

ANSWER BOOKLET FOR SECONDARY ENTRANCE ASSESSMENT FOR MATHEMATICS

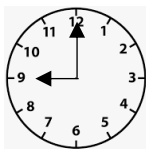
TEST 1

Section 1

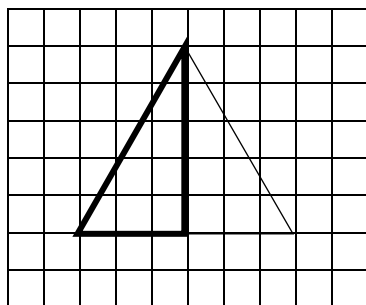
1. Seven hundred and five thousand and six.
2. 4200
3. 60 tenths
4. $2\frac{2}{3}$
5. 55
6. $\frac{4}{5}$, 60%, 0.25
7. \$300.00
8. 16 cakes
9. B= 1.21
10. 437%
11. 6:25 or 25 minutes after 6
12. Peter arrived at 8:50 a.m.
13. 500ml
14. 22cm^2
15. B
16. 2 lines of symmetry
17. 4 sides or the sum of the interior angles = 4 quarter turns or 3 right angles
18. Blue
19. 74 marks
20. 32 goals

Section 2

21. $4\frac{2}{5}$
22. \$50.00
23. \$360.00
24. 266
25. 15km
26. 8 4 6 1
27. a. $\frac{3}{5}$ b. Convert $\frac{3}{5}$ to percentage. $\frac{3}{5} = 60\%$, $60\% > 55\%$
28. $\$10 - 5$, $\$1 - 5$



29. 20%
30. a. 5:30 a.m. b.
31. 122.1 kg
32. $42\frac{1}{2}$ litres
33. a.



- b. Name: Right angled triangle.

Properties: One of the interior angles is a $\frac{1}{4}$ turn or a right angle.

34. a. North b. $4 - \frac{1}{4}$ turns 35. 8 goals
36. a. 75 marks b. 25 marks

Section 3

37. a. 6380 mangoes b. \$6380.00 c. \$1595.00

38. a. 250 000 millimetres

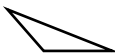
- b. 5 times tank A = 1250 litres (Tank B)

Tank A will hold = $1250\ 000\ \text{ml} \div 5 = 250\ 000\ \text{ml}$

1000 ml = 1 litre

- 39.

40. a. 20 points b. 26 points c. $\frac{1}{7}$

Right –angled	
Scalene	
Equilateral	
Isosceles	

Section 1

1. 46 000

2. 208 406

3. 4.34

4. 6.0

5. 12

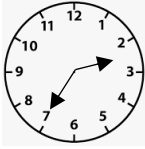
6. 1.41

7. \$360.00

8. \$45.00

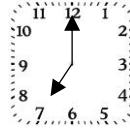
9. $\frac{1}{6}$

10. 1254



11.

12. B = $2\frac{2}{3}$

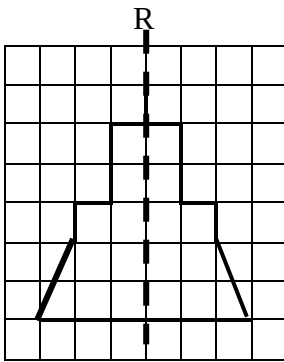


13.

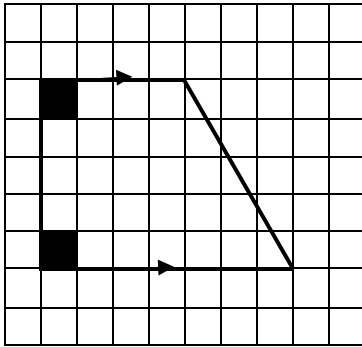
14. 12cm^2

15. Angle PRS

16.



17.



18.



19. 90

20. 64 students

Section 2

21. $\frac{4}{7}$

22. $\frac{17}{5}$

23. 252

24. 59

25. 10 boys

26. a. $3\frac{1}{3}$

b. 3

27. a. $\frac{3}{8}$

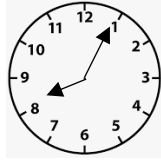
b. 9 oranges

28. 5 ½ dozen eggs

29. a. 2594 b. 9425 c. A number divisible by 2 ends with the digits 0, 2, 4, 6, 8.

A number divisible by 5 ends with the digits 0 or 5.

30. a. 80 packets b. \$180.00 c. \$60.00



31. Correct Time: 8:05

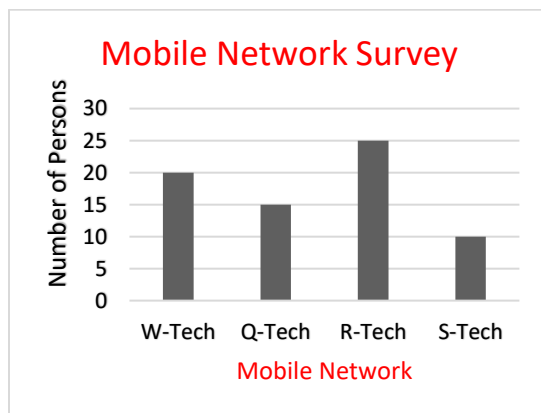
32. 13

33. Add 4 squares to each figure. $1^{\text{st}} = 1$, $2^{\text{nd}} = 5$, $3^{\text{rd}} = 9$, $4^{\text{th}} = 13$ keep the shape.

34. Disagree. The shape when folded along the symmetrical line must fit exactly on each other. Therefore AB **is not** a symmetrical line.

35. a. 74 b. 82

36.



Section 3

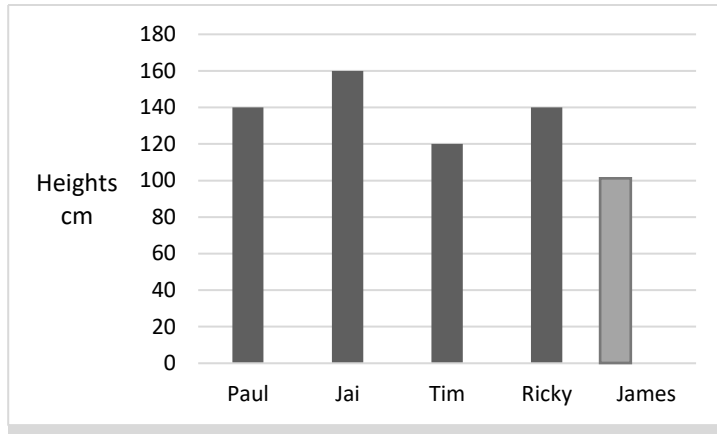
37. a. Nine hundred thousand, four hundred and thirty-five.

b. Nine hundred and forty-three thousand and five hundred.

c. It is different because zero is a place holder. The value of the number is identified because of the position the zero holds.

In the 1^{st} number 900 435, the zeros gave the value Nine hundred thousand. In the 2^{nd} number 943 500, the zero give the digit 5 the value five hundred.

38. a. 540 litres b. $67 \frac{1}{2}$ minutes



36. a.

b. Jai

c. 140cm

Section 3

37. a. 10kg

b. 1kg

c. (a) Calculate the total weight of the sand in the bucket. e.g. $\frac{4}{5} = 11 - 3 = 8\text{kg}$

$$\text{Weight of the sand} = 8 \times \frac{5}{4} = 10\text{kg}$$

$$\text{Weight of sand in bucket} = 10\text{kg.}$$

(b) Weight of the sand and bucket = 11kg

$$\text{Weight of the sand} = 10\text{kg}$$

$$\text{Weight of the bucket} = 11\text{kg} - 10\text{kg} = 1\text{kg}$$

38. a. Rectangle

b. 15 buckets

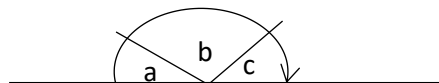
c. \$14 375.00

39. a. 3 unequal sides, 3 unequal angles.

Sum of the interior angles equals to 2 right angles or $2 - \frac{1}{4}$ turns.

b. b

c.



40. a.

History	72	100
Total	442	600

b. $73\frac{2}{3}\%$

c. $73\frac{2}{3}$ marks

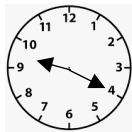
d. 98 marks

TEST 4

Section 1

1. Four hundred and thirty thousand, two hundred and thirty-four.

2. 1.9 3. $1\frac{1}{6}$ 4. 39.3 5. 20 6. 70 cents 7. 375 buttons

8. = 9. $7\frac{4}{9}$ 10. $\frac{3}{9}, \frac{5}{6}, \frac{7}{8}$ 11.  10:20a.m. 12. 11:30 a.m

13. 100 millimetres 14. 20cm 15. 25cm 16. z

17. Rectangular based solid 18. Green 19. 13 20. 😊😊😊😊😊😊😊😊

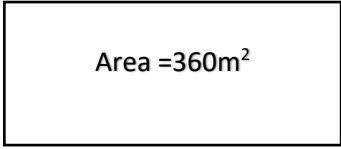
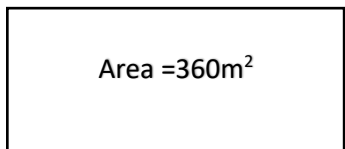
Section 2

21. 1.2 and 0.5 22. 1800 Smart phones 23. 42 marbles

24. 3840 25. a. 70 plants b. 130 plants 26. a. 36 teachers b. 300desks

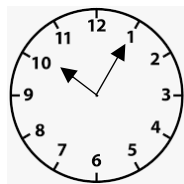
27. $\frac{6}{5}$ 28. a. 175 passengers b. 75 passengers

29. Student B

30m  12 m Area = 360m² Area is measured in Square Units (m²) Surface completely covered.	30m  12m Area = 360m² Perimeter is distance around the shape 30 + 12 + 30 + 12. Perimeter is measured inn linear units (m)
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30. 25 cookies

31.



