

SEA YEAR 2023
Section 1

1. Write the numeral 91 005 in words.

Tens of Thousands	Thousands	Hundreds	Tens	Ones
10 000	1 000	100	10	1
9	1	0	0	5

Ninety + one = Ninety-one thousand

five units

Answer: Ninety-one thousand and five

2. Arrange the numbers below in **descending** order.

3 162 3 612 3 261 3 126

We can place the numbers on a Place Value Chart

Thousands	Hundreds	Tens	Ones
3	1	6	2
3	6	1	2
3	2	6	1
3	1	2	6

Since all digits in the **thousands** column have the same value, we start by observing the next column which is the **hundreds** column.

The digit with the largest value is 6. So, 3 612 is the largest of the four numbers.

The next largest digit is 2, so 3 261 is the second largest number.

We now move to the **tens** column and examine the **tens** digit in the two remaining numbers which are 3 162 and 3 126. Their **tens** digits are 6 and 2.

Since 6 is larger than 2, then 3162 is larger than 3126.

So, 3 162 is the third largest number and 3 126 is the smallest of the given four numbers.

Answer: 3 612, 3 261, 3 162, 3 126

3. Write $2\frac{3}{8}$ as an improper fraction.

$$\begin{aligned}
 1 &= \frac{8}{8} \\
 2 &= 2 \times \frac{8}{8} = \frac{16}{8} \\
 2\frac{3}{8} &= \frac{16}{8} + \frac{3}{8} \\
 &= \frac{19}{8}
 \end{aligned}$$

Alternatively:

$$\begin{aligned}
 2\frac{3}{8} &= \frac{(2 \times 8) + 3}{8} \\
 &= \frac{16 + 3}{8} \\
 &= \frac{19}{8}
 \end{aligned}$$

Answer: $\frac{19}{8}$

4. Divide 628 by 12.

$$\begin{array}{r}
 052 \\
 12 \overline{)628} \\
 \underline{-60} \quad \downarrow \\
 28 \\
 \underline{-24} \\
 4 \text{ (Remainder)}
 \end{array}$$

Answer: 52 with remainder 4 or $52\frac{4}{12}$ or $52\frac{1}{3}$ in its lowest form

5. $8^2 + 6^2 =$

$$\begin{aligned}
 8^2 + 6^2 &= (8 \times 8) + (6 \times 6) \\
 &= 64 + 36 \\
 &= 100
 \end{aligned}$$

Answer: 100

6. Round 15 296 to the nearest thousand.

In rounding to the nearest thousand, we need to express this number in thousands or larger. The digits to the right of the thousands digit will be replaced by zero.

The value of the digit to the immediate right of the thousands digit is critical in deciding if the number of thousands must be increased or not. We refer to the hundreds digit, in this case, as the deciding digit. If this digit is less than 5, we round down and if it is 5 or more, we round up by adding one thousand to the thousands digit.

Tens of Thousands	Thousands	Hundreds	Tens	Units
10 000	1 000	100	10	1
1	5	2	9	6

Remains the same

↑
This digit is less than 5.

So, we round down by replacing it and all digits to its right by 0.

Answer: 15 000

7. Max ate 5 cherries which were $\frac{1}{9}$ of the total number of cherries he picked. How many cherries did Max pick?

If 5 cherries were $\frac{1}{9}$ of the number picked, then, the number of cherries picked is
 $5 \times 9 = 45$

Alternatively:

$\frac{1}{9}$ of the number of cherries picked is 5.

The whole has 9 equal parts, and one part is 5.



The whole is $5 \times 9 = 45$.

Answer: 45

8. Write the total value of the bills and the coin shown below.



Total in \$ and cents is:

$$\$20 + \$20 + \$5 + \$1 + \$0.05$$

\$20.00
\$20.00
\$ 5.00
\$ 1.00
\$ 0.05
\$46.05

Answer: \$46.05

9. Calculate 15% of 120.

$$15\% = \frac{15}{100}$$

$$\begin{aligned}
 15\% \text{ of } 120 &= \frac{15}{100} \times 120 \\
 &= \frac{3 \cancel{15}}{2 \cancel{10}} \times 12 \\
 &= \frac{3 \times \cancel{12}^6}{\cancel{2}_1} \\
 &= 3 \times 6 \\
 &= 18
 \end{aligned}$$

Answer: 18

10. Write the digits in the squares below to create an addition problem with the **largest** sum.

$$\begin{array}{r}
 \square \square \\
 + \square \square \\
 \hline
 \hline
 \end{array}$$

The two largest digits are 3 and 4. These two digits are placed in the tens column. It doesn't matter where the last two digits, 1 and 2 are placed. Either with the 3 or the 4 will make no difference in the final sum.

Answer:

Tens	Units		
(10)	(1)		
<input type="text" value="4"/>	<input type="text" value="1"/>		
+		<input type="text" value="3"/>	<input type="text" value="2"/>
		<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
		7	3

OR.

Tens	Units		
(10)	(1)		
<input type="text" value="4"/>	<input type="text" value="2"/>		
+		<input type="text" value="3"/>	<input type="text" value="1"/>
		<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
		7	3

11. A part of the calendar for the month of April is shown below.

April						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25				

On what day of the week is the 2nd of the April?

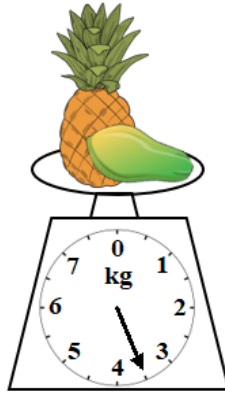
By counting backwards and forwards the calendar is completed to show:

April						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

We observe that the 2nd of April is on a Sunday.

Answer: Sunday

12. The total mass of a pineapple and a pawpaw is shown on the scale below. The mass of the pineapple is 2.75 kg.



What is the mass of the pawpaw, in grams?

The pointer on the scale is midway between 3 and 4.

