben Lucy Step 2: Find the amount of money Nancy had $132

- $20 = $112 7 units  $112 1 unit  $112 ÷ 7 = $16 Step 3: Find the amount of money Ben had 3 units  3 × $16 = $48 Step 4: Find the amount of money Lucy had $48 + $20 =

$68 Nancy had $16. Ben had $48. Lucy had $68.

# Question 107

Step 1: Draw a model blue red Step 2: Find the total number of balls at first 7 units  21 1 unit  21 ÷ 7 = 3 10 units  10 × 3 = 30 There were 30 balls in the basket at first.

# Question 108

Step 1: Draw a model Step 2: Find the mass of parcel B

# Question 109

Step 1: Change 1/5 and 2/3 into equivalent fractions Step 2: Draw a model Step 3: Find Mr Rice's salary

# Question 110

Step 1: Draw a model Step 2: Find the number of marbles Sam gave to his brother Step 3: Find how many more marbles Sam gave to his cousin than to his brother

# Question 111

Step 1: Draw a model Step 2: Find the number of eggs she used to bake cakes 5 units  60 1 unit  60 ÷ 5 = 12 2 units  2 × 12 = 24 Step 3: Find the number of eggs she used for baking cookies 60 - 24 - 12 = 24 She used 24 eggs for baking cookies.

# Question 112

Step 1: Draw a model Step 2: Find the total number of women in the country club 3 units

 960 1 unit  960 ÷ 3 = 320 5 units  5 × 320 = 1600 Step 3: Find the number of

women who are above 50 years old 1600 - 1050 = 550 550 women are above 50 years old.

# Question 113

Step 1: Draw a model Step 2: Find the number of pieces of notes left after spending 8 pieces of $10 notes 80 - 8 = 72 Step 3: Find the number of pieces of $2 notes 8 units  72 1 unit  72 ÷ 8 = 9 5 units  5 × 9 = 45 Step 4: Find the number of $10 notes 3 units  3

× 9 = 27 27 + 8 = 35 Step 5: Find the amount of money she had at first 45 × $2 = $90 35 ×

$10 = $350 $90 + $350 = $440 Stephanie had $440 at first.

# Question 114

Step 1: Draw a model Step 2: Find the amount of flour sold on Tuesday Step 3: Find the amount of flour sold on Wednesday Step 4: Find the total amount of flour he had at first

# Question 115

Step 1: Draw a model Step 2: Find the number of black toy cars in the box

# Question 116

Step 1: Draw a model Step 2: Find the number of chocolates Andrew had at first Step 3: Find the number of chocolates taken by Ryan Step 4: Find the number of chocolates Ryan had at first

# Question 117

Step 1: Draw a model Step 2: Find the number of pencils transferred to box B Step 3: Find how many more pencils there were in box A than box B at first

# Question 118

Step 1: Draw a model Step 2: Find the number of stickers given by Ann Step 3: Find the number of stickers for each of them

# Question 119

Step 1: Draw a model Step 2: Find the amount of money she gave to her three brothers Step 3: Find Andrea's salary

# Question 120

Step 1: Draw a model Step 2: Find the amount of money her son received Step 3: Draw another model Step 4: Find the amount of money Mrs Brown had at first

# Question 121

Step 1: Draw a model Ray Cindy Gina $648 Step 2: Find the total number of charity tickets that three of them sold $648 ÷ $2 = 324 tickets Step 3: Find the number of charity tickets that Gina sold 9 units  324 1 unit  324 ÷ 9 = 36 4 units  4 × 36 = 144 Gina sold 144 charity tickets.

# Question 122

Step 1: Draw a model Before Mike Sue Evon After Mike Sue Evon Step 2: Find the amount of money for 1 unit 6 units  $54 1 unit  $54 ÷ 6 = $9 Step 3: Find the total amount of money Mike and Sue had at first 7 units  7 × $9 = $63 $63 + $50 = $113 The total amount of money Mike and Sue had at first was $113.