10:05p.m.

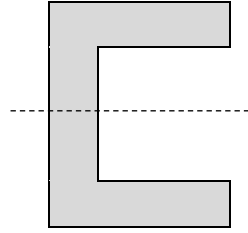
32. 17.825kg

33. (1) A polygon with 3 enclosed sides.

(2) Each triangle has 3 angles = 2 right angles or $2 - \frac{1}{4}$ turns.

34. a. B

b.



c. Only the shape at B can be folded along the symmetrical line and fits completely on each other.

35. 1 run

36. a. 32°C b. 31.7 °C

Section 3

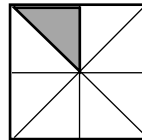
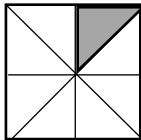
37. a. 60 marbles

b. $\frac{1}{3}$

38. a.

6th

7th



b. From 1st skip 1 triangle to 2nd. From 2nd skip 2 triangles to 3rd.

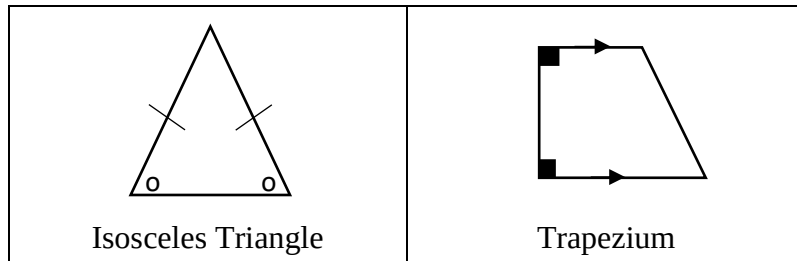
From 3rd skip 3 triangles to 4th. From the 4th skip 4 triangles to 5th.

From 5th skip 5 triangles to 6th. From the 6th skip 6 triangles to 7th.

39. a.

	<i>Plane Shapes</i>	<i>Number of Sides</i>	<i>Number of Equal Sides</i>	<i>Number of Parallel Sides</i>	<i>Number of Right Angles</i>
(i)	Isosceles Triangle	3	2	0	0
(ii)	<i>Right angle triangle</i>	3	0	0	1
(iii)	Trapezium	4	0	1pair	2
(iv)	<i>Scalene Triangle</i>	3	0	0	0

b.



40. a. $\triangle \triangle \triangle \triangle \triangle \triangle \triangle \triangle$

b. 30 houses

c. 80 homes

TEST 5

Section 1

1. Three hundred and eight thousand and fifty three.

2. 203.06

3. 2.62

4. $\frac{11}{12}$

5. 1400

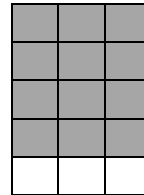
6. 63 050

7. 40 females

8. 14 marbles

9. \$125.00

10.



11. 26 children

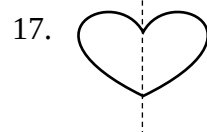
12. 8 $\frac{1}{2}$ hours

13. 8500 grams

14. 20 seconds

15. 11.3 cm²

16. Scalene



18. 81

19. 9 yrs.

20. Sita

Section 2

21. $1\frac{1}{2}$ or $\frac{3}{2}$

22. 60 members

23. 557 marbles

24. a. Prime Numbers b. 3572

25. 54

26. 30 cookies

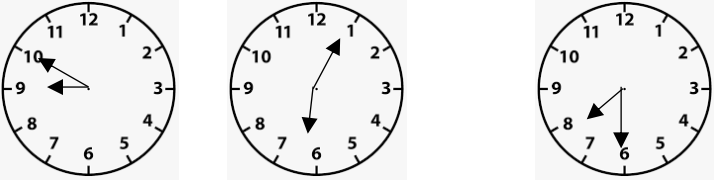
27. Student A estimated 2079 to the nearest 10. 2079 → 2080

Student B estimated 2079 to the nearest 1000. 2079 → 2000

28. a. 480 words

b. 5 minutes

29. 50 children

30. **A** **B**
- 
- a. 8:50 p.m. b. 6:05 a.m. c. 7:30 p.m.
31. a. 3 kg b. 8 32. a. 4 litres b. 60%
33. i) All four sides are equal in length.
 ii) Opposite sides are parallel.
 iii) Diagonals bisect the angles at the vertices.
 iv) The diagonals bisect each other at right angles.
34. a. Trapezium b. 0 symmetrical lines
35. a. 200 students b. 36 students
36. a. 82 marks b. 41 marks

Section 3

37. a. 3000 cans of juice b. 40% 38. 27 bottles

39.

Name of Solid	Number of Edges	Number of Faces	Number of Rectangular faces
Triangular based Prism	9	5	3

40. a. \$7600 b. \$1600 c. \$1200

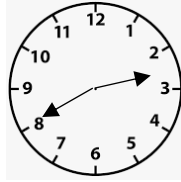
TEST 6

Section 1

1. \$5050.00 2. 49 3. 405 4. 1.2 5. $\frac{2}{5}$
6. 6.3 7. 26 marbles 8. \$120.00 9. 4 10. 40%, 0.55, $\frac{3}{5}$

11. 506 centimetres

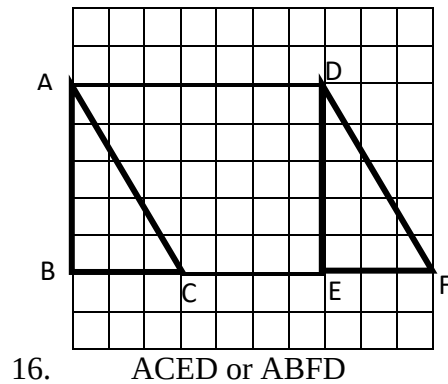
12.



13. 2 litres

14. 24 cm

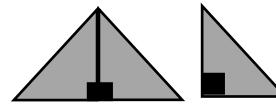
15. C



16.

ACED or ABFD

17.



18. 95 marks

19. 95 marks

20. 9 runs

Section 2

21. 33

22. $2\frac{5}{6}$

23. \$300

24. 40%

25. 48 students

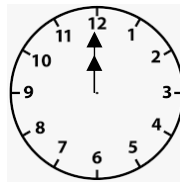
26. 900 chickens

27. 204

28. \$300.00

29. 64

30. 8:20



32. a. 3.06 litres

b. 14%

33. $1^2 = 1$, $2^2 = 4$, $3^2 = 9$, $4^2 = 16$

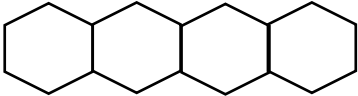
34. XY. XY is the symmetrical line because each quadrilateral is equidistant apart in the same position. When folded on the symmetrical line, the quadrilateral matches each other in shape and size.

35. a. 6.7

b. 2.3

36. a. Vertical Block b. 23 lunches

Section 3

37. a. 21 match sticks b.  4th 21 match sticks

c. 1 Hexagon = 6 match sticks

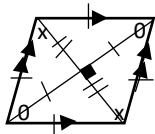
2 Hexagon = 11 match sticks

3 Hexagon = 16 match sticks

4 Hexagon = 21 match sticks 6^{+5} 11^{+5} 16^{+5} 21

38. a. 40 packs b. 28 packs c. \$77.00

39. 40. a. \$19500 b. \$3900.



c.

Years	2015	2016	2017	2018	2019
Amount. Saved	\$3500	\$4000	\$5000	\$4000	\$3000

TEST 7

Section 1

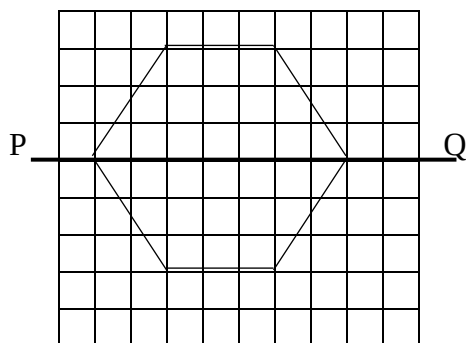
1. 340201 2. $\frac{11}{20}$ 3. = 4. 190 heaps 5. 8 cupcakes

6. $\frac{17}{20}$ 7. \$144 8. 0.3 9. 50 five dollar bills 10. 1352

11. 12 12. Friday 13. 6cm 14. 189cm² 15. Square

16. Similar

17.



18. 105 animals

19. 00

20.

Ages	Tally	Total
6		3
7		4
8		7
9		5
10		4
11		4
	Total	27

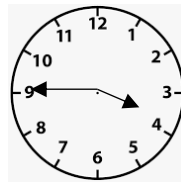
Section 2

21. 2 22. 22 23. 2.52 24. 21 25. 10%

26. a. 9762 b. 2796 c. 6966 27. 1 6 4 8

28. a. Juan

b. 2 is a Prime Number. 1 is not a Prime Number.
A Prime Number has only two factors 1 and itself.
1 has only 1 factor
2 has 2 factors 1 and itself.