Hence, the combined mass of the pineapple and the pawpaw is $3\frac{1}{2}$ kg or 3.5 kg.

$$\begin{aligned} 3.5 \text{ kg} &= 3.5 \times 1000 \\ &= 3\,500 \text{ g} \end{aligned}$$

The mass of the pineapple is 2.75 kg.

$$\begin{aligned} 2.75 \text{ kg} &= 2.75 \times 1000 \\ &= 2\,750 \text{ g} \end{aligned}$$

$$\therefore \text{Mass of the pawpaw is } (3\,500 - 2\,750) \text{ g} = 750 \text{ g}$$

$$\begin{array}{r} 3\,500 \text{ g} \\ -2\,750 \text{ g} \\ \hline 750 \text{ g} \end{array}$$

Alternatively:

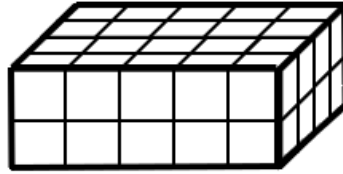
Mass of the pawpaw is

$$\begin{array}{r} 3.50 \text{ kg} \\ -2.75 \text{ kg} \\ \hline 0.75 \text{ kg} \end{array}$$

$$\begin{aligned} 1 \text{ kg} &= 1000 \text{ g} \\ \therefore 0.75 \text{ kg} &= 1000 \times 0.75 \\ &= 750 \text{ g} \end{aligned}$$

Answer: 750 grams

13. Identical cubes are packed into a box as shown below.



How many cubes are in the box?

The length of the box fits 5 cubes.

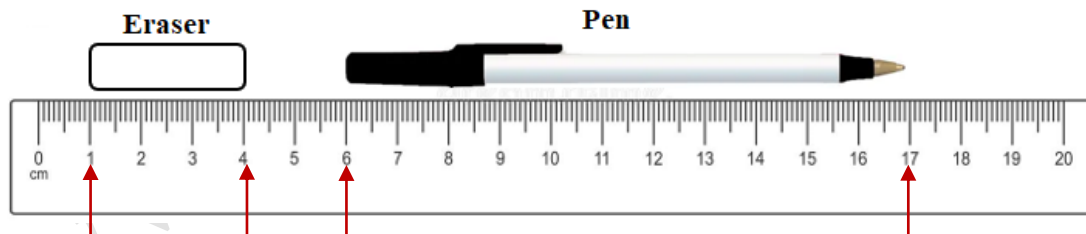
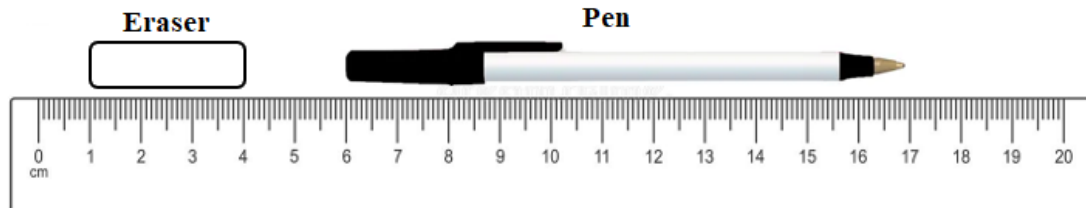
The width of the box fits 4 cubes.

The height of the box fits 2 cubes.

\therefore The number of cubes in the box $= 5 \times 4 \times 2 = 40$

Answer: 40 cubes

14. Calculate the difference in length between the eraser and the pen.



1 cm

4 cm

6 cm

17 cm

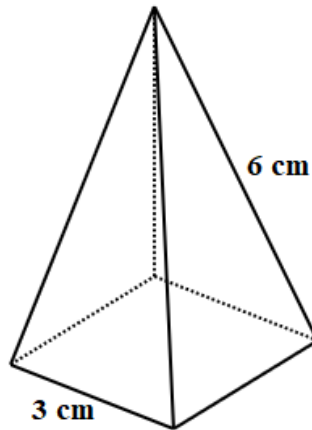
\therefore Length of eraser $= (4 - 1)$ cm
 $= 3$ cm

\therefore Length of pen $= (17 - 6)$ cm
 $= 11$ cm

The difference in length between the pen and the eraser $= (11 - 3)$ cm $= 8$ cm

Answer: 8 cm

15. The pyramid shown below has a square base.



How many edges of the pyramid have a length of 6 cm?

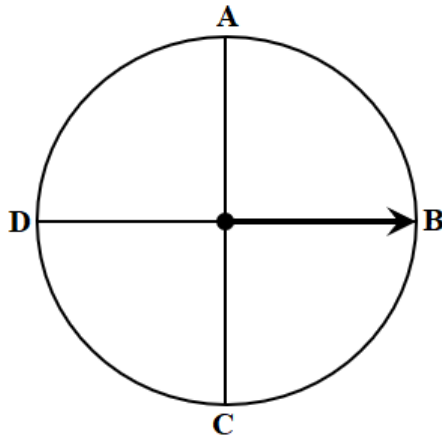
The slant edges of the pyramid are 6 cm in length.

There are 4 slant edges

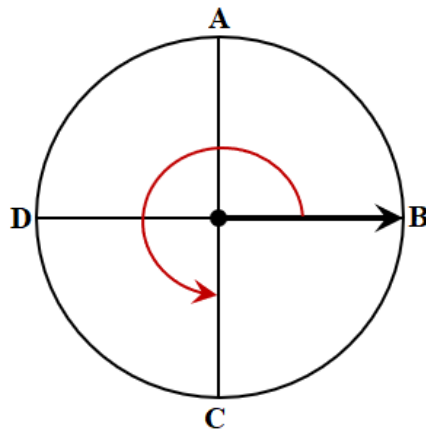
The four slant edges of the pyramid are therefore each of length 6 cm.

Answer: 4 edges

16. The arrow below is pointing to B. The arrow moves three quarter-turns in an anti-clockwise direction.



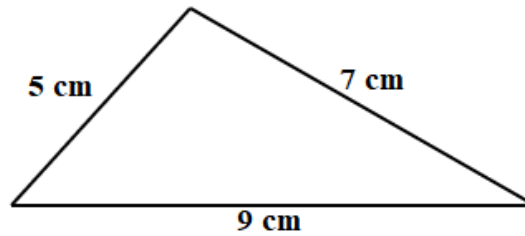
To which letter is the arrow now pointing?



After three quarter-turns in an anti-clockwise direction, the arrow will point to C.

Answer: C

17. Name the type of triangle shown below.



In the above triangle all three sides are unequal in length. The triangle is called scalene.

Answer: Scalene

18. The table below shows the shoe sizes of some students.

Shoe Size	9	8	7	6	5
Number of Students	11	3	12	9	3

What shoe size represents the mode?

The shoe size with the highest frequency represents the mode.

The shoe size 7 occurs 12 times.