# Question 123

Step 1: Draw a model Before box A box B After box A box B Step 2: Find the number of sweets for 1 unit 8 units  152 1 unit  152 ÷ 8 = 19 Step 3: Find the number of sweets in each box Box A  6 × 19 = 114 Box B  8 × 19 = 152 There were 114 sweets in box A and 152 sweets in box B at first. Answers: Box A: 114 sweets Box B: 152 sweets

# Question 124

Step 1: Draw a model Saturday Sunday Monday Step 2: Find the number of buns the baker sold on Monday 7 units  1260 1 unit  1260 ÷ 7 = 180 Step 3: Find the number of buns the baker sold on Sunday 4 units  4 × 180 = 720 He sold 720 buns on Sunday.

Answer: 720 buns

# Question 125

Step 1: Draw a model Joan $45 + $98 Alan $45 + $98 = $143 Step 2: Find the total amount of money Alan had $45 + $98 = $143 Step 3: Find the amount of money for 1 unit 4 units  $143 1 unit  $143 ÷ 4 = $35.75 Step 4: Find the total amount of money Joan

and Alan had 7 units  7 × $35.75 = $250.25 Joan and Alan had $250.25 altogether.

# Question 126

Step 1: Draw a model $220 Step 2: Find the amount of money for 1 unit 2 units  $220 +

$10 = $230 1 unit  $230 ÷ 2 = $115 Step 3: Find the normal price of the watch 5 units 

5 × $115 = $575 The normal price of the watch was $575.

# Question 127

Step 1: Draw a model Step 2: Find the number of marbles for 1 unit 6 units  150 - 12 = 138 1 unit  138 ÷ 6 = 23 Step 3: Find the number of marbles in box B in the beginning 3

units  3 × 23 = 69 69 + 12 = 81 There were 81 marbles in box B in the beginning.

Answer: 81 marbles

# Question 128

Step 1: Draw a model Step 2: Find the number of eggs for 1 unit 9 units  144 1 unit 

144 ÷ 9 = 16 Step 3: Find the number of eggs he had in the beginning 16 units  16 × 16

= 256 He had 256 eggs in the beginning. Answer: 256 eggs

# Question 129

Step 1: Draw a model Step 2: Find the cost of one such magazine Step 3: Find the amount of money he had at first

# Question 130

Step 1: Find the total number of eggs the farmer packed Step 2: Draw a model Step 3: Find the number of eggs the farmer had at first

# Question 131

Step 1: Draw a model Step 2: Find the total number of yellow, red and blue candles Step 3: Find the total number of candles in the box

# Question 132

Step 1: Draw a model Step 2: Find the number of pies that she packed into boxes Step 3: Find 1/3 of Mrs Crawford's pies Step 4: Find the total number of pies Mrs Crawford baked

# Question 133

Step 1: Draw a model Step 2: Find the amount of money Sandy spent on the bear and toy train Step 3: Find the amount of money she had left Step 4: Find the cost of each book

# Question 134

Step 1: Draw a model Step 2: Find the total number of oranges he sold Step 3: Draw another model Step 4: Find the number of oranges he had at first

# Question 135

Step 1: Draw a model Step 2: Find the number of eggs for 1 unit Step 3: Find the total number of eggs

# Question 136

Step 1: Draw a model Step 2: Find the number of mugs Alfred sold Step 3: Find the cost of 1 mug Step 4: Find the amount of money he would get if he had sold all the mugs

# Question 137

Step 1: Draw a model Step 2: Find the number of chicken wings left in the pack Step 3: Find the number of chicken wings in the pack at first

# Question 138

Step 1: Draw a model Step 2: Find the total number of T-shirts Step 3: Draw another model Step 4: Find the number of T-shirts left in the box

# Question 139

Step 1: Draw a model Step 2: Find the number of pears for 1 unit Step 3: Find the number of pears in both boxes