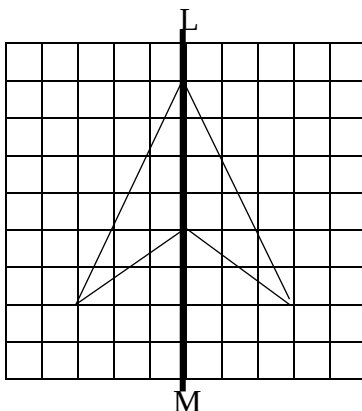


29. a. 1320 patrons b. 2700 patrons 30. a. b. 37 ½ hours

31. a. 80 m² b. 160 tiles 32. \$24.00

33. Equilateral triangles: All 3 sides are equal in length. The 2 angles are also equal and the sum of the 3 angles are equal to 2 right angles or 2 – ¼ turns. Scalene triangles: 3 sides are unequal in length. 3 angles are also unequal. Their sum are equal to 2 – right angles or 2 – ¼ turns.

34. a.

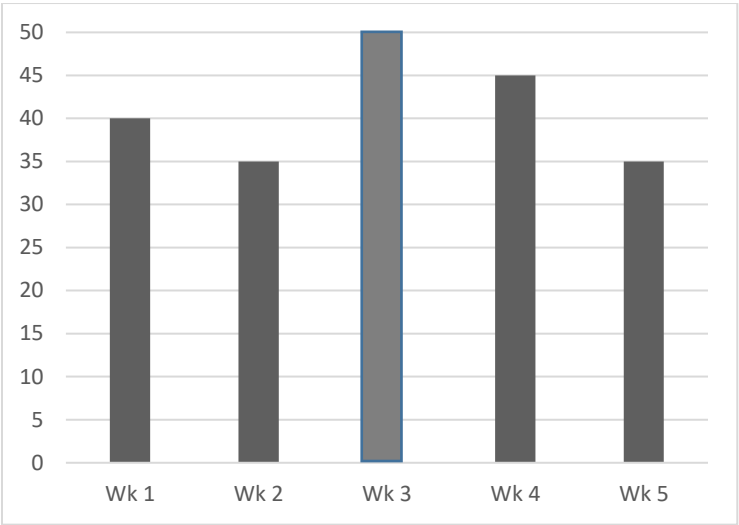


b. 1 line of symmetry

35. a. 44 b. 36

36.

Thousands
of
Dollars



Section 3

37. a. 80 red apples b. 90 yellow apples c. \$400.00

38. a. 2kg 400g b. 60 metal balls

39.

<i>Shapes</i>										<i>Area of Shape</i>	<i>Perimeter of Shape</i>
1 st										1	4
2 nd										2	6
3 rd										3	8
4 th										4	10
5 th										5	12
6 th										6	14

40. a. Feb = 45, Mar = 35, May = 25

b. April and May

TEST 8

Section 1

1. Forty thousand, two hundred and thirty-four

2. 17

3. 5.6

4. $6\frac{1}{3}$

5. 2.04

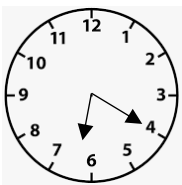
6. 10 150

7. 25.79

8. \$185.65

9. 75%, $\frac{4}{5}$, 1.25

10. Yes. He multiplied by 100, because $25 \times 4 = 100$, then he divided by 4, solving the problem quite easily. Also 100 is a multiple of 25 and 4, and 4 and 25 are factors of 100.



11. 6:20

12. 26th

13. 36 cubes

14. \$6.20

15. p and r

16. Cube/ Cuboid/ Triangular bas prism / Cylinder etc.

17. A and D

18. 5

19. Red and Green

20. 33 students

Section 2

21. 31.5 metres

22. 359 and 245

23. 32%

24. $9\frac{1}{3}$

25. 240 sweets

26. a. Stall B b. \$34.00

27. a. 3

$$\text{b. } 0 + \frac{1}{5} = \frac{1}{5}, \quad \frac{1}{5} + \frac{2}{5} = \frac{3}{5}, \quad \frac{3}{5} + \frac{3}{5} = \frac{6}{5} = 1\frac{1}{5}, \quad 1\frac{1}{5} + \frac{4}{5} = 2, \quad 2 + \frac{5}{5} = 3$$

Each fraction is increased by $\frac{1}{5}$ more than the previous fraction.

28. \$375.00

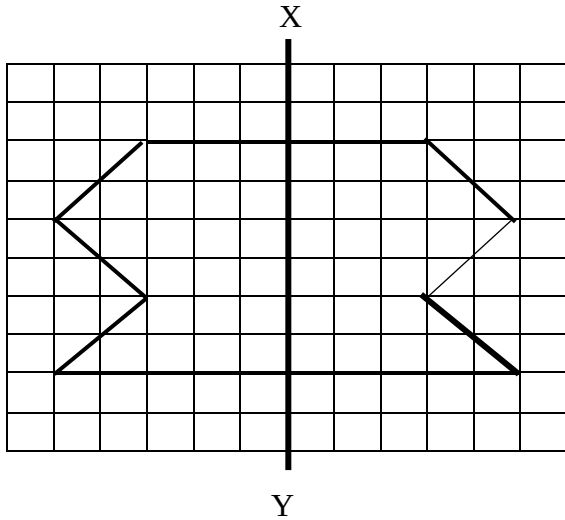
29. \$300.00

30. 144cm²

31. 250 $\frac{1}{2}$ litres or 250.5 litres

32. 16 000cm²

33.



34. Trapezium Rectangle

Similarity: Both are quadrilaterals, or Each shape has 4 sides.

or 4 Interior angles = 4 right angles or 4 – ¼ turns

Difference: Trapezium has 1 pair of parallel sides. Rectangles has 2 pairs of parallel sides

35. $10^{\text{th}} = 11$ 70%

36. a. 25 matches b. 79 goals c. 2 goals

Section 3

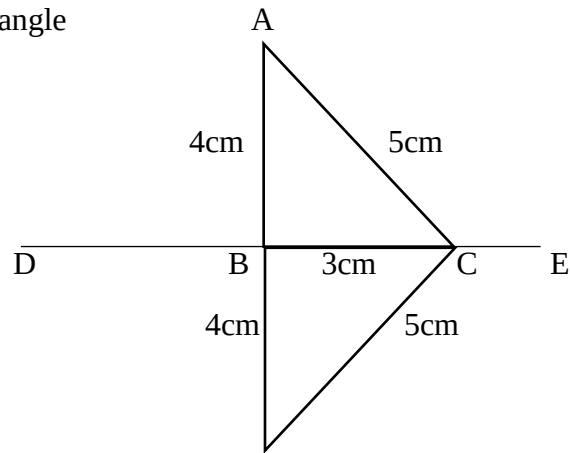
37.

<i>Items</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
Rice	4 kg	\$9.00	\$ 36.00
Sugar	2 ½ kg	\$8.00	\$ 20.00
Cereal	2 boxes	\$28.00	\$ 56.00
<i>Sub Total</i>			\$112.00
Discount	5%		\$ 5.60
<i>Total</i>			\$106.40

38. a. Right angled Triangle

b. Angle ABC

c. Isosceles Triangle



39. a. 48 000 litres b. 5 Tank B

40. a. 360 cars b. 60 cars

TEST 9

Section 1

1. 80 036 2. 52.00 3. $\frac{81}{25}$ 4. $(4 \times 100) + (0 \times 10) + (6 \times 1) + (0 \times \frac{1}{10}) + (8 \times \frac{1}{100})$

5. 2093 6. $4\frac{4}{7}$ 7. 17 8. \$210 9. 7.01

10. 11 11. 4.1kg

12. Perimeter is the distance around the rectangle once. Opposite sides are equal 2lengths and 2 widths.

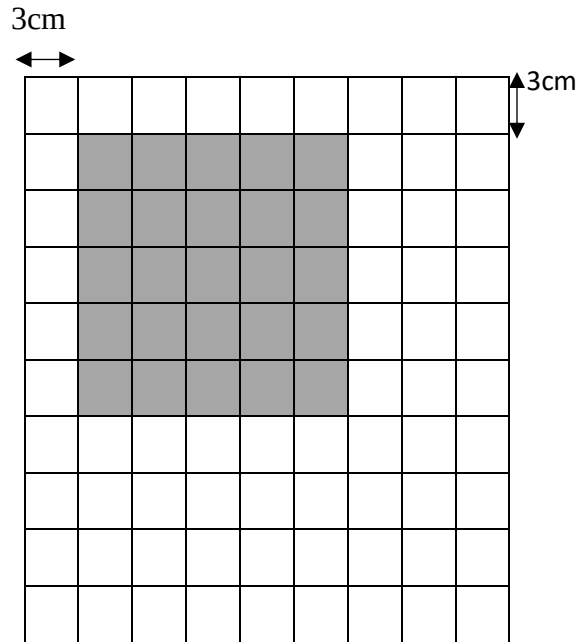
$$2L + 2W = 2(L + W)$$

$$24 \times 2 + 12 \times 2 = 48 + 24 = 72\text{cm}$$

Perimeter is measured in linear measurement.

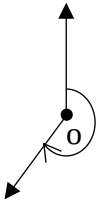
13. Pablo 14. 1.5kg or $1\frac{1}{2}$ kg

15.



16. AB

17. North



18. 4 goals

19. 32 students

20. English B and Social Studies

Section 2

21. $1\frac{1}{13}$

22. 30

23. 254 oranges

24. 24 mangoes

25. 28%

26. a. $36 = 6^2$

b. Adding consecutive odd numbers equal to a square number.

$2^2, 3^2, 4^2, 6^2$

e.g. $1 + 3 + 5 + 7 + 9 + 11 + 13 = 49 = 7^2$

27.