Since 12 is highest frequency, the modal shoe size is 7.

Answer: 7

19. Calculate the mean of the numbers below.

32 14 24 0 5

Total of all numbers: $32 + 14 + 24 + 0 + 5 = 75$

There are 5 numbers.

$$\text{Mean} = \frac{\text{Total of the numbers}}{\text{Number of numbers}} = \frac{75}{5} = 15$$

$$\begin{array}{r} 32 \\ 14 \\ 24 \\ 0 \\ + 5 \\ \hline 75 \end{array}$$

Answer: 15

20. The incomplete tally chart below shows the pets owned by students.

Pets Owned by Students

Pet	Number	Tally
Birds	8	
Fishes	10	
Dogs	12	

Complete the tally chart to show the number of students who own dogs.

The completed tally chart now looks like:

Pets Owned by Students

Pet	Number	Tally
Birds	8	
Fishes	10	
Dogs	12	

Section 2

21. Write the missing digit in **each** box below.

$$\begin{array}{r} 9 \square 21 \\ - 2637 \\ \hline 658\square \end{array}$$

Consider the ones column, we cannot subtract 7 ones from 1 one, so we re-group: 2 tens and 1 one = 1 ten and 11 ones as shown below:

Th	H	T	O
9		2	1
-2	6	3	7
6	5	8	4

We know the difference between the two numbers is 6 584.

We know that we subtracted 2 637 from a number to get this difference.

$$\square - 2\,637 = 6\,584$$

$$\square = 6\,584 + 2\,637$$

$$\square = 9\,221$$

The completed problem looks like:

$$\begin{array}{r} 9 \square 21 \\ - 2637 \\ \hline 658\square \end{array}$$

$$22. 6 - 2\frac{5}{14} =$$

$$\begin{aligned} 6 - 2\frac{5}{14} &= 4 - \frac{5}{14} \\ &= 3 + 1 - \frac{5}{14} \\ &= 3 + \frac{14}{14} - \frac{5}{14} \\ &= 3 + \frac{14-5}{14} \\ &= 3 + \frac{9}{14} \\ &= 3\frac{9}{14} \end{aligned}$$

Answer: $3\frac{9}{14}$

Alternatively:

$$\begin{aligned} 6 - 2\frac{5}{14} &= \frac{84}{14} - \frac{33}{14} \\ &= \frac{51}{14} \\ &= 3\frac{9}{14} \end{aligned}$$

23. Karen uses 0.65 metres of cloth to make 1 skirt.

How many metres of cloth would she need to make 12 similar skirts?

1 skirt uses 0.65 metres of cloth
12 similar skirts will require $0.65 \text{ m} \times 12$

Use 65 (0.65×100) to avoid a decimal multiplicand

$$\begin{aligned} &65 \times 12 \\ &= (60 \times 12) + (5 \times 12) \\ &= 720 + 60 = 780 \end{aligned}$$

The correct answer is
 $780 \text{ cm} \div 100 = 7.8 \text{ m}$

Answer: 7.8 metres

24. Kim and Ben estimated the solution to the following problem.

$$60 \times 18$$

Kim's Estimate
600

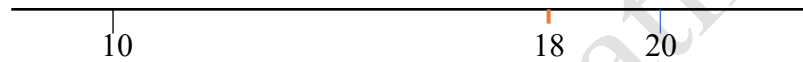
Ben's Estimate
1200

Explain who had the better estimate and how it was calculated.

Both rounded the multiplier, 18 to a multiple of 10 to make the calculations easier.

Kim rounded down 18 to 10 and got a lower estimate of $60 \times 10 = 600$

Ben rounded up 18 to 20 and got a higher estimate of $60 \times 20 = 1200$



Since 18 is closer to 20 than 10, rounding 18 to 20 will give a better estimate than rounding 18 to 10.

Ben's estimate is better than Kim's estimate because he chose 20.

Alternatively, we obtain the exact value of $60 \times 18 = 1080$

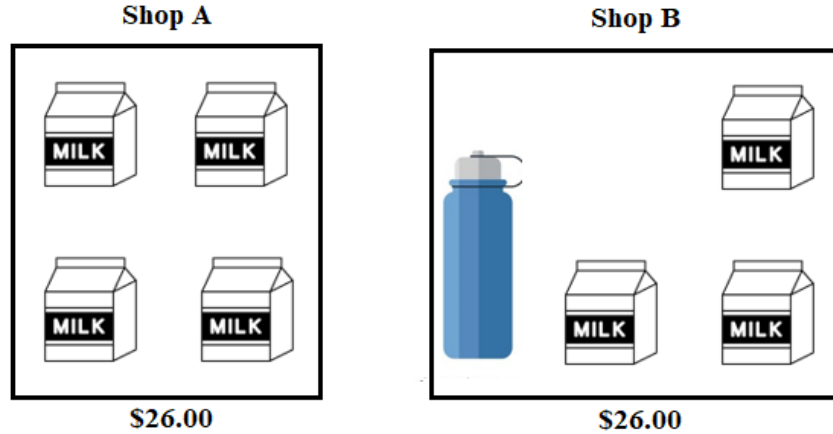
- The difference between Kim's estimate and the exact value is $1080 - 600 = 480$
- The difference between Ben's estimate and the exact value is $1200 - 1080 = 120$



Ben's estimate is closer to the exact value than Kim's estimate since 120 is less than 480.

Ben, therefore, has the better estimate.

25. Shop A and Shop B sell the same packet of milk. Shop A sells 4 packets of milk for \$26.00. Shop B sells 3 packets of milk and a container for \$26.00. The price of the container is \$3.20.



What is the difference in the price of a packet of milk at Shop A and Shop B?

At Shop A, 4 packets of milk cost \$26.00.

$$\begin{aligned} \therefore \text{Cost of 1 packet of milk} &= \$26.00 \div 4 \\ &= \$6.50 \end{aligned}$$

At Shop B, 3 packets of a milk and a container for \$3.20 cost \$26.00.

Hence, the 3 packets of milk at shop B will cost:

$$\begin{array}{r} 26.00 \\ - 3.20 \\ \hline 22.80 \end{array}$$

$$\begin{aligned} \therefore \text{Cost of 1 packet of milk at B} &= \$22.80 \div 3 \\ &= \$7.60 \end{aligned}$$

$$\begin{aligned} \text{The difference in cost of a packet of milk at Shop B and Shop A} &= \$7.60 - \$6.50 \\ &= \$1.10 \end{aligned}$$

Answer: At shop B one packet of milk is \$1.10 more than it is at shop A.