# Question 140

Step 1: Draw a model Step 2: Find 1 unit of the purple balloons Step 3: Find the total number of purple and green balloons

# Question 141

Step 1: Draw a model mango mango mango durian

# Question 142

Step 1: Draw a model blouse shirt 1 shirt

# Question 143

Step 1: Draw a model Step 2: Find the cost of each bun Step 3: Find the cost of each cake Step 4: Find the total cost of 6 buns and 9 cakes

# Question 144

Step 1: Draw a model Step 2: Find the value of 3 units Step 3: Find the cost of the clock Step 4: Find the cost of the radio

# Question 145

Step 1: Draw a model Betty Johnson $350 $25 1 unit 1 unit Step 2: Find the amount of money Johnson had $350 - $25 = $325 Step 3: Find the total amount of money they had at first 1 unit  $325 3 units  3 × $325 = $975 They had $975 at first.

# Question 146

Step 1: Draw a model Connie Alice $126 Step 2: Find the amount of money for 1 unit 3 units  $126 1 unit  $126 ÷ 3 = $42 Step 3: Find the amount of money Connie had at first 5 units  5 × $42 = $210 Connie had $210 at first.

# Question 147

Step 1: Draw a model Terence Winnie 27 coins Step 2: Find the number of coins Winnie had 9 units  27 1 unit  27 ÷ 9 = 3 6 units  6 × 3 = 18 Step 3: Draw another model ten-cent coins twenty-cent coins 18 coins Step 4: Find the number of ten-cent and

twenty-cent coins Winnie had ten-cent coins  18 ÷ 3 = 6 twenty-cent coins  2 × 6 = 12 Step 5: Find the amount of money Winnie had in the end 6 × 10¢ = 60¢ 12 × 20¢ = 240¢ 60¢ + 240¢ = 300¢ = $3 She had $3 in the end.

# Question 148

Step 1: Draw a model to compare the prices of chocolate and butter cookies 20 butter cookies cost as much as 10 chocolate cookies. Therefore, 20 butter cookies and 20 chocolate cookies cost as much as 30 chocolate cookies. Step 2: Draw a model to find the amount of money Hazel had at first 5 chocolate cookies  $6 1 chocolate cookie  600¢

÷ 5 = 120¢ 25 chocolate cookies  25 × 120¢ = 3000¢ = $30 Hazel had $30 at first.

# Question 149

Step 1: Draw a model pen book photo frame $74.25 Step 2: Find the cost of 1 unit 15 units

 $74.25 1 unit  $74.25 ÷ 15 = $4.95 Step 3: Find the cost of a book, a pen and a photo frame 9 units  9 × $4.95 = $44.55 The total cost of a book, a pen and a photo frame is

$44.55. Answer: $44.55

# Question 150

Step 1: Find the amount of money he would receive if he sold 1 T-shirt, 10 T-shirts and 100 T-shirts respectively 1 T-shirt | $12 10 T-shirts | 10 × $12 + $5 = $120 + $5 = $125 100 T-shirts | (100 × $12) + (10 × $5) + $50 = $1200 + $50 + $50 = $1300 Step 2: Find the number of T-shirts he would have to sell if he wanted to receive $1372 $1372 - $1300 =

$72 $72 ÷ $12 = 6 100 T-shirts + 6 T-shirts = 106 T-shirts Joel would have to sell 106 T-shirts if he wanted to receive $1372 in total. Answer: 106 T-shirts

# Question 151

Solution to Question 59 Step 1: Draw a model paint $5.40 $5.40 $5.40 coloured pencils

# Question 152

Solution to Question 60 Step 1: Draw a model 20¢ 10¢ 50¢ Step 2: Find the number of coins in the different denominations Number of ten-cent coins  3 × 2 = 6 Number of twenty-cent coins  12 × 2 = 24 Step 3: Find the amount of money in the different denominations Amount of money in fifty-cent coins  2 × 50¢ = 100¢ Amount of money in ten-cent coins  6 × 10¢ = 60¢ Amount of money in twenty-cent coins  24 × 20¢ = 480¢ Step 4: Find the amount of money he had at first 100¢ + 480¢ + 60¢ = 640¢ Step 5: Find the amount of money he had left if he spent $2.75 on a pair of socks $1 = 100¢ 640¢ - 275¢ = 365¢ = $3.65 He would have $3.65 left if he spent $2.75 on a pair of socks.