<i>Denominations</i>	<i>Number</i>	<i>Denominations</i>	<i>Number</i>
\$50	2	\$5	3
\$20	3	\$1	5
\$10	2		

28. It is a correct method, because $6 \times 3 = 18$. 6 and 3 factors of 18 and also 18 is a multiple of 6 and 3.

$$\begin{array}{r} 34 \\ 18 \overline{) 612} \\ - 540 \\ \hline 72 \\ - 72 \\ \hline 00 \end{array}$$

Answer = 34

Dave's method

$$\begin{array}{r} 102 \\ 6 \overline{) 612} \\ - 600 \\ \hline 12 \\ - 00 \\ \hline 12 \\ - 12 \\ \hline 00 \end{array}$$

and

$$\begin{array}{r} 34 \\ 3 \overline{) 102} \\ - 90 \\ \hline 12 \\ - 12 \\ \hline 00 \end{array}$$

Answer = 34

29. 370 poultry

30. a. 8:15 or 15 minutes past 8

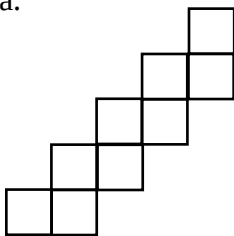
c. 08:40

31. a. 26.5 kg

b. \$200

32. 15 bottles

33. a.



b.

Add 2 squares to the 1st to obtain the 2nd.

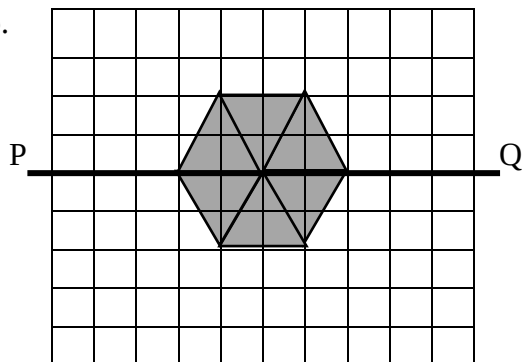
Add 2 squares to the 2nd to obtain the 3rd.

Add 2 squares to the 3rd to obtain the 4th.

3	5	7	9
1 st	2 nd	3 rd	4 th

34. a. Equilateral triangles.

b.



35. |||| |||| |||| | 16

36. a. 270 sticks b. 90%

c. Person(s): Mrs. Singh and Mr. Thomas

Reason: Mrs. Singh sold the most tickets followed by Mr. Thomas. Between both of them, they sold 40% of the total number of tickets.

Section 3

37. a. \$15.00 b. 25 tickets c. \$75.00 d. \$2000.00

38. \$200.00

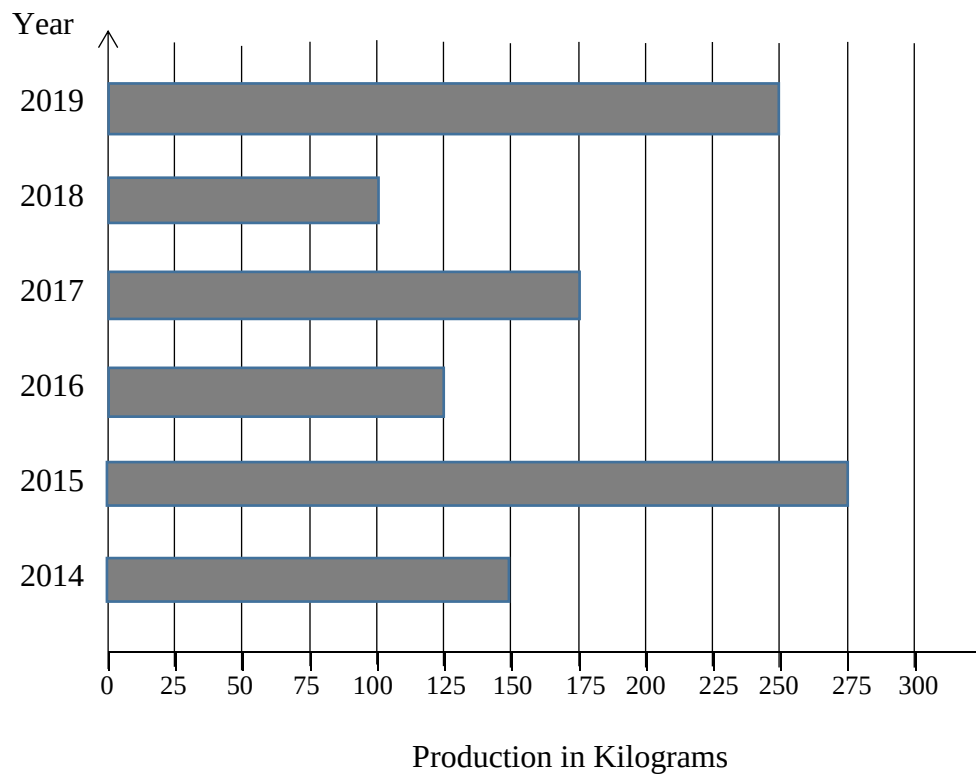
39. a.

Figure	Number of squares in Figure	Perimeter of Figure
4	9	20

b. For every 2 squares added in the figure, the perimeter of the figure is increased by 4.

e.g. 3 squares + 2 squares = 5 squares in the figure, the perimeter $8 + 4 = 12$ etc.

40.



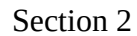
Section 1

5.5.6

10. =



20. 14 cm



25. 11

28. 75 cookies

30. No. Example 1: $\frac{1}{3} = \frac{2}{6}$ and $\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$

$$\therefore \frac{1}{3} > \frac{1}{6}$$

Example 2: $\frac{1}{4}$ and $\frac{1}{8}$ again $\frac{1}{4} = \frac{2}{8}$, i. e. $\frac{1}{8} + \frac{1}{8} = \frac{2}{8}$

$$\therefore \frac{1}{4} > \frac{1}{8}$$

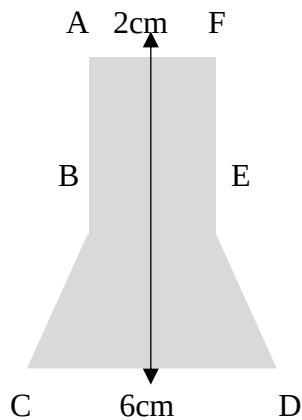
$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	→ 3 equal parts		
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	→ 6 equal parts

[illegible]

31. 50%

32. 227.1 kg

33.



34. a. Triangular based prism

b. It is a prism. A prism when dissected has an equal cross section to its top and base.

A pyramid when dissected has an unequal cross-section, to its top and base.

35. 70 students

36. a.

Marks	5	6	7	8	9	10
Number of Students	10	5	25	15	10	5

b. 7

Section 3

37. a. 6 cups of grated cheese

b. 4 macaroni pie

38. a. 20 pens

b. 15 pencils

c. 1st. Find the cost of 5 pens. $\$12 \times 5 = \60

2nd Subtract the cost of 5 pens from \$360. Balance = \$300.

3rd Add the cost of 1 pen and 1 pencil = \$20

4th Divide \$300 by \$20 = 15 of each.

5th Add the 5 extra pens to the 15 pens.

$\therefore$ 20 pens and 15 pencils

39. a. Trapezium

b. (i) 4 sided plane shapes

(ii) 1 pair of parallel sides

(iii) The sum of the interior angles equals 4 right-angles or $4 - \frac{1}{4}$ turns.

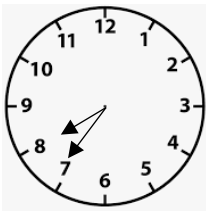
c. 1 whole turn, or 4 quarter turns

40. a. 40 students b. 144cm c. 50%

TEST 11

Section 1

1. 0 2. Seven hundred and nine and six hundredths
3. 4 4. $\frac{1}{3}$ 5. 2 $\frac{1}{2}$ dozens 6. $93 \frac{3}{4}$ or 93.75
7. 6 children 8. 69.94 9. $\frac{3}{4}$



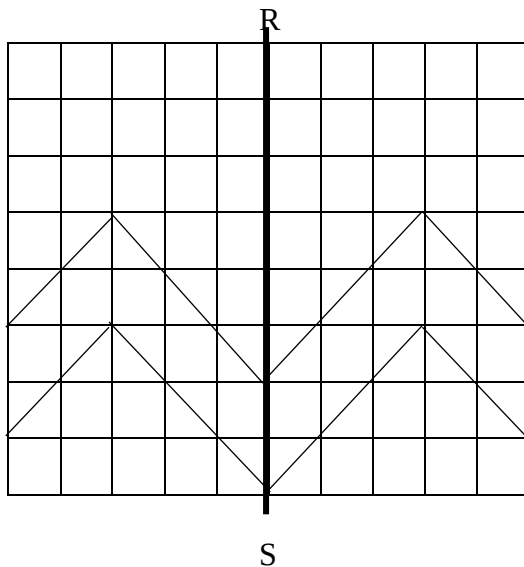
10. 11. Monday 3rd August 12. 33 hours

13. 150 millimetres 14. 56cm^2 15. Draw any triangle

16. cube 17. 2 quarter turns 18. 32



20.



Section 2

21. 52.50 metres 22. $4\frac{5}{10}$ or $4\frac{1}{2}$ 23. 20% 24. 25 25. 42 buttons

26. a.

8	$2 \times 8 - 4$	12
9	$2 \times 9 - 4$	14

b. Counting in twos. 2, 4, 6, 8, 10, 12, 14

27. Different. Pablo's answers will be 2 equal groups with 10 buttons in each group.

Ricky's answers will be 10 groups of twos with 2 buttons in each group.

Numerical value will be the same.

28. Response 1

Response 1 identifies the factors of 26.