26. Andy, Tom and Brad shared \$85 among themselves. Andy received \$10 more than Tom while Brad received \$20 more than Andy.

How much money did **each** boy receive?

Let us represent each boy's share in a diagram.

Tom

Tom's share

Tom	\$10
-----	------

Andy's share is \$10 more than Tom

Tom	\$10	\$20
-----	------	------

Brad's share is Andy's share plus \$20.

We know that the whole is \$85. So, we can combine all the shares to make \$85.

If we add the total in the known boxes we get: $\$10 + \$10 + \$20 = \40

This \$40 is part of the \$85, so we subtract it from \$85 to get: $\$85 - \$40 = \$45$

What remains is 3 equal units where each unit represents Tom's share.

So, Tom's share $\times 3 = \$45$

Tom's share $\$45 \div 3 = \15

Tom got \$15

Andy got $\$15 + \$10 = \$25$

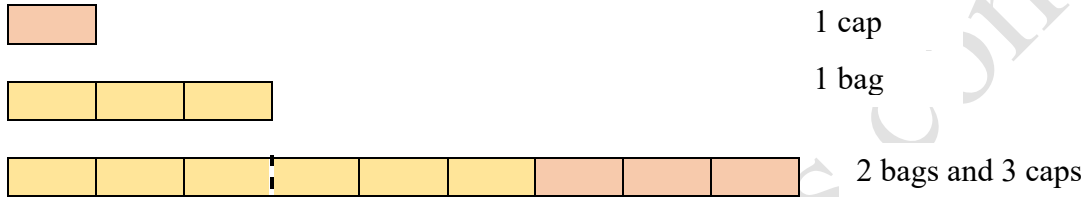
Brad got $\$15 + \$10 + \$20 = \45

Answer: Tom got \$15
 Andy got \$25
 Brad got \$45

27. The cost of a bag is three times the cost of a cap. The total cost of 2 bags and 3 caps is \$180.

What is the cost of 1 cap?

Representing the cost of a cap as one unit, we have:



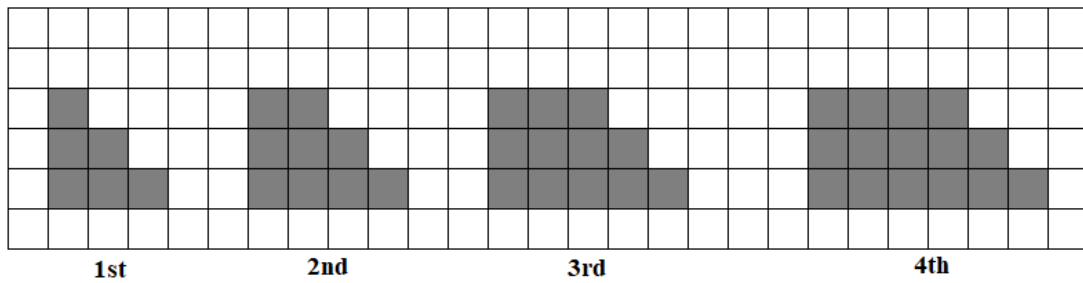
In all, there are 9 equal units.
1 unit represents the cost of a cap.

Cost of 9 caps = \$180

$$\begin{aligned}\text{Cost of 1 cap} &= \$180 \div 9 \\ &= \$20\end{aligned}$$

Answer: \$20

28. The first 4 elements of a pattern are shown below.



How many squares will form the 11th element?

The number of squares in the 1st element = $1 + 2 + 3$

The number of squares in the 2nd element = $2 + 3 + 4$

The number of squares in the 3rd element = $3 + 4 + 5$

The number of squares in the 4th element = $4 + 5 + 6$

Hence, following the pattern, the number of squares in the 11th element = $11 + 12 + 13$
= 36

Answer: 36 squares

State the pattern rule.

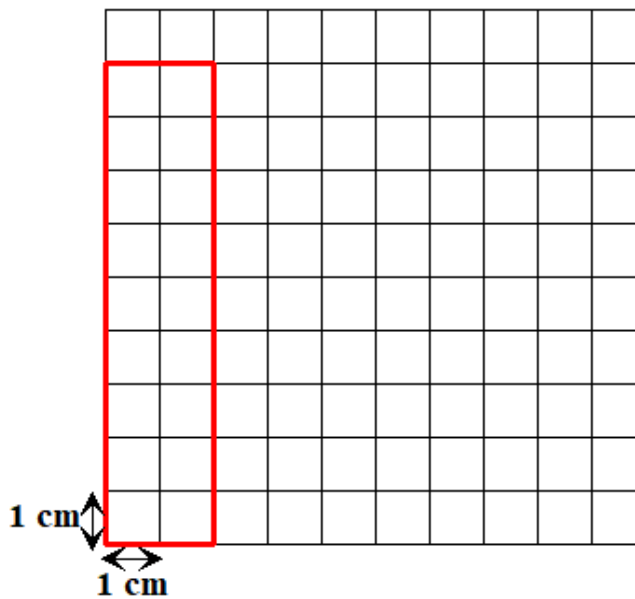
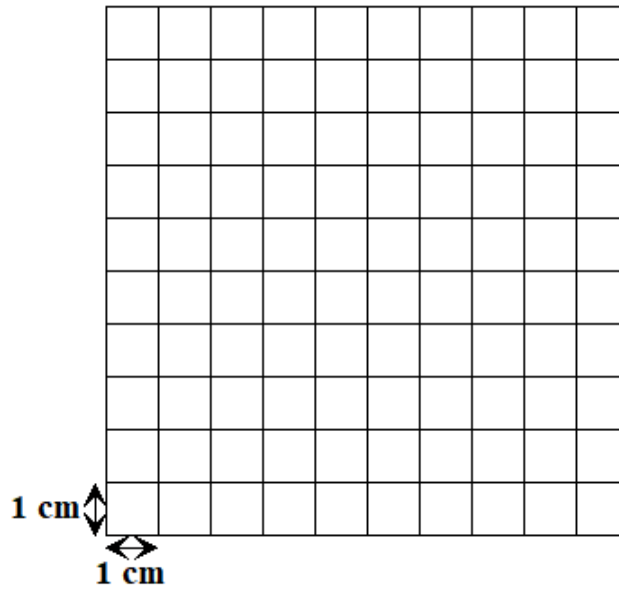
The rule for the number of squares is always the sum of three numbers.