# Question 153

Step 1: Find the number of flowers Fanny had $7.20 ÷ 80¢ = 720¢ ÷ 80¢ = 72 ÷ 8 = 9 Step 2: Find the amount collected for selling 2/3 of the flowers at 90¢ each 2/3 × 9 = 6 flowers 6

× 90¢ = 540¢ Step 3: Find the amount collected for selling the rest of the flowers at 50¢ each 9 - 6 = 3 flowers 3 × 50¢ = 150¢ Step 4: Find the total amount of money Michael collected 540¢ + 150¢ = 690¢ = $6.90

# Question 154

Step 1: Draw a model 3 pens or 5 pencils $45 Step 2: Find the cost of 3 pens or 5 pencils 5 units  $45 1 unit  $45 ÷ 5 = $9 2 units  2 × $9 = $18 Step 3: Find the cost of 1 pencil and 1 pen pencil: $18 ÷ 5 = $3.60 pen: $18 ÷ 3 = $6 $3.60 + $6 = $9.60 The total cost of a pencil and a pen was $9.60.

# Question 155

Step 1: Find the number of hours Ron worked for 10 weekdays 10 days × 8 hours = 80 hours Step 2: Find the number of hours Ron had worked for 4 days over 2 weekends weekend = Sat + Sun 4 days × 5 hours = 20 hours Step 3: Find the amount of money Ron earned in 10 weekdays 80 hours × $12 = $960 Step 4: Find the amount of money Ron earned in 4 days over 2 weekends 2 × $12 = $24 20 hours × $24 = $480 Step 5: Find the amount of money Ron will earn in 2 weeks $960 + $480 = $1440 He will earn $1440 in 2 weeks.

# Question 156

Step 1: Draw a model Step 2: Find the cost of 1 magazine $34 × 2 = $68 $76 - $68 = $8 Step 3: Find the cost of 1 book $34 - $8 = $26 $26 ÷ 2 = $13 Step 4: Find the cost of 13 magazines and 9 books 13 magazines  13 × $8 = $104 9 books  9 × $13 = $117 Total

 $104 + $117 = $221 She spends $221.

# Question 157

Step 1: Draw a model $2.30 $a $o $a $o $o $2.30 $a $a $o $2.50 Rearrange the model

$2.30 × 2 $a $a $o $o $o $a $a $o $o $o $a $a $o $o $o $2.50 a : apple o : orange Step 2: Find the cost of 1 orange $2.30 × 2 = $4.60 $4.60 - $2.50 = $2.10 $2.10 ÷ 3 = $0.70 Step 3: Find the cost of 1 apple $2.50 - $0.70 = $1.80 $1.80 ÷ 2 = $0.90 Step 4: Find the cost of 4 apples and 6 oranges 4 × $0.90 = $3.60 6 × $0.70 = $4.20 $3.60 + $4.20 = $7.80 The cost of 4 apples and 6 oranges is $7.80.

# Question 158

Step 1: Draw a model butter chocolate chip coconut Step 2: Find the total number of cookies 1 unit  80 ÷ 2 = 40 7 units  7 × 40 = 280 Step 3: Find the number of boxes that

she used to put the cookies in 280 ÷ 4 = 70 Step 4: Find the total amount of money she collected 70 × $4.50 = 7 × 10 × $4.50 = 7 × $45 = $315 Mrs Bellamont would collect $315 from the sale of all the cookies.

