## SECTION I

1. Write in words:

| Hundreds of <br> Thousands | Tens of <br> Thousands | Thousand | Hundred | Tens | Ones |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 7 | 1 | 0 | 6 | 8 |

Answer $\qquad$ Five hundred and seventy-one thousand and sixty-eight $\qquad$
2. Express $\frac{51}{9}$ as a mixed number.
$51 \div 9=5$ remainder 6 (how many groups of 9 can you get from 51?)
The answer (excluding the remainder) represents the whole number in the mixed number.
Whole number $=5$

The remainder becomes the numerator in the mixed number and is placed over the denominator of the proper fraction: $\frac{6}{9}=\frac{2}{3}$

Answer $\qquad$ $5 \frac{2}{3}$

3. The students of the Standard 5 classes were equally divided into 6 groups for the school excursion.

If there were 96 students in total, how many students were in each group?

Total number of students $=96$ students
Number of groups $=6$ groups

Number of students in each group $=\frac{\text { Total number of students }}{\text { Number of groups }}$
$=\frac{96}{6}$
$=16$ students

Answer $\qquad$ 16 $\qquad$ students
4. If $\frac{7}{11}$ of a number is 119 , what is the number?
$\frac{7}{11}$ of number $=119$

Number $=\frac{119}{1} \times \frac{11}{7}$

$$
=187
$$

Answer $\qquad$ 187 $\qquad$
5. Express 0.44 as a common fraction.

$$
\begin{aligned}
0.44 & =\frac{44}{100} \\
& =\frac{11}{25}
\end{aligned}
$$

Answer___ $\frac{11}{25}$ $\qquad$
6. $18^{2} \div 12=9 \times 3$

$$
\begin{aligned}
18^{2} \div 12 & =(18 \times 18) \div 12 \\
& =324 \div 12 \\
& =27
\end{aligned}
$$

Since,

$$
18^{2} \div 12=\square \times 3
$$

$$
27=\square \times 3
$$

$$
\square=27 \div 3
$$

$$
=9
$$

7. Complete the number pattern below.
$2,8,20,38, ~-62 \_$

Let's observe the pattern:
$8-2=6$
$20-8=12$
$38-20=18$

We can see that the number being added to each consecutive term is a multiple of 6 . Therefore, $38+24=62$
8. Subtract 2.84 from 9.63.

Answer $\qquad$ 6.79 $\qquad$
9. Eli saved the money shown below.

How much more money does he need to save to reach his savings goal of $\$ 90.00$ ?


| Bills (\$) |
| :---: |
| 10 |
| 5 |
| 10 |
| 50 |
| $\$ 75$ |

Coins ( $x$ )
25
5

5
25
65 \&

Total $=\$ 75.00$

$$
\$ \quad 0.65
$$

$$
\$ 75.65
$$

Amount of money Eli needs to save to reach his savings goal $=\$ 90.00-\$ 75.65$

$$
=\$ 14.35
$$

$\qquad$ 14.35 $\qquad$
10. Mr Springer bought 14 dozen cupcakes to be shared equally among his 7 Mathematics classes. How many cupcakes will each class get?

14 dozen cupcakes $=14 \times 12$

$$
=168 \text { cupcakes }
$$

Number of mathematics classes $=7$ classes

Number of cupcakes each class will get $=\frac{\text { Total number of cupcakes }}{\text { Number of mathematics classes }}$

$$
\begin{aligned}
& =\frac{168}{7} \\
& =24 \text { cupcakes }
\end{aligned}
$$

Answer $\qquad$ 24 $\qquad$ cupcakes
11. Write down the MOST appropriate standard unit for recording the length of a school's playground.

Answer $\qquad$ metres $\qquad$
12. Complete the statement below.

Converting from centimetres to metres
$100 \mathrm{~cm}=1 \mathrm{~m}$
$409 \div 100=4.09 \mathrm{~m}$
$\qquad$ 4.09 $\qquad$ m
13. Crissa used the scale below to record the mass of five identical muffins.