The first number is the number of the pattern. The second number is the number of pattern + 1. The third number of the pattern is the number of pattern + 2.

So, if the number of the pattern is n , then the 1st number is n , the 2nd number will be $n + 1$ and the third number will be $n + 2$.

The number of squares in the n^{th} pattern = $n + n + 1 + n + 2$ which simplifies to $3n + 3$

29. Draw a rectangle with an area of 18 cm^2 on the grid below.



Our rectangle is 9 cm long and 2 cm wide.

We could have drawn a rectangle $6 \text{ cm} \times 3 \text{ cm}$ or any other rectangle where $\text{length} \times \text{width} = 18 \text{ cm}^2$.

For whole number dimensions there is a third possibility, $18 \text{ cm} \times 1 \text{ cm}$, but clearly this will not fit on the given grid.

30. A clock shows that the time in Trinidad is 6:00 a.m. The clock is 15 minutes slow. The time in Trinidad is 2 hours ahead of the time in Canada.

What is the correct time in Canada?

Time on the clock is 6:00 a.m.

Clock is 15 minutes slow.

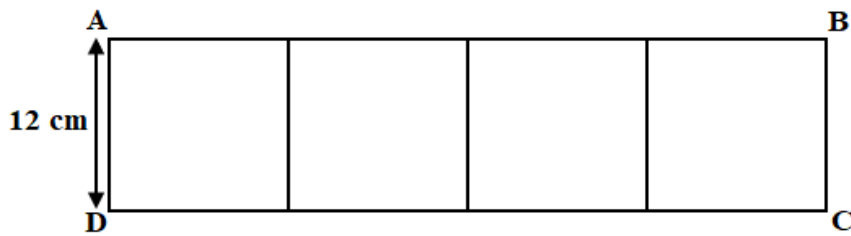
$$\begin{aligned} \therefore \text{Correct time in Trinidad when the clock reads 6:00 am is} &= 6:00 + 0:15 \text{ a.m.} \\ &= 6:15 \text{ a.m.} \end{aligned}$$

The correct time in Canada will be

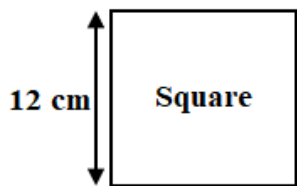
$$\begin{array}{r} 6:15 \text{ a.m.} \\ -2:00 \\ \hline 4:15 \text{ a.m.} \end{array}$$

Answer: 4:15 a.m.

31. Four identical squares are placed side by side to form the rectangle ABCD.

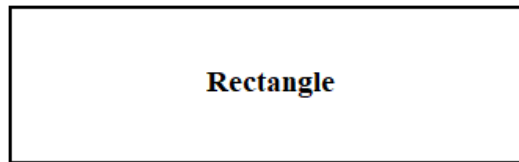


Calculate the **difference** between the perimeter of **one** square and the perimeter of the rectangle ABCD.



$$\begin{aligned} \text{Perimeter of one square} &= 12 \text{ cm} \times 4 \\ &= 48 \text{ cm} \end{aligned}$$

$$\text{Length} = 12 \times 4 = 48 \text{ cm}$$



$$\text{Width} = 12 \text{ cm}$$

$$\begin{aligned} \text{Perimeter of rectangle} &= 2(48 + 12) \text{ cm} \\ &= 120 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Difference between the perimeter of the rectangle and the perimeter of the square} &= (120 - 48) \text{ cm} \\ &= 72 \text{ cm} \end{aligned}$$

Answer: 72 cm

32. Keisha's luggage was over limit by 5 kg. When she removed her hairdryer and shampoo, her luggage was below the limit by 500 g. When she put back the hairdryer, the luggage was over the limit by 2 kg.

What was the mass of the hairdryer, in grams?

We are given the following statements

1. Luggage with hairdryer and shampoo is over the limit by 5 kg.
2. Luggage without hairdryer and shampoo is below the limit by 500 g
3. Luggage with hairdryer and no shampoo is over by 2 kg.

Luggage with hairdryer and shampoo is 5 kg over.

Luggage with hairdryer is 2 kg over.

Hence, the mass of the shampoo is $(5 - 2) \text{ kg} = 3 \text{ kg}$

Since the luggage was above by 5 kg when both items were present and it was below by 500 g after removing both items, then the hairdryer and the shampoo together weigh $5 \text{ kg} + 500\text{g} = 5.5 \text{ kg}$.

The mass of the hairdryer

= Mass of both hairdryer and shampoo – Mass of shampoo

= $(5.5 - 3) \text{ kg}$

= 2.5 kg

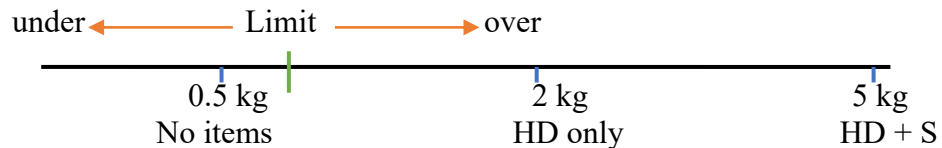
= $(2.5 \times 1\,000) \text{ g}$

= 2 500 grams

Alternatively

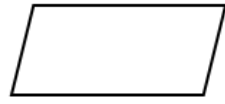
Since the luggage was below the limit by 500g without the hairdryer and shampoo, and 2 kg over the limit after putting in the hairdryer, the hairdryer must weigh:

$2 \text{ kg} + 0.5 \text{ kg} = 2.5 \text{ kg} = 2\,500\text{g}$



Answer: 2 500 grams

33. Five quadrilaterals are shown below.



Parallelogram



Rhombus



Trapezium



Square

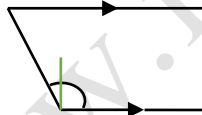


Rectangle

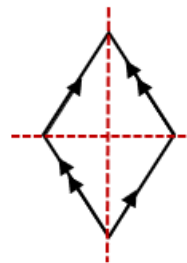
Write the name of the quadrilateral that matches the properties given.

Properties	Name
No lines of symmetry, one pair of parallel sides, one angle greater than a right angle	
Two lines of symmetry, two pairs of parallel sides, not right angles	

The figure with no lines of symmetry, one pair of parallel sides, one angle greater than a right angle is the given trapezium.