Response 2 did not identify the Prime Factors of 26. Factor 1 is NOT a Prime factor.

A Prime Factor has only two factor 1 and itself.

29.

Days	1	2	3	4	5	6
Number of Pineapples sold	120	130	150	190	270	430

b. 700

30. Length = 29cm, Width = 25cm

31. i) Total distance around the shape only once.

ii) $L + W + L + W = 2L + 2W = 2(L + W)$

iii) In a rectangle there are 4 sides, opposite sides equal in length (distance). i.e. 2 equal lengths and two equal widths.

32. a. 80 - 125 grams pieces b. 40 - 250 grams pieces

33. a. Octagon b. 8 triangles

34. a. Square has 4 symmetrical lines Rectangle has 2 symmetrical lines

b. The diagonals in the square are symmetrical lines but not in the rectangle. Remember when the shapes are folded along the lines of symmetry, each folded part fits exactly on each other.

35. 25 – 5G cell phones

36. a. 4 persons b. $\frac{6}{25}$

Section 3

37. i) None

Student 1: $8.6 \div 1.0 = 86$. Student multiply by 10. The word ‘quotient’ was taken as ‘multiplication’ and shifted the decimal point, hence the value 10.

Student 2: Understood the word ‘quotient’ as the answer to a division problem, and also shifted the point, thereby dividing by 10.

ii) $8.6 \div 1.0$

$$\frac{86}{10} \div 1$$

Answer = 8.6

or

$$\begin{array}{r} 8.6 \\ 1.0 \overline{) 8.6} \end{array}$$

$$- \underline{8.0}$$

$$0.6$$

$$- \underline{0.6}$$

$$0.0$$

Answer = 8.6

Correct Answer = 8.6

38. a. 50 cubes

b. Box B’s capacity is 100%

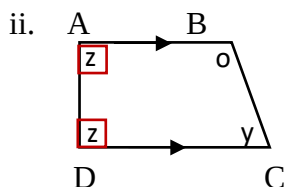
Wooden Cube has a capacity of 2%

Number of wooden cubes required $100\% \div 2\% = 50\%$

Example: Wooden cube capacity = 8cm^3 , Box B’s capacity = 400cm^3

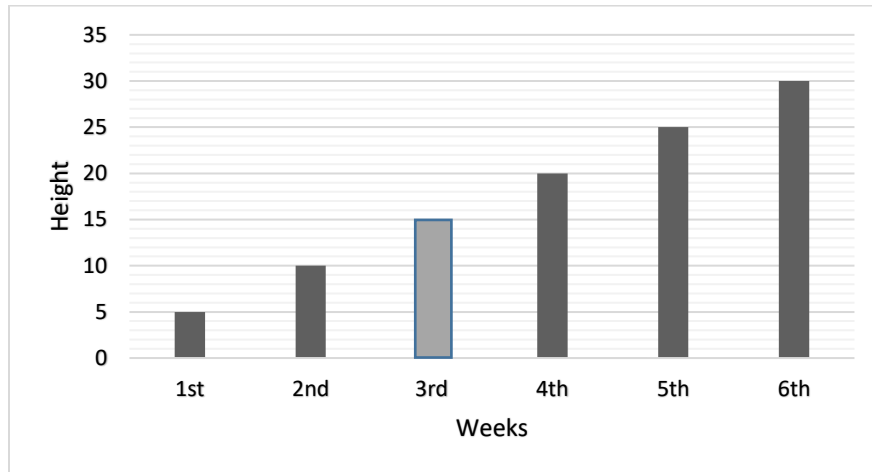
Number of wooden cubes required will be $400\text{cm}^3 \div 8\text{cm}^3 = 50$

39. i. Trapezium



40. i) 5 cm ii)

Growth of a Flowering Plant



iii) 30cm

iv) 5, 10, 15, 20, 25, 30 . Multiples of 5 to 30. Constant graph of 5cm each week.

TEST 12

Section 1

1. 976310 – Nine hundred and seventy-six thousand and three hundred and ten

2. $\frac{3}{2}$

3. 11 thirds

4. 35

5. 576

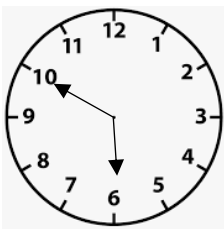
6. 17100

7. 80 705

8. 4.04

9. 48

10. 50.0, 5.0, 0.5, 0.05



11.

12. 2045cm

13. 8 persons 14. 5.250kg or 5 $\frac{1}{4}$ kg

15. (iii)

16. B

17. 4 rectangular faces 2 square faces

18. 78 students

19. 21 students

20. Lawyer

Section 2

21. $10\frac{2}{3}$ 22. a. $\frac{1}{3}$ b. 30 23. 827 sweets 24. 3

25. 1.5 and 0.3 26. \$5.40

27. Calculate $\frac{1}{5}$ of \$1000 = 4200

Subtract \$200 from \$1000 = \$800

Divide \$800 by 2 = \$400 Son

Add \$200 to \$400 = \$600 daughter

28. \$44.50

29. Yes. Vendor A has the better buy. At Vendor A, 1 egg costs \$1.50

At Vendor B, 1 egg cost \$1.75

30. \$12800

31. a. 27 litres b. 27 000 millimetres

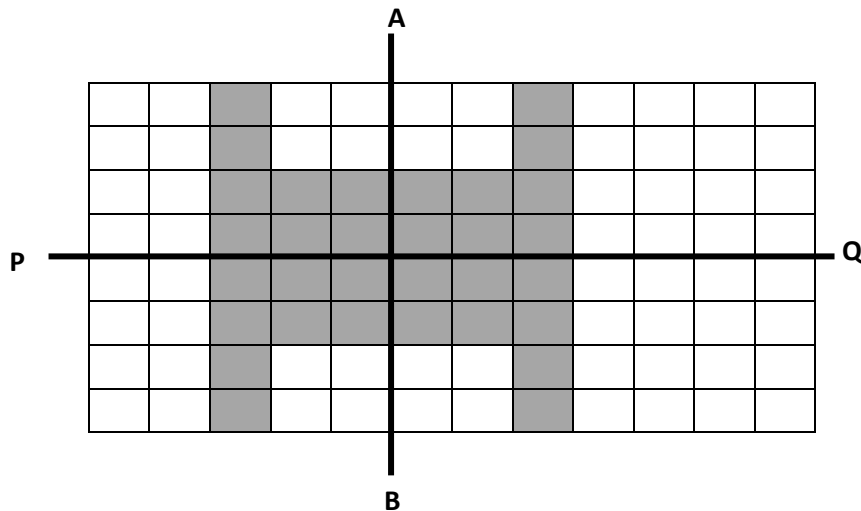
32. a. 168m^2 b. 8 rugs

33. a. True

b. A square has 4 equal sides, 4 equal angles, 4 lines of symmetry, 2 pairs of parallel sides.

A rectangle has 4 sides, opposite sides are equal. It has 4 equal angles, 2 lines of symmetry, 2 pairs of parallel sides.

34.



(2 marks)

35. 74 36. (i) 5 points (ii) 200 points (iii) 12.5%

Section 3

37. Problem 1: Answer = 15 children

Problem 2: Answer = \$15.00

The problems are different while the numerical value 15 is the same in both answers, the answer in Problem 1 is 15 children and the answer in Problem 2 is 15 dollars. The units required are completely different in meaning.

38. (i) Contractor 2 is very reliable and can be depended upon to complete the job on time.

(ii) Contractor 2 can perform excellent work, quality is at a very high standard.

39. a. Right angled triangles b. Similar

c. The length of the sides in triangle PQR is greater than the length of the sides of triangle \ ABC.

d. Isosceles Triangle. You can draw any other triangle: Equilateral /Scalene Triangle

40. a. 38 students

b.

Monday										
Tuesday										
Wednesday										
Thursday										
Friday										

c. 20%

TEST 13

Section 1

1. 2568

2. Multiples of 3 = 3, 6, 9, 12 Multiples of 4 = 4, 8, 12, 16 Common Multiples = 12

3. $(7 \times 10\,000) + (3 \times 1000) + (1 \times 100) + (1 \times 1)$

4. 1

5. 2.1

6. 363.04

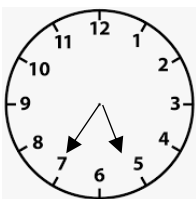
7. 30%

8. 24 tenths

9. 56895

10. (16×23)

11. 35 minutes

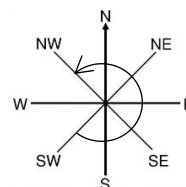


12.

13. 6 litres

14. 33cm^2

15.



16. A cube is a solid with 6 equal square faces. A cuboid is a solid with 6 rectangular faces.

Opposite faces are equal. There are cuboids with 4 rectangular faces and 2 square faces.

17. Triangular base solid (prism)

18. 270 runs

19. 75 marks

20. Water Taxi

Section 2

21. a. Digit 7 b. $69\frac{1}{10}$

22. $1\frac{3}{10}$

23. a. 22kg b. 9 smaller bags

24. This is possible because 4 and 3 are factors of 24, also 24 is a multiple of 3 and 4.

i.e. $3 \times 8 = 24$ and $4 \times 6 = 24$

25. 40%

26. $5\frac{1}{9}$

27. 290 males

28.