Write down the mass of each muffin.

$$
\begin{aligned}
\text { Mass of } 5 \text { muffins } & =3 \mathrm{~kg} \\
\text { Mass of } 1 \text { muffin } & =3 \mathrm{~kg} \div 5 \\
& =0.6 \mathrm{~kg}
\end{aligned}
$$

Converting from kilograms to grams:

$$
\begin{aligned}
& 1000 \mathrm{~g}=1 \mathrm{~kg} \\
& 0.6 \times 1000=600 \mathrm{~g}
\end{aligned}
$$

$\qquad$ 600 $\qquad$ grams
14. Jonathan's journey from Oropouche to Las Cuevas took 140 minutes.

How many HOURS did his journey take?

Duration of Jonathan's journey $=140$ minutes

Converting minutes to hours:
60 minutes $=1$ hour
140 minutes $=\frac{140}{60}$
$=2 \frac{1}{3}$ hours

15. How many complete 30 ml doses would Josiah get from his bottle of vitamins shown below?


Volume of bottle of vitamins $=0.52 \mathrm{~L}$

$$
\begin{aligned}
& =0.52 \times 1000 \\
& =520 \mathrm{ml}
\end{aligned}
$$

Volume of 1 dose $=30 \mathrm{ml}$

Number of doses Josiah can get from the bottle $=\frac{520}{30}$

$$
=17.333^{\prime} \text { doses }
$$

The question asked for the number of complete doses therefore the answer is 17 doses.
$\qquad$ 17 $\qquad$ doses
16. Sian purchased some of the items as advertised below.


Scissors
2 pairs for $\$ 15$


Rulers
3 for $\$ 7$

She buys 4 pairs of scissors and pays with a $\$ 50.00$ bill.
How many rulers can she buy with the remainder of the money if they are only sold in bundles and not separately?

$$
\begin{aligned}
2 \text { pairs of scissors } & =\$ 15 \\
4 \text { pairs of scissors } & =2 \times \$ 15 \\
& =\$ 30
\end{aligned}
$$

Remaining money $=\$ 50.00-\$ 30.00$

$$
=\$ 20.00
$$

Number of sets of rulers she can purchase $=\frac{20}{7}$

$$
=2 \text { sets }
$$

1 set of rulers $=3$ rulers
2 sets of rulers $=2 \times 3$
$=6$ rulers

Answer $\qquad$ 6 $\qquad$ rulers
17. Draw a Triangular Prism below.

18. The diagram below shows three angles. AB is a straight line.


Calculate the value of $y$.

Sum of angles in a straight line $=180^{\circ}$

$$
90^{\circ}+y^{\circ}+64^{\circ}=180^{\circ}
$$

$$
\begin{aligned}
& y^{\circ}=180^{\circ}-90^{\circ}-64^{\circ} \\
& y^{\circ}=26^{\circ}
\end{aligned}
$$

$\qquad$ 26 $\qquad$ degrees
19. The mean of 10,16 and 34 is the same as the mean of 22 and a. What number does a represent?

$$
\begin{aligned}
\text { Mean of } 10,16 \text { and } 34 & =\frac{\text { sum of } 10,16 \text { and } 34}{\text { frequency }} \\
& =\frac{10+16+34}{3} \\
& =\frac{60}{3} \\
& =20
\end{aligned}
$$

10,16 and 34 has the same mean as 22 and a.

Mean of 22 and $\mathbf{a}=20$

Sum of 22 and $\mathrm{a}=$ Mean of 22 and $\mathrm{a} \times$ frequency

$$
\begin{aligned}
& =20 \times 2 \\
& =40
\end{aligned}
$$

Therefore, $\mathbf{a}=40-22$

$$
=18
$$

Answer 18 $\qquad$
20. The table below shows the number of practice tests completed by 4 students over the course of one month.

| Student | Practice Tests Completed |
| :---: | :---: |
| Shinia |  |
| Terryn |  |
| Rylee |  |
| Khyla |  |

$\bigwedge=6$ practice tests

How many practice tests did the 4 students complete altogether?