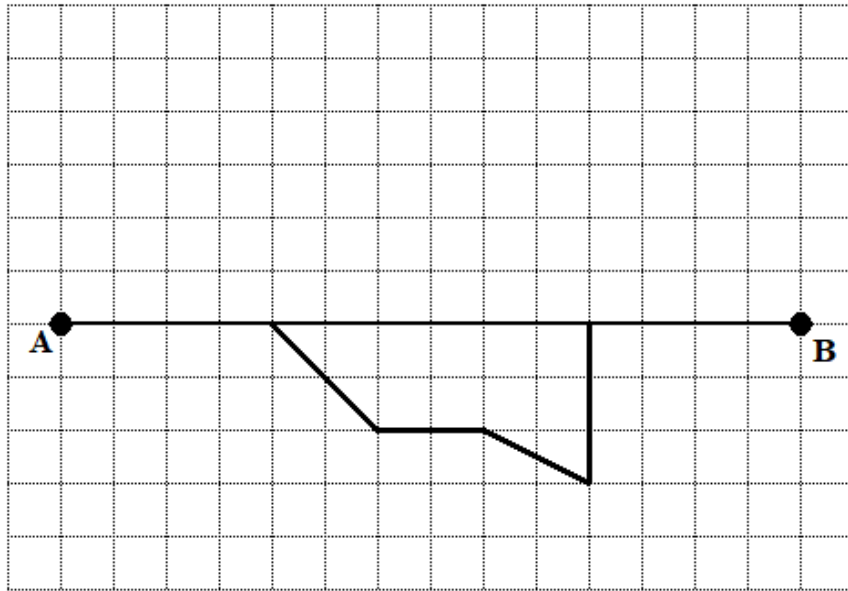
The figure with two lines of symmetry, two pairs of parallel sides, not right angles is the given rhombus.



The completed table now looks like:

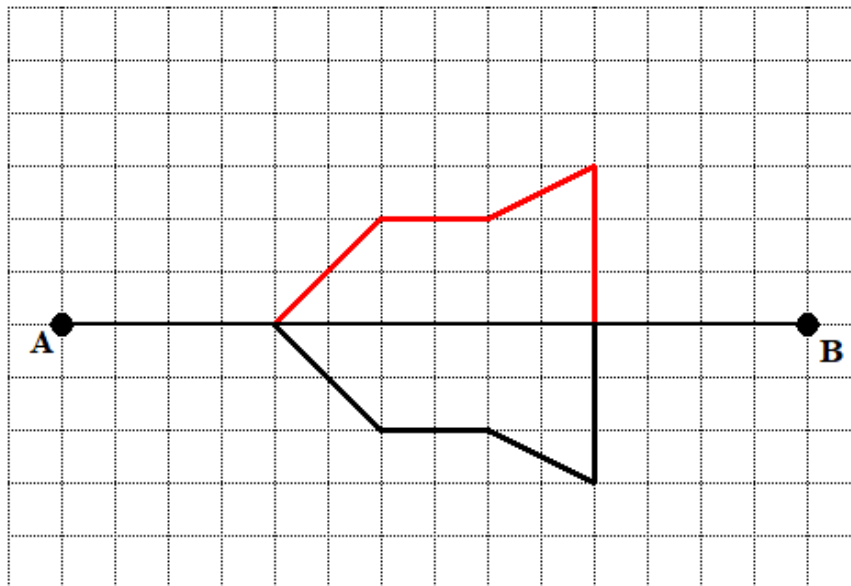
Properties	Name
No lines of symmetry, one pair of parallel sides, one angle greater than a right angle	Trapezium
Two lines of symmetry, two pairs of parallel sides, not right angles	Rhombus

34. Complete the shape on the grid below using AB as the line of symmetry.

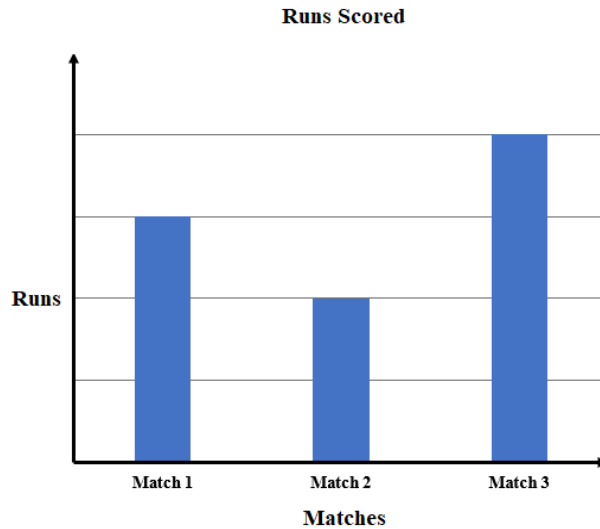


We reflect each vertex of the given figure in the line AB. Each reflected vertex would lie on the opposite side of AB and the same distance from AB. This can be located by counting the blocks. The new vertices are now connected by straight lines to complete the symmetrical figure.

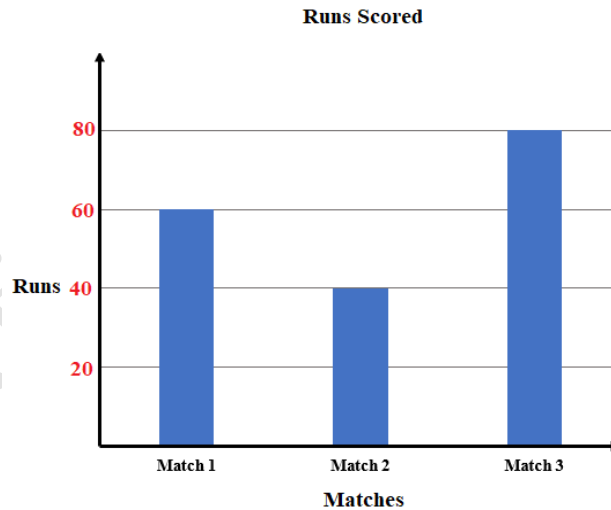
The completed shape looks like:



35. The incomplete graph below shows the runs scored by a cricket team in 3 matches.



The total runs scored in Match 1 and Match 2 was 100.
How many runs were scored in Match 3?



The bar for Match 1 is 3 'blocks' high.
The bar for Match 2 is 2 'blocks' high.

Hence, 5 blocks represent a total of 100 runs.