Item	Quantity	Unit Price	Total Cost
Flour (wheat)	$2\frac{1}{2}$ kg	\$8.50	a. \$21.25
Potatoes	4 kg	b. \$3.56	\$ 14.24
		Sub Total	\$ 35.49
		Discount	\$ 3.50
		Total	\$ 31.99

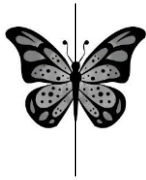
29. a. \$3000 b. \$5625 30. a. 180 kg b. 54kg

32. Yes, the estimation is valid.

Length: 8.5cm was rounded to 9cm

Width: 4.3cm was rounded to 4cm

$$9\text{cm} \times 4\text{cm} = 36.0\text{cm}^2$$

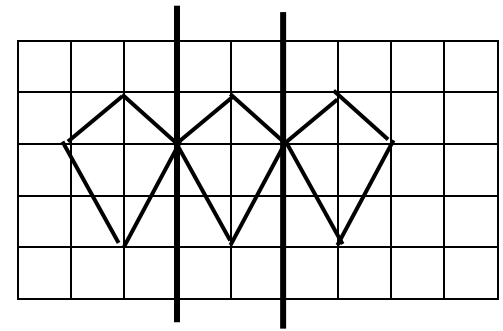
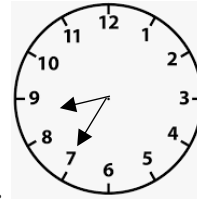


33. a. 1

b.

34. a. 2 lines of symmetry

31.



35. a. $36\frac{2}{3}\%$ b. 45 marks 36. 21 students

Section 3

37. a. \$192 b. 56%

38. Jar A is the better buy.

150g cost \$3.00

1 g will cost $\$3.00 \div 150$

$$\frac{3.00}{150} = 0.02$$

= 2 cents

400g cost \$12.00

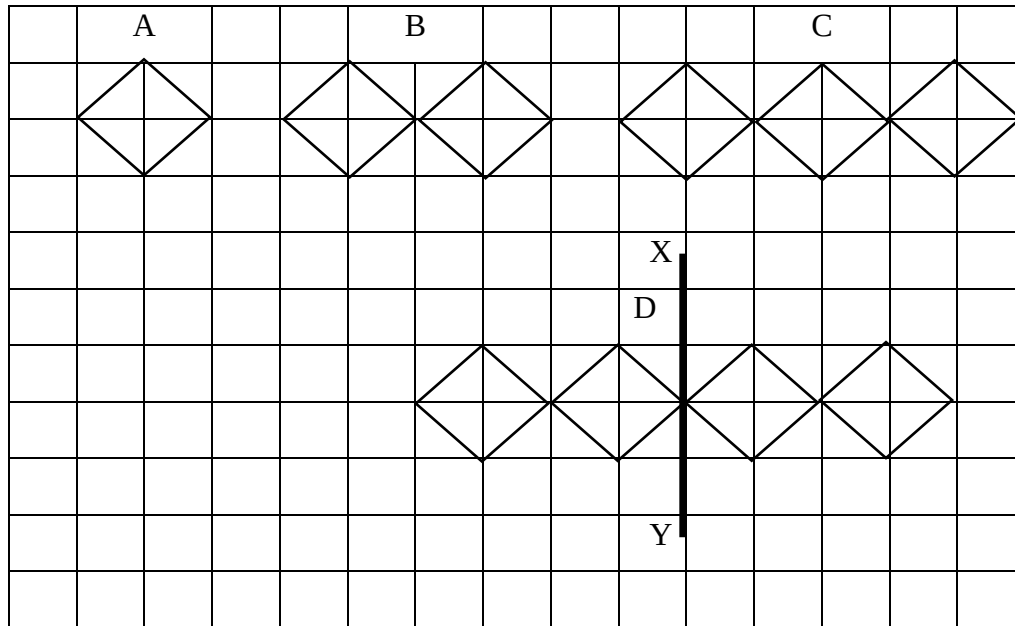
1 g will cost $\$12.00 \div 400$

$$\frac{12.00}{400} = 0.03$$

= 3 cents

39. a. Rhombus b. Regular

c.



40. a. 22 hundreds of cars b. 2016 and 2017 year c. 11 000 cars

d. 2015 and 2016 year

TEST 14

Section 1

1. Three hundred and fifty thousand three hundred and fifty-eight.

2. $(3 \times 100) + (1 \times 10) + (2 \times 1) + (0 \times \frac{1}{10}) + (7 \times \frac{7}{100})$

3. 31, 37, 41, 43, 47

4. $\frac{3}{8}$

5. $\sqrt{64} = 8$

6. $P = 81$, $Q = 49$

7. 492

8. \$75.00

9. 63

10. 29 bananas

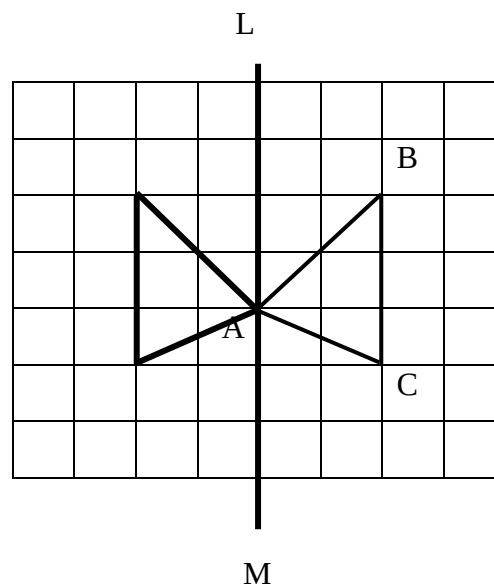
11. 10:05a.m.

12. 12.77kg

13. 1 litre

14. 36 cubes

15.



16. $\frac{3}{4}$ turn

$\frac{1}{2}$ turn

17. Isosceles

18. 72

19. 50

20. 40%

Section 2

21. $\frac{7}{6}$

22. Valuable. It is valuable as a place value holder. Without the '0' the number recorded would be 36.8. The 8 represents $\frac{8}{10}$. In its present form 36.08, the 8 represents $\frac{8}{100}$. A difference of $\frac{72}{100}$.

23. $2\frac{1}{10}$

24. 12 jackets

25. 150 persons

26. a. Student 3

b. $0.4 \times 0.6 = 0.24$

$$\frac{4}{10} \times \frac{6}{10} = \frac{24}{100} = 0.24$$

4 tenths $\times$ 6 tenths = 24 hundredths

27. \$486

28. a. 10%

b. 300 chicken pies

c. 30 boxes

29. $\frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \boxed{\frac{5}{8}}, \frac{3}{4}, \boxed{\frac{7}{8}}$

The fraction is increasing by $\frac{1}{8}$ in value. e.g. $\frac{1}{4} + \frac{1}{8} = \frac{3}{8}, \frac{3}{8} + \frac{1}{8} = \frac{1}{2}, \frac{1}{2} + \frac{1}{8} = \frac{5}{8}$

Remember $\frac{1}{4} = \frac{2}{8}, \frac{1}{2} = \frac{4}{8}, \frac{3}{4} = \frac{6}{8}$

30. 125 minutes

31. a. 112.59kg

b. $\frac{1}{2}$

32. a. Vishu's age 30 years. Deo's age 60 years

b. 2 times older

33. a. Trapezium Parallelogram

b. Quadrilateral A has two right angles or $2 - \frac{1}{4}$ turns, which can be identified or

Quadrilateral B has 2 pairs of parallel sides or

Opposite angles in quadrilateral B are equal.

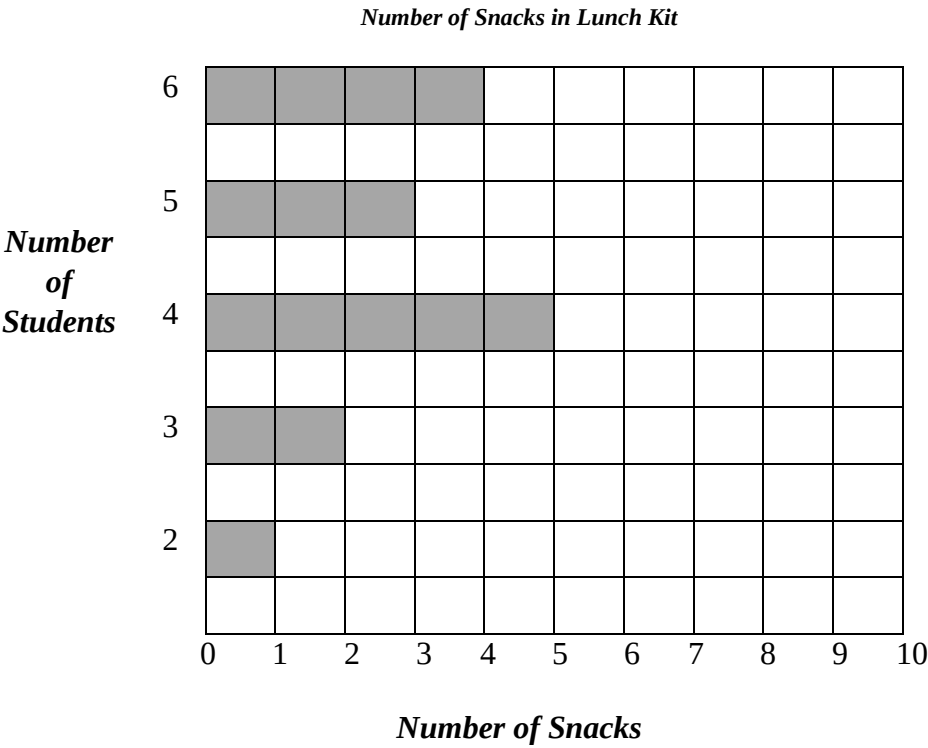
34. perpendicular lines intersect at right angles. Parallel lines are equidistant apart and do not intersect when produced (extended).