Total number of $\bigwedge=2.5+3+1.5+4.5$

$$
=11.5
$$

Since


Total number of practice tests completed by the 4 students $=11.5 \times 6$

$$
=69 \text { practice tests }
$$

$\qquad$ 69 $\qquad$ practice tests

## SECTION II

21. $7 \frac{3}{8}-2 \frac{5}{6}=$

$$
\begin{array}{ll}
\text { Whole Numbers } & \text { Fractions } \\
=7-2 & =\frac{3}{8}-\frac{5}{6} \\
=5 & =\frac{9-20}{24} \\
=4 \frac{24}{24} \cdots & =\frac{24+9)-}{24} \\
=4 & +24 \\
& =\frac{33-20}{24} \\
& \\
& =\frac{13}{24}
\end{array}
$$

Answer $\qquad$ $4 \frac{13}{24}$
22. (a) Arrange the following numbers in ASCENDING order (smallest first).

5 274, $5724,5742,5247$

| Th | H | T | 0 |
| :--- | :--- | :--- | :--- |
| 5 | 2 | 7 | 4 |
| 5 | 7 | 2 | 4 |
| 5 | 7 | 4 | 2 |
| 5 | 2 | 4 | 7 |

The first digit, the thousands digit, is the same for all numbers. So, we look at the next digit, which is the hundreds digit. 5274 and 5247 both had 2 hundreds and so they are smaller than the other two numbers.

We next look at the tens column where 7 tens are present in 5274 making it larger than 5247.

Answer $\qquad$ $5247,5274,5724,5742$ $\qquad$
(b) What is the SMALLEST even number in the list above?

An even number is a number which ends in $0.2,4,6$ and 8 .

Based on the list given the even numbers are 5 274, 5724 and 5742.

The smallest even number is 5274 since it has 2 hundreds.

Answer $\qquad$ 5274 $\qquad$

23. For every 4 tasks that Mia completes, Shantel completes 9 . Shantel eventually completes 45 tasks.

Calculate how many tasks Mia completed.

Shantel completed 45 tasks.

For every 4 tasks that Mia completes, Shantel completes 9.

Number of groups of " 9 " in $45=45 \div 9$

$$
=5
$$

Number of tasks Mia completed $=5 \times 4$

$$
=20 \text { tasks }
$$

Answer $\qquad$ 20 $\qquad$ tasks
24. Kareena bought a pack of erasers containing 30 erasers for $\$ 42$. She then sold the erasers in a singular fashion and made a profit of $\$ 18$.

What was the selling price of each eraser?

Cost Price of 30 erasers $=\$ 42.00$
Profit made from selling erasers in a singular fashion $=\$ 18.00$

Selling Price of 30 erasers $=$ Cost Price + Profit

$$
\begin{aligned}
& =\$ 42.00+\$ 18.00 \\
& =\$ 60.00
\end{aligned}
$$

Therefore, selling price of 1 eraser $=\$ 60.00 \div 30$

$$
=\$ 2.00
$$

$\qquad$ 2 $\qquad$
25. In a birthday party, each attendee was given 6 chocolates and 2 cupcakes. If a total of 264 chocolates and cupcakes were distributed, how many attendees were present?

Each attendee received $=6+2$
$=8$ items

Altogether, 264 items were distributed at the party.

Number of attendees $=\frac{264}{8}$

$$
=33 \text { attendees }
$$

Answer $\qquad$ 33 $\qquad$ attendees
26. The Ali family went out to dine in a restaurant. The total cost of the items they ordered was $\$ 840$. If they are required to pay $12.5 \%$ VAT and $10 \%$ service charge based on the total cost of their items, what will be the final amount paid to the restaurant?

Cost of items $=\$ 840$

$$
\begin{aligned}
\text { VAT } & =12.5 \% \text { of } \$ 840 \\
& =\frac{12.5}{100} \times \frac{\$ 840}{1} \\
& =\$ 105
\end{aligned}
$$

Service charge $=10 \%$ of $\$ 840$

$$
\begin{aligned}
& =\frac{10}{100} \times \frac{\$ 840}{1} \\
& =\$ 84
\end{aligned}
$$

Final amount to be paid to the restaurant $=$ Total cost of items + VAT + Service Charge

$$
\begin{aligned}
& =\$ 840+\$ 105+\$ 84 \\
& =\$ 1029
\end{aligned}
$$

27. Kaveer shaded part of the shape below to represent a fraction.

(a) Shade the shape below to represent the equivalent fraction to Kaveer's.