∴ Each block on the vertical axis represents $100 \text{ runs} \div 5 = 20 \text{ runs}$

Hence, in Match 3 the number of runs scored is four blocks high and will represent $20 \times 4 = 80 \text{ runs}$

Answer: 80 runs

36. The incomplete table below shows Paul's marks in 5 subjects. Paul's mean mark was 68.

Paul's Marks in Five Subjects

Subject	Science	Mathematics	Art	Music	English Language Arts
Mark	80		55	47	73

Calculate Paul's mark in Mathematics.

Paul's mean mark in 5 subjects is 68.

$$\begin{aligned} \therefore \text{Paul's total marks in all 5 subjects} &= 68 \times 5 \\ &= 340 \end{aligned}$$

$$\begin{aligned} \text{Paul's total marks in four of the subjects} &= 80 + 55 + 47 + 73 \\ &= 255 \end{aligned}$$

$$\begin{aligned} \text{Hence, Paul's mark in Mathematics} &= 340 - 255 \\ &= 85 \end{aligned}$$

Answer: 85 marks

Section 3

37. Tara bought an equal number of pies and doughnuts. She spent a total of \$70.



How many pies did Tara buy?

Tara can buy pies in sets of two and she can buy doughnuts in sets of three.

The number of pies can be 2, 4, 6, 8, 10, 12, ...

The number of doughnuts can be 3, 6, 9, 12, ...

For equal numbers of pies and doughnuts, the options are 6, 12, ... or multiples of 6.

Assume she bought 6 of each, we calculate her total cost as follows:

2 pies are sold for \$5

\therefore 6 pies will cost $\$5 \times 3 = \15

3 doughnuts for \$10

\therefore 6 doughnuts will cost $\$10 \times 3 = \20

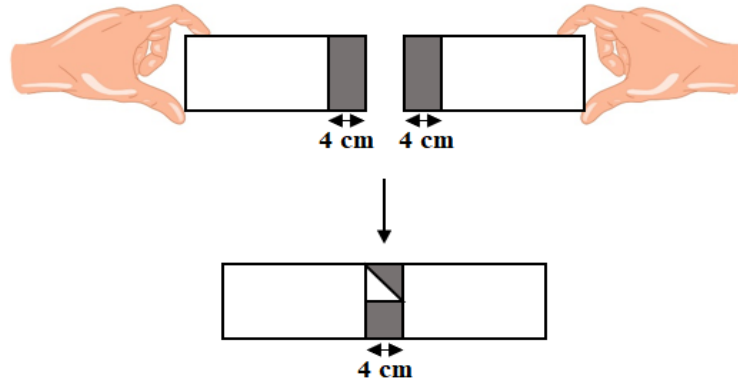
6 pies and 6 doughnuts cost $\$(15 + 20) = \35

If Tara spent \$70 then she must have bought twice as many as 6 of each of the items since $\$70 = \35×2 .

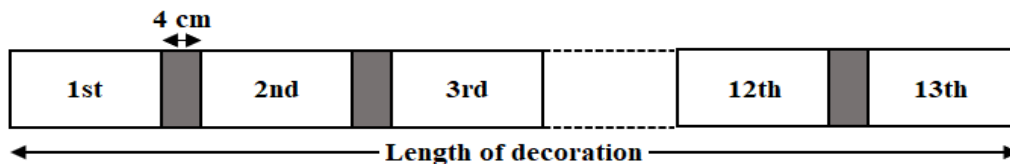
12 pies and 12 doughnuts will cost $\$35 \times 2 = \70

Answer: 12 pies

38. Dave made a decoration by sticking rectangular strips of Bristol board together. When two strips were stuck together, there was an overlap of a length of 4 cm from each strip.

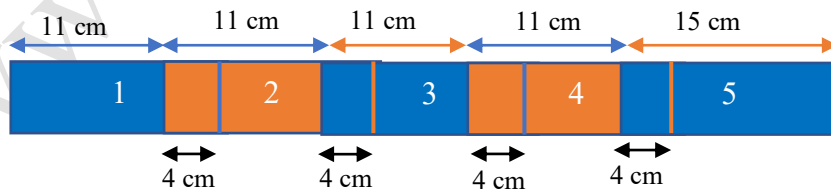


Dave stuck 13 strips of Bristol board, each of length 15 cm to make the decoration.



Calculate the length of Dave's decoration.

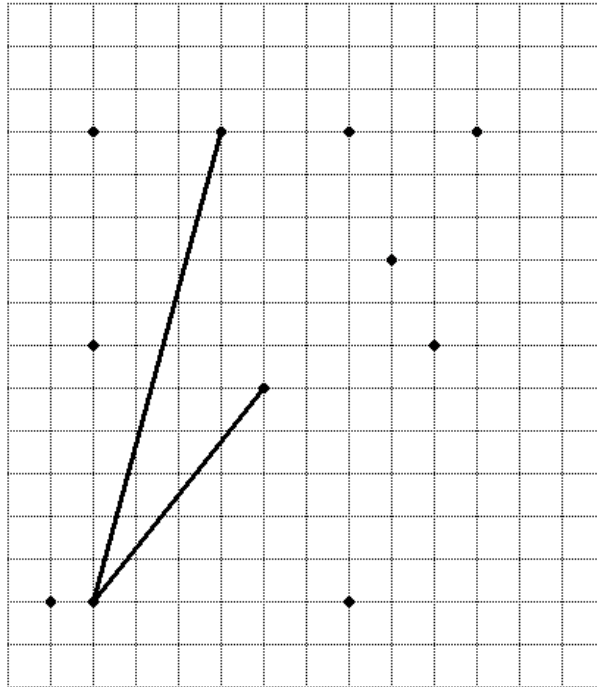
Assuming Dave overlaps the strips by placing 4 cm of the second strip over the first strip and then continues in this manner. Starting from the first strip, each strip will have a 4 cm overlap at its right end, so that only $15 - 4 = 11$ cm will be exposed. Assuming he had only 5 strips, then the 5th strip will have no overlap on its right end and so 15 cm will be exposed.