# Question 159

Step 1: Draw a model Step 2: Find the mass of Sean before he lost 1/4 of his mass Step 3: Find the mass of Gilbert Step 4: Find the difference in mass between Gibert and Sean

# Question 160

Step 1: Draw a model Step 2: Find the mass of parcel B Step 3: Find the mass of parcel A Step 4: Find the total mass of parcels A, B and C Step 5: Find the mass of parcel D Step 6: Find how much heavier parcel D is than parcel C

# Question 161

Step 1: Draw a model Step 2: Find the value of 1 unit Step 3: Find the mass of box A

# Question 162

Solution to Question Step 2: Find the mass of the remaining items Step 3: Find the mass of the empty box Step 4: Find the mass of 6 empty boxes

# Question 163

Solution to Question Step 1: Draw the diagram of the large square Step 2: Find the length of each side of the large square Step 3: Find the area of the large square

# Question 164

Step 1: Label the different lengths of the square Step 2: Find the length of each side Length of AB = 9 cm Length of BF = Length of GD = 9 cm - 7 cm = 2 cm Length of EH = 7 cm - 2 cm = 5 cm GH + EF = 9 cm Step 3: Find the perimeter of the unshaded portion Perimeter of the unshaded portion = AB + BF + (GH + EF) + EH + GA = 9 cm + 2 cm + 9 cm + 5 cm + 7 cm = 32 cm

# Question 165

Step 1: Draw a model Step 2: Find the breadth of the rectangle Step 3: Find the length of the rectangle Step 4: Find the area of the rectangle

# Question 166

Solution to Question 74 Step 1: Draw the diagrams of the square and rectangle Step 2: Find the length of each side of the square 6 cm × 6 cm = 36 cm² Step 3: Find the length of the wire used to form a square Length of wire used to make the square = Perimeter of the square 4 × 6 cm = 24 cm Step 4: Find the total length of the wire The wire was 36 cm long at first.

# Question 167

Solution to Question 75 Step 1: Find the breadth of the paper 8 cm + 4 cm + 4 cm = 16 cm Step 2: Find the area of the paper 24 cm × 16 cm = 384 cm² Step 3: Find the length of the picture 24 cm - 4 cm - 4 cm = 16 cm Step 4: Find the area of the picture 16 cm × 8 cm = 128 cm² Step 5: Find the area of the border 384 cm² - 128 cm² = 256 cm² The area of the border is 256 cm². Answer: 256 cm²

# Question 168

Solution to Question 76 Step 1: Find the perimeter of the rectangle 15 cm + 12 cm = 27 cm 2 × 27 cm = 54 cm Step 2: Find the area of the rectangle 15 cm × 12 cm = 180 cm² Step 3: Find the perimeter of the square 180 cm ÷ 2 = 90 cm Step 4: Find the length of the wire needed to make 3 squares and 2 rectangles 3 squares  3 × 90 cm = 270 cm 2 rectangles  2 × 54 cm = 108 cm Step 5: Find the length of the wire 270 cm + 108 cm + 20 cm = 398 cm The length of the wire is 398 cm. Answer: 398 cm

# Question 169

Step 1: Find the length of EH EF = HG = 24 cm EH and FG = 180 cm - 24 cm - 24 cm = 132 cm EH = FG = 132 cm ÷ 2 = 66 cm Step 2: Find the length of rectangle ABCD 10 cm + 66 cm + 13 cm = 89 cm Step 3: Find the length of GZ YH = 12 cm GZ = 12 cm ÷ 2 = 6 cm Step 4: Find the breadth of rectangle ABCD 12 cm + 24 cm + 6 cm = 42 cm Step 5: Find the area of rectangle ABCD 42 cm × 89 cm = 3738 cm². The area of rectangle ABCD is 3738 cm².