(b) Use the fractions and an explanation to tell how you know that your answer is correct.

Total number of parts in Kaveer's shape $=12$ parts
Number of shaded parts in Kaveer's shape $=8$ parts
Fraction of Kaveer's shape that is shaded $=\frac{8}{12}$

Total number of parts in the shape in part (a) = 6 parts
Number of shaded parts in in the shape in part (a) $=4$ parts
Fraction of part (a)'s shape that is shaded $=\frac{4}{6}$
$\frac{4 \times 2}{6 \times 2}=\frac{8}{12}$
28. Janiah decided to organize the 40 pens on her study desk by placing them in a small case. She has three times as many blue pens as red pens.
(a) Complete the table below to show the number of blue and red pens in the case.

| Colour | Number of pens |
| :---: | :---: |
| Blue | $-18-16$ |
| Black | 18 |
| Red | TOTAL $=40$ PENS |

Total number of pens $=40$ pens
Janiah has three times as many blue pens as red pens.
3 parts blue pens +1 part red pens $=4$ parts
Number of blue and red pens $=$ Total number of pens - Number of black pens

$$
\begin{aligned}
& =40-16 \\
& =24 \text { pens }
\end{aligned}
$$

4 parts $=24$ pens
1 part $=24 \div 4$
1 part $=6$ pens

Number of red pens $=1$ part $=6$ red pens

$$
\begin{aligned}
\text { Number of blue pens }=3 \text { parts } & =3 \times 6 \\
& =18 \text { blue pens }
\end{aligned}
$$

(b) What percentage of the pens are blue?

$$
\begin{aligned}
\text { Percentage of the pens that are blue } & =\frac{\text { Number of blue pens }}{\text { Total number of pens }} \times 100 \\
& =\frac{18}{40} \times 100 \\
& =45 \%
\end{aligned}
$$

Answer $\qquad$ 45 $\qquad$ \%
29. The product of two numbers is 7 . One of them is $3 \frac{1}{9}$. What is the other number?

The product of two numbers $=7$
$3 \frac{1}{9} \times$ the other number $=7$

The other number $=7 \div 3 \frac{1}{9}$

$$
\begin{aligned}
& =7 \div \frac{28}{9} \\
& =\frac{7}{1} \times \frac{9}{28} \\
& =\frac{63}{28} \\
& =\frac{9}{4} \\
& =2 \frac{1}{4}
\end{aligned}
$$

Answer $\qquad$ $2 \frac{1}{4}$
30. In the following diagram, the dotted line $A B$ is a line of symmetry for the incomplete shape. Complete the drawing of the shape.

31. Anna purchased 25 metres of embroidery floss to construct some dream catchers. Each dream catcher required 375 centimetres of floss for its construction.
(a) Anna used 18.75 metres of embroidery floss to make the dream catchers. Calculate how many dream catchers Anna made.

Length of embroidery floss Anna used $=18.75 \mathrm{~m}$

$$
=1875 \mathrm{~cm}
$$

Length of embroidery floss required for one dream catcher $=375 \mathrm{~cm}$

$$
\begin{aligned}
\text { Number of dream catchers Anna made } & =\frac{\text { Length of embroidery floss Anna used }}{\text { Length of embroidery floss required for one dream catcher }} \\
& =\frac{1875}{375} \\
& =5 \text { dream catchers }
\end{aligned}
$$

Answer $\qquad$ 5 $\qquad$ dream catchers
(b) Anna's daughter took the remaining embroidery floss to make necklaces for her friends. If one necklace was made using 40 centimetres of floss, how many necklaces were made?