35. a. 20 snacks

b. 67 snacks

36.

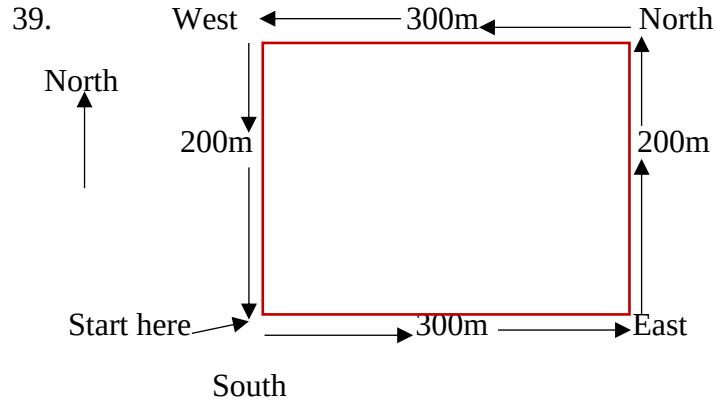
<i>Numbe of Snacks</i>	<i>Number of Students</i>	<i>Total Number of Snacks</i>
1	2	2
2	3	6
3	5	15
4	6	24
5	4	20



Section 3

37. 14 steps

38. a. 1.4 litres b. $\frac{1}{8}$ litres

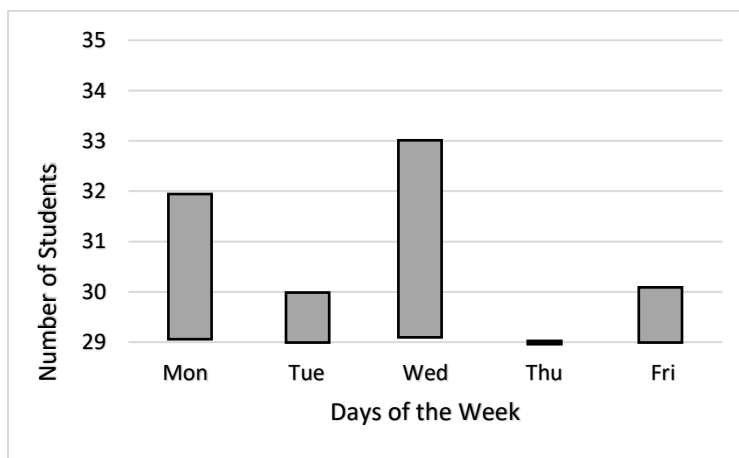


b. Rectangle

c. 3

40. a.

<i>Days of the Week</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>
<i>No. of Absent Student</i>	3	5	2	6	5
<i>No. of Students Present</i>	32	30	33	29	30



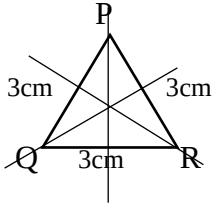
b.

c. 12%

TEST 15

Section 1

1. 895340 2. 6.55 3. 53 4. 16 5. 9315
6. 25 7. 6.8 8. \$6.00 9. 2.91 10. 25%, 0.35, $\frac{2}{5}$
11. 15.15 kilometres 12. 9:10a.m. 13. 27th September 14. 4050 grams
15. Scalene Triangle

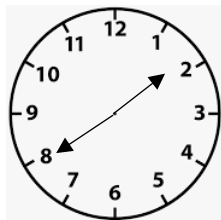
16.  17. Triangles ABC and ADC 18. 35

19. March and April 20. 7

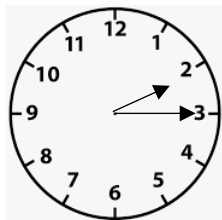
Section 2

21. $11\frac{5}{6}$ 22. 300 23. 80 24. $\frac{3}{4}$ and $\frac{2}{3}$ 25. $\frac{3}{2}$
26. \$180 27. 3337

28



B



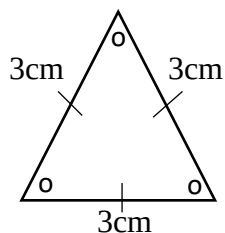
C

Since Clock A is 45 minutes faster than clock B, you move the minute hand anticlockwise 45 minutes to the number 8 on clock B. Time will be 1:40.

Since Clock B is 35 minutes slower than clock C, you move the minute hand clockwise 35 minutes to the number 3 on clock C. Time will be 2:15.

29. 200 students 30. a. 90 cherries b. 72 cherries c. 262 cherries
31. 4 flags 32. 6

33. Equilateral Triangle



34.



35. 4

36. \$50

Section 3

37. a. 1750 persons b. 700 females c. 975 children

38. a. 4500cm b. 2.7 km

39. a. Cuboid

b.

<i>Number of Square Faces</i>	<i>Number of Rectangular Faces</i>	<i>Number of Edges</i>
<i>2</i>	<i>4</i>	<i>12</i>

40. a. \$200 000

b. \$31 000

c. 80%

TEST 16

Section 1

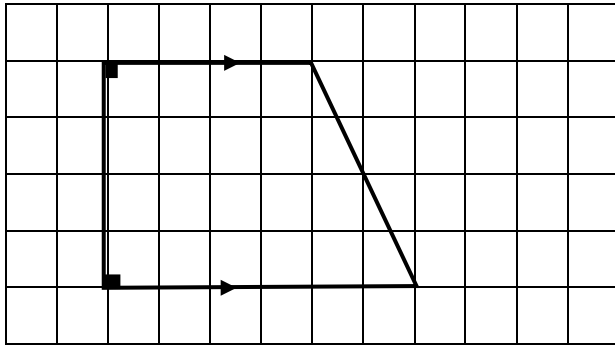
1. (3 x 10 000) 2. 4000 3. $\frac{13}{4}$ 4. 7.09 5. \$18.00

6. 20 7. 3.15 8. $1509 + 877 = 2386$ 9. $\frac{9}{14}$

10. 40 students 11. \$140.00 12. 9cm 13. 48m 14. 90km

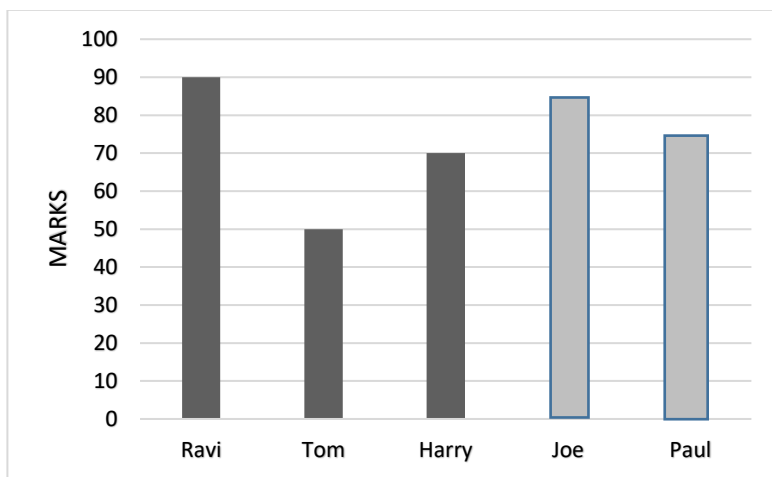
15. No 16. 7 face

17.



18. 7 mark

19.



20. 90 marks

Section 2

21. $\frac{1}{5}, \frac{1}{4}, \frac{1}{3}, \frac{3}{8}, \frac{1}{2}$

22. $12 \frac{3}{4}$

Subtract $\frac{3}{4}$ from the 1st number, then 2nd until you arrive at 12.

e.g. $15 - \frac{3}{4} = 14 \frac{1}{4}$, $14 \frac{1}{4} - \frac{3}{4} = 13 \frac{1}{2}$, $13 \frac{1}{2} - \frac{3}{4} = 12 \frac{3}{4}$, $12 \frac{3}{4} - \frac{3}{4} = 12$

23. 24 plums

24. 1974

25. $(73 \times 200) + (73 \times 2)$

26. (ii) $(3500 \times 12) - 12$

27. 250 plums

28. a. \$40.00

b. 1 hot dog, 1 Juice, 2 Ice Cream

29. Student 2

Student 1 subtracted the smaller value number from the greater value number in each column regardless of position. E.g. 4 3 0 5

$$\begin{array}{r} - \quad 2 \ 5 \ 4 \ 3 \\ \hline 2 \ 2 \ 4 \ 2 \end{array}$$

30. 3 m 46cm

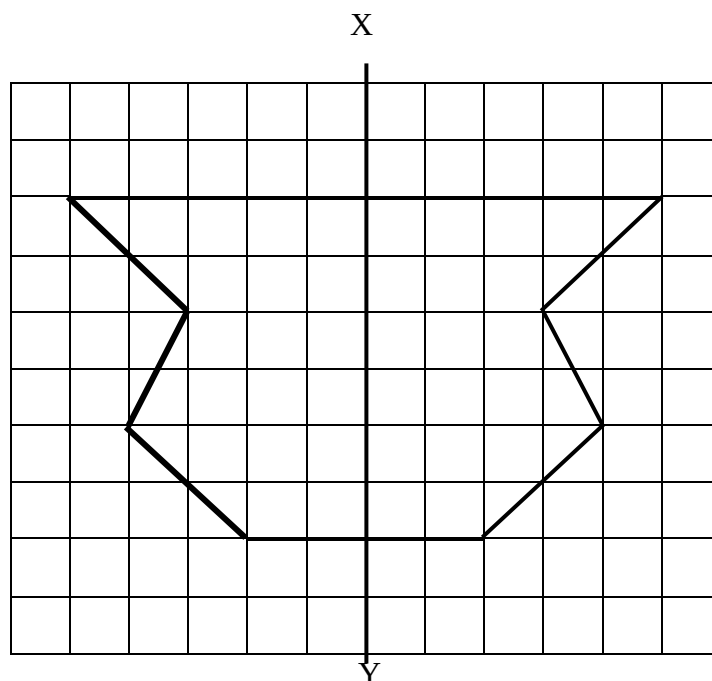
31. a. 42 $\frac{1}{2}$ hours

b. 35 hours 50 minutes

32. a. Length 4200cm, Width 2200cm

b. 38.4%

33.