# Question 170

Step 1: Label the diagram Step 2: Find the length of each rectangle 34 m - 6 m - 6 m = 22 m Step 3: Find the lengths of all sides of the garden AB = 34 m BC = 22 m + 6 m = 28 m CD = 6 m DE = 22 m EF = 22 m - 6 m = 16 m FG = 6 m GH = 6 m HI = 6 m IA = 6 m + 6 m

= 12 m Step 4: Find the perimeter of the garden Perimeter of the garden = 34 m + 28 m + 6 m + 22 m + 16 m + 6 m + 6 m + 6 m + 12 m = 136 m Step 5: Find the cost of fencing the entire garden 2 m  $23 1 m  $23 ÷ 2 = $11.50 136 m  136 × $11.50 = $1564 Mr Cox will have to pay $1564 to fence the entire garden.

# Question 171

Step 1: Draw a model Mr Richard his son Step 2: Find their present total ages 58 - 8 - 8 = 42 Step 3: Find his son's present age 6 units  42 1 unit  42 ÷ 6 = 7 (a) His son's present age is 7 years old. Step 4: Find Mr Richard's age in 8 years' time 5 units  5 × 7 = 35 35 + 8 = 43 (b) Mr Richard will be 43 years old.

# Question 172

Step 1: Draw a model Jane Mark Step 2: Find the value of 1 unit 5 units  $240 1 unit 

$240 ÷ 5 = $48 Step 3: Find the amount of money Jane had at first 2 units  2 × $48 =

$96 (a) Jane had $96 at first. Step 4: Find the amount of money Mark had at first 3 units 

3 × $48 = $144 (b) Mark had $144 at first.

# Question 173

Step 1: Draw a model $450 + $90 handbag jewellery savings Step 2: Find the amount of money she saved $450 + $90 = $540 3 units  $540 1 unit  $540 ÷ 3 = $180 (a) She saved $180. Step 3: Find the amount of money she had at first 6 units  6 × $180 =

$1080 (b) She had $1080 at first.

# Question 174

Step 1: Draw a model watch wallet $65 Step 2: Find the amount of money Sean had left 5 units  $65 1 unit  $65 ÷ 5 = $13 (a) Sean had $13 left. Step 3: Find the amount of money Sean had at first 12 units  12 × $13 = $156 (b) Sean had $156 at first.

# Question 175

Step 1: Draw a model English Chinese Malay 54 ? Step 2: Find the number of Malay books 3 units  54 1 unit  54 ÷ 3 = 18 4 units  54 + 18 = 72 Step 3: Find the total

number of books 3 × 72 = 216

# Question 176

Step 1: Draw a model ? : did not wear spectacles ? : wore spectacles Step 2: Find the number of boys who wore spectacles 25 units  250 1 unit  250 ÷ 25 = 10 Step 3: Find the number of girls who wore spectacles 6 units  6 × 10 = 60

# Question 177

Step 1: Draw a model women men children Step 2: Find the number of boys 2 × 120 = 240

(a) There were 240 boys. Step 3: Find the number of adults 3 units  240 1 unit  240 ÷ 3 = 80 8 units  8 × 80 = 640 (b) There were 640 adults.

# Question 178

Step 1: Draw a model Step 2: Find the number of people who did not wear hats 4 units  124 1 unit  124 ÷ 4 = 31 3 units  3 × 31 = 93 (a) 93 people did not wear hats. Step 3: Find the total number of people at the fair 9 units  9 × 31 = 279 (b) There were 279 people at the fair.

# Question 179

Step 1: Draw a model first number second number Step 2: Find the value of 1 unit 5 × 12 = 60 221 - 60 = 161 7 units  161 1 unit  161 ÷ 7 = 23 Step 3: Find the first number 23 +

12 = 35 5 × 35 = 175 (a) The first number is 175. Step 4: Find the second number 2 × 23 = 46 (b) The second number is 46.