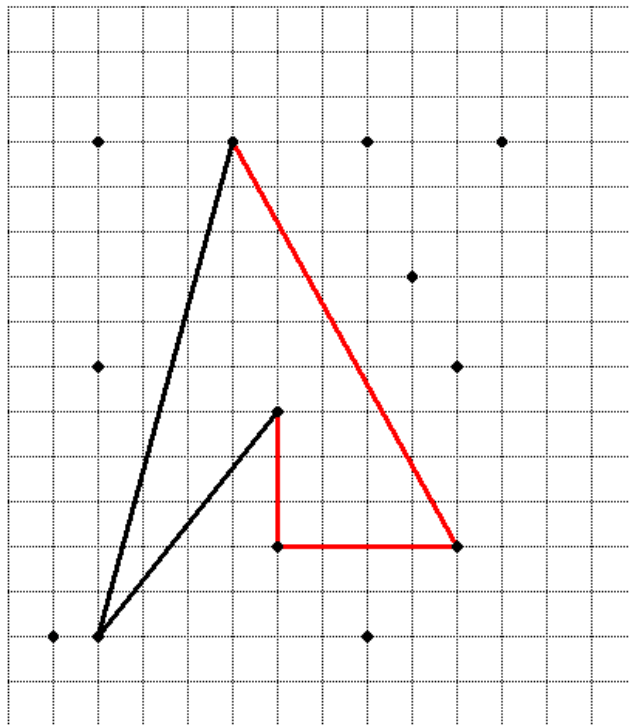
The completed length of the decoration will comprise:
12 strips of length 11 cm and the 13th strip of length 15 cm

$$\begin{aligned} \text{Length of Dave's decoration} &= (11 \times 12) + 15 \text{ cm} \\ &= (132 + 15) \text{ cm} \\ &= 147 \text{ cm} \end{aligned}$$

39. Jenna drew a five-sided shape with one **right angle**. Two sides of the shape are shown on the grid below.



- a) Complete the shape by joining some of the dots on the grid.



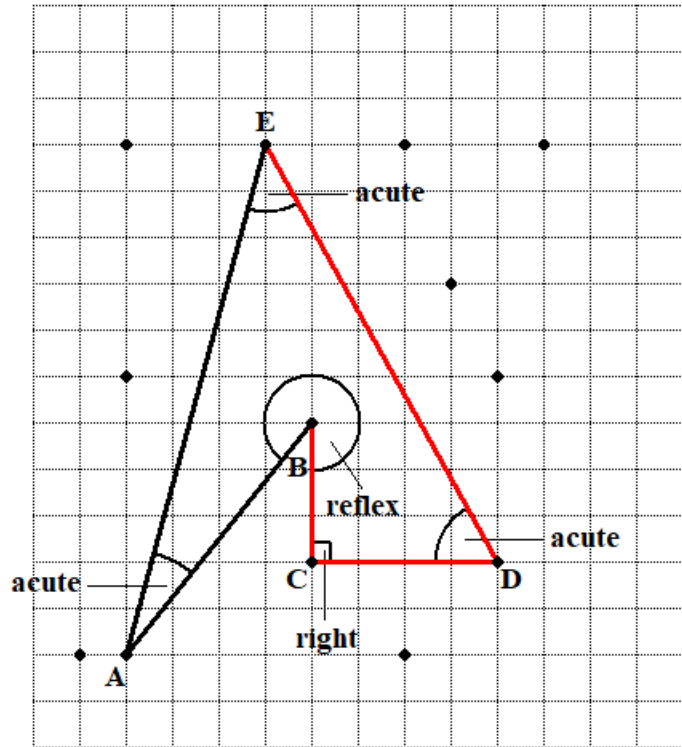
b) Describe all the angles in the shape.

This shape has

Acute angles at vertices A, D and E.

Right angle at C.

Reflex angle at B.



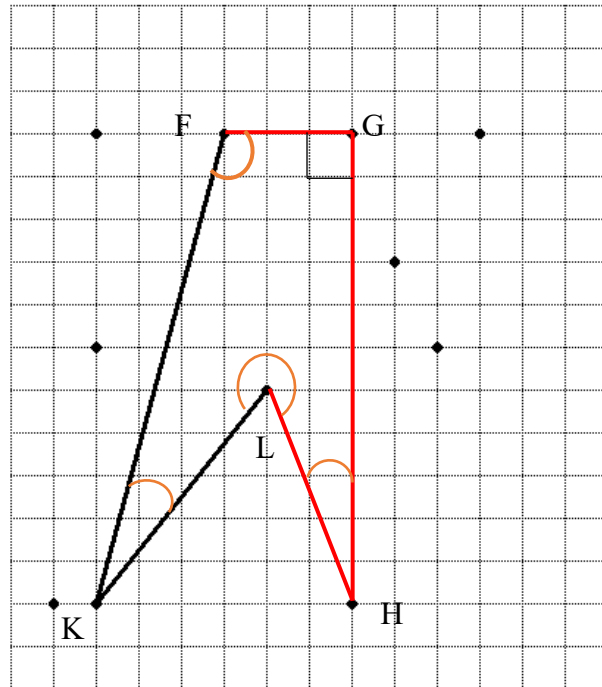
Alternatively:

This shape has

Acute angles at vertices K and H.

Right angle at G.

Reflex angles at F and L



40. Brandy and Clara played 3 rounds in a video game. The incomplete table shows their scores.

Scores in Video Game

Student	Round 1	Round 2	Round 3
Brandy	90	82	
Clara	48		

Medals were given based on the **average score** of 3 rounds

Medals Based on Average Score

Bronze	Silver	Gold
61 – 90	91 – 120	121 – 150

- a) What is the lowest score that Brandy should obtain in Round 3 to qualify for a silver medal?

The lowest average to obtain a silver medal is 91.

So, the total that must be scored in all three games $= 91 \times 3 = 273$

Brandy scored, in the first two games, a total of $90 + 82 = 172$

Hence, the lowest score that Brandy needs in Round 3 is $273 - 172 = 101$

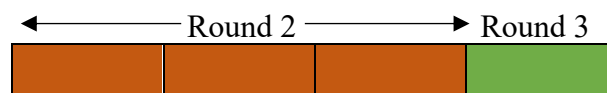
Answer: 101 points

- b) Clara's total score was 140. Her score in Round 2 was **three times** her score in Round 3.

What was Clara's score in Round 3?

Clara's score in both Rounds 2 and 3 would total $140 - 48 = 92$

Score in Round 2 is three times the score in Round 3.



$$\begin{aligned} 4 \text{ parts} &= 92 \\ 1 \text{ part} &= 92 \div 4 \\ &= 23 \end{aligned}$$

Hence, the score in Round 3 is 23

Answer: 23 points