Total length of embroidery floss $=25 \mathrm{~m}$

$$
=2500 \mathrm{~cm}
$$

Length of embroidery floss Anna used $=1875 \mathrm{~cm}$
Remaining embroidery floss $=2500-1875$

$$
=625 \mathrm{~cm}
$$

Length of embroidery floss required for one necklace $=40 \mathrm{~cm}$

$$
\begin{aligned}
\text { Number of necklaces made } & =\frac{\text { Remaining embroidery floss }}{\text { Length of embroidery floss required for one necklace }} \\
& =\frac{625}{40} \\
& =15 \text { necklaces }
\end{aligned}
$$

Answer $\qquad$ 15 $\qquad$ necklaces
32. Andre went to the market on Saturday and Sunday to sell his bananas according to the advertisement below.

(a) If he made $\$ 122.50$ on Saturday, what was the mass of the bananas that were sold?

1 kg of bananas cost \$14.
Andre's sales on Saturday $=\$ 122.50$

Mass of bananas sold on Saturday $=\frac{\$ 122.50}{\$ 14 \text { per kg }}$

$$
=8.75 \mathrm{~kg}
$$

Answer $\qquad$ 8.75 $\qquad$ kg
(b) On Sunday he sold 3.15 kilograms less bananas than on Saturday. Calculate Andre's sales on Sunday.

Mass of bananas sold on Sunday $=3.15 \mathrm{~kg}$ less than on Saturday

$$
\begin{aligned}
& =8.75-3.15 \mathrm{~kg} \\
& =5.6 \mathrm{~kg}
\end{aligned}
$$

1 kg of bananas cost $\$ 14$.

Andre's sales on Sunday $=5.6 \times \$ 14$

$$
=\$ 78.40
$$

Answer \$ $\qquad$
$\qquad$
33. Duliana is touring Port of Spain with her family. They want to visit the Emperor Valley Zoo, the Botanical Garden and the National Museum before their lunch reservations at 1:30 p.m.

They want to spend 2 hours and 15 minutes at the Emperor Valley Zoo, 45 minutes in the Botanical Garden and 1 hour and 45 minutes on the tour of the National Museum.

What is the latest time Duliana's family can start their tour of Port of Spain and still make it to lunch on time?

Lunch reservations are at 1:30 p.m.

Time to be spent in the Emperor Valley Zoo $=2$ hours 15 minutes

Time to be spent in the Botanical Garden $=0$ hours 45 minutes

Time to be spent in the National Museum =1 hours 45 minutes

TOTAL time to be spent touring POS $\quad=4$ hours 45 minutes

Latest time Duliana's family can begin their tour to make it to lunch at 1:30 p.m.:

1290
13:30

$$
4: 45
$$

$08: 45$

Answer $\qquad$ 8:45 $\qquad$
34. (a) What is a polygon?

Answer: A polygon is a two-dimensional shape (also called flat or plane figure) with at least three straight sides and angles.
(b) Name and draw an irregular polygon below.

Irregular polygons are polygons that have unequal angles and unequal sides.


Answer $\qquad$ scalene triangle
35. A clock is shown below.


The hour hand moved from 7 to 5 in a clockwise direction. Through how many degrees did the hour hand move?

A circle has $360^{\circ}$.
The circle is divided equally into twelve angles at the centre.

Angle between any 2 numbers next to each other $=360^{\circ} \div 12$

$$
=30^{\circ}
$$

Spaces moved from 7 to $5=10$ spaces

Number of degrees the hand moved $=10 \times 30^{\circ}$

$$
=300^{\circ}
$$

Answer $\qquad$ 300 $\qquad$ degrees
36. The mean of 13 numbers was 22 . Another number was added and the new mean was 24 . What number was added?

Mean $=\frac{\text { Sum }}{\text { Frequency }}$

The mean of 13 numbers was 22 .
Hence, the sum of these 13 numbers $=13 \times 22$

$$
=286
$$

The new mean of the 14 numbers is 24 .

Hence, the new sum $=14 \times 24$

$$
=336
$$

The number that was added $=336-286$

$$
=50
$$

Answer $\qquad$ 50 $\qquad$

## SECTION III

37. The school board wants to tile the auditorium using square tiles 25 cm in length.

(a) How many tiles are required to cover the auditorium?