# Question 180

Step 1: Draw a model Step 2: Find the total number of red and blue pens 1 unit  24 + 12

= 36 8 units  8 × 36 = 288 288 + 12 = 300 (a) Gracia had 300 red and blue pens. Step 3: Find the total number of pens Gracia had 10 units  10 × 36 = 360 (b) Gracia had 360 pens altogether.

# Question 181

Step 1: Draw a model

# Question 182

Step 2: Find the number of oranges in carton A at first

# Question 183

Step 3: Find the number of oranges in carton B at first

# Question 184

Step 4: Find the number of lemons Mr Clement sold on Tuesday

# Question 185

Step 5: Find the number of lemons both men sold altogether

# Question 186

Step 1: Find the fraction of money that each of them saved every day Cleo  1 - 4/7 = 3/7 Diana  1 - 2/3 = 1/3 Step 2: Find how much more Cleo saved than Diana in 1 day $56 ÷ 7 = $8 Step 3: Draw a model

# Question 187

Step 1: Find the cost of 90 oranges 90 × 70¢ = 6300¢ = $63 $1 = 100¢ Step 2: Draw a model Step 3: Find the cost of a box of apples 7 units  $63 1 unit  $63 ÷ 7 = $9 2 units

 2 × $9 = $18 (a) A box of apples costs $18. Step 4: Draw another model Step 5: Find the number of apples in 1 box 90 ÷ 3 = 30 (b) There are 30 apples in 1 box.

# Question 188

Leslie and Katherine have some sweets. Leslie has 5 more sweets than Katherine. Together they have 140 sweets. How many sweets does each have?

# Question 189

There are 4 pears and 7 apples in a box. If there are 19 pears in the box at first, how many apples were there initially?

# Question 190

Step 1: Draw a model Step 2: Find the number of adults Step 3: Find the number of people belonging to the tennis club Step 4: Find the total number of spectators

# Question 191

Step 1: Find the cost of each papaya Step 2: Find the cost of three apples and three papayas

# Question 192

Step 1: Draw a model Step 2: Find the amount of money Joey used $9.60 ÷ 2 = $4.80 Step 3: Use 'Guess and Check' method to find how many ten-cent and twenty-cent coins she used

# Question 193

Step 1: Draw a model Step 2: Find the amount of money James had at first 8 × $5 = $40 5 units  $40 1 unit  $40 ÷ 5 = $8 10 units  10 × $8 = $80 (a) James had $80 at first.

Step 3: Find the amount of money James spent 3 units  3 × $8 = $24 (b) James spent

$24.

# Question 194

Step 1: Draw a model Step 2: Find the amount of money Vivian had at first Step 3: Find the amount of money Vivian’s brother had at first

# Question 195

Step 1: Draw the diagrams of the squares and rectangles Step 2: Find the length of the wire at first Step 3: Find the perimeter of each rectangle Step 4: Find the length of each rectangle Step 5: Find the area of each rectangle

# Question 196

Solution to Question 101 Step 1: Find the length of each square Area = Length × Breadth 5 cm × 5 cm = 25 cm² Step 2: Fill in the missing measurements and name the unshaded areas in the diagram Step 3: Find the perimeter of the whole figure 13 cm + 9 cm + 8 cm + 4 cm + 8 cm + 4 cm + 13 cm + 9 cm + 8 cm + 4 cm + 8 cm + 4 cm = 92 cm (a) The perimeter of the whole figure is 92 cm. Step 4: Find the area of each rectangle Area = Length × Breadth = 13 cm × 9 cm = 117 cm² Unshaded area A = 117 cm² - 25 cm² = 92 cm² Unshaded area B = 117 cm² - 25 cm² - 25 cm² = 67 cm² Unshaded area C = 117 cm² - 25 cm² = 92 cm² Total unshaded area = 92 cm² + 67 cm² + 92 cm² = 251 cm² (b) The total area of the unshaded parts is 251 cm².