We can split the auditorium into two sections, labelled A and B above.

Area of section $A=1200 \times 600$

$$
=720000 \mathrm{~cm}^{2}
$$

Area of section $B=400 \times 300$

$$
=120000 \mathrm{~cm}^{2}
$$

Area of the auditorium $=720000+120000$

$$
=840000 \mathrm{~cm}^{2}
$$

Area of one tile $=25 \times 25$

$$
=625 \mathrm{~cm}^{2}
$$

Number of tiles to be used $=\frac{\text { Area of the auditorium }}{\text { Area of } 1 \text { tile }}$

$$
=\frac{840000}{625}
$$

$$
=1344
$$

Answer $\qquad$ 1344 $\qquad$ tiles
(b) If the cost of one tile is $\$ 3.50$, what will be the total cost of the tiles?

$$
\begin{aligned}
\text { Total cost of tiles } & =1344 \times \$ 3.50 \\
& =\$ 4704
\end{aligned}
$$

Answer \$ $\qquad$ 4704 $\qquad$
38. There are 380 Styrofoam boxes (medium and large) in a Chinese restaurant. Half of the medium boxes is 85 more than $\frac{1}{3}$ of the large boxes.

How many large boxes are there in the restaurant?


Medium boxes


Large
boxes

$$
\begin{aligned}
\text { Total } & =380 \text { boxes } \\
\text { Excess } & =85+85 \\
& =170 \text { boxes }
\end{aligned}
$$

$$
\text { Removing excess }=380-170
$$

$$
=210 \text { boxes }
$$

5 bars $=210$ boxes
1 bar $=\frac{210}{5}$
$=42$ boxes
Number of large boxes $=3 \times 42$

$$
\text { = } 126 \text { large boxes }
$$

Answer $\qquad$ 126 $\qquad$ large boxes
39. The first four elements of a pattern are shown below.


Answer: Each term on the outer blades is being increased by multiples of 3 .
For example: $1+3=4$

$$
\begin{aligned}
& 4+6=10 \\
& 10+9=19
\end{aligned}
$$

Also, the centre is the sum of the numbers on the outer blades: $1+2+3+4=10$ OR

The centre increases by multiples of 12 as the pattern progresses.
(b) Draw the $6^{\text {th }}$ element.

| $19+12=31$ | $31+15=46$ |
| :--- | :--- |
| $20+12=32$ | $32+15=47$ |
| $21+12=33$ | $33+15=48$ |
| $22+12=34$ | $34+15=49$ |

$31+32+33+34=130$
$46+47+48+49=190$

40. Kylie spent $30 \%$ of her salary on rent and gave her sister, Renee, $20 \%$ of the remainder.

Kylie was left with $\$ 980$.
(a) Calculate the total amount of Kylie's salary.

Percentage spent by Kylie $=30 \%$
Fraction spent by $\mathrm{Kylie}=\frac{30}{100}=\frac{3}{10}$

Remainder after rent $=\frac{10}{10}-\frac{3}{10}$

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

Renee received $20 \%$ of the remainder.

Fraction received by Renee $=\frac{20}{100} \times \frac{7}{10}$

$$
=\frac{7}{50}
$$

Fraction of salary spent and given away $=\frac{3}{10}+\frac{7}{50}$

$$
=\frac{11}{25}
$$

Fraction of salary remaining $=\frac{25}{25}-\frac{11}{25}$

$$
=\frac{14}{25}
$$

Kylie was left with $\$ 980$.

So, $\frac{14}{25}$ of her salary $=\$ 980$

Entire salary $=\frac{980}{1} \times \frac{25}{14}$

$$
=\$ 1750
$$

$\qquad$ 1750 $\qquad$
(b) Calculate the amount of money Renee received.

Entire salary $=\$ 1750$
Fraction received by Renee $=\frac{7}{50}$

Amount of money Renee received $=\frac{7}{50} \times \$ 1750$

$$
=\$ 245
$$

Answer \$ $\qquad$ 245 $\qquad$