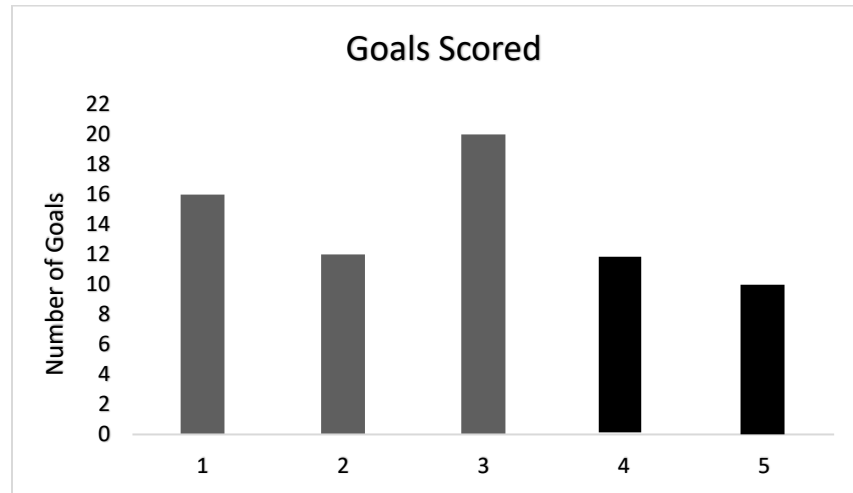


34.

Similarities	Differences
Square, solids, edges, vertices, 6 square faces, Can be stacked quite easily.	Length of sides 2cm in one and 4cm in the other capacity.

35. a. 155cm

b. 156cm



36.a.

b. 12

Section 3

37. Alfred = \$30 000 Michael = \$20 000

1st start with Winston's share = \$10 000

2nd Calculate Michael's share $2 \times \$10\,000 = \$20\,000$

3rd Calculate Alfred's share $3 \times \$10\,000 = \$30\,000$

Conclude by adding \$30 000, \$20 000 and \$10 000 = \$60 000

38. a. 360cm^2

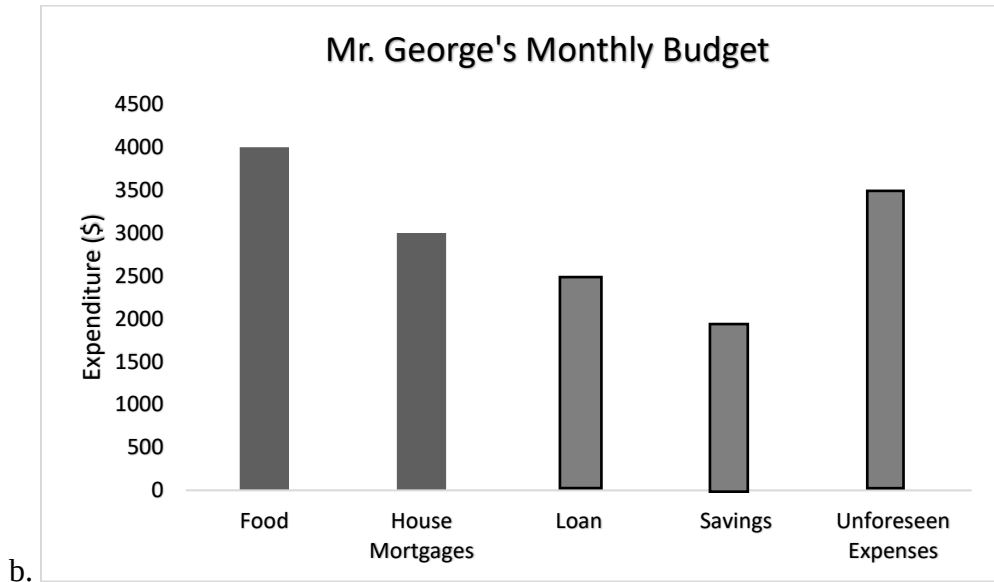
b. 840cm^2

c. 0.7

39.

<i>Plane Shapes</i>	<i>Number of Sides</i>	<i>Number of Equal Sides</i>	<i>Number of Parallel Lines</i>
<i>Scalene Triangle</i>	3	0	0
<i>Pentagon</i>	5	5	0
Isosceles Triangle	3	2	0
Trapezium	4	0	2

40. a. \$3500



TEST 17

Section 1

1. Seven thousand and thirty and forty-five hundredths

2. $\frac{4}{7}$

3. 9

4. 4 loaves of bread

5. 6000

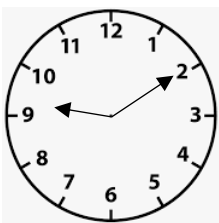
6. 6

7. 11

8. 32

9. 11 and 12

10. 8



11.

12. Saturday

13. 32 years

14. 23m 64cm

15. 2 lines

16. Prism

17. S and s

18. 0.5

19. 5

20. 8 times

Section 2

21. 21.2

22. 144 students

23. Paul = 55 marbles, Harry = 54 marbles

24. 55 cloth face masks 25. a. 45% orange candies b. 160 candies

26. a. \$450 b. \$270 c. \$720

27. Statement 2; **An odd** number multiply by an Even Number = Even Number

Number Sentence: $9 \times 4 = 36$

Statement 3: Even Number multiply by an Even Number = **Even Number**

Number Sentence: $8 \times 6 = 48$

28. Yes

Examples: $\frac{2}{6}$ and $\frac{1}{3}$ or $\frac{4}{8}$ and $\frac{1}{2}$

$$\frac{2}{6} = \frac{1}{3}$$

$\therefore \frac{2}{6}$ and $\frac{1}{3}$ = Equal or Equivalent fractions $\frac{1}{2} = \frac{4}{8}$

$\frac{4}{8}$ and $\frac{1}{2}$ = Equal or Equivalent fraction.

$\frac{1}{3}$		
$\frac{1}{6}$	$\frac{1}{6}$	

29. a. 48 b. 4

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$				
$\frac{1}{2}$							

30. a. Correct time 05:40 a.m.

b. Correct time 5:40 a.m.

2 hours 5 minutes

31. \$22.50

32. 430 litres

33.

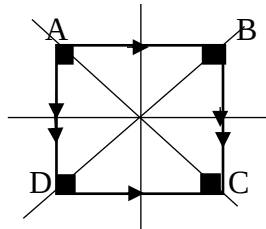


Figure 1

Yes in Figure 1. No. in figure 2.

Figure 1 is a square and has 4 lines of symmetry.

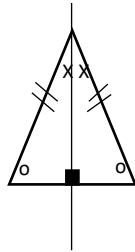
Figure 2 is a trapezium and has zero lines of symmetry.

34. Two right angled triangles.

i) One angle in the triangle = a $\frac{1}{4}$ turn or a right angle

ii) Congruent triangles

iii) The sum of the interior angles of each triangle = two $\frac{1}{4}$ turns or 2 right angles.



35. a. 5 houses

b. 37.5%

36. 12.5 %

Section 3

37. a. \$250

b. \$390

c. \$110

b. \$55

38.

<i>Polygon 1</i>	<i>Polygon 2</i>
Name: <i>Equilateral Triangle</i>	Name: <i>Square</i>

39. a. 587 $\frac{1}{2}$ km

b. 187 $\frac{1}{2}$ km

c. 137 $\frac{1}{2}$ km

40. a. 70 point

b. 10 point

c. 56%

d. 14 points

TEST 18

Section 1

1. Three hundred and thirty three thousand, three hundred and three.

2. The digit 5 in 45 972 = 5000. The digit 5 in 72954 = 50

Difference = 4950

3. \$61.25

4. 10 000

5. 3.53

6. 1

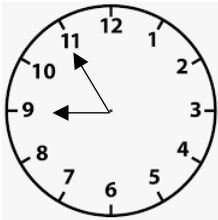
7. 59

8. 2150

9. 3

10. 40 coins

11. 10 000 metres



12.

13. 18 bananas

14. A pack of 250ml costs \$5.25

15. Perimeter is distance around the rectangle only once. $2(L + W) = \text{Perimeter}$. Linear Measure.

Area is the rectangular surface totally covered. $\text{Area} = L \times W$. Squared measure.

16. 0 lines of symmetry

17. Cube.

6 equal squared faces, 12 equal edges, 8 vertices

18. 51

19. 2009

20. 85 runs

Section 2

21. $1\frac{2}{3}$

22. \$1725

23. 10

24. \$176

25. 22

26. a. $\frac{11}{15}$ b. $\frac{4}{15}$

27. a. Good

b. Student 1 estimated downwards to 213

Student 2 estimated upwards to 214.

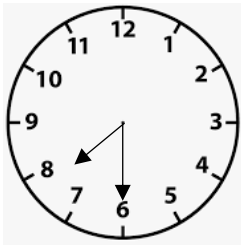
Both answers can reasonably work in an estimation, because their answers differ by 1.

28. a. \$200

b. 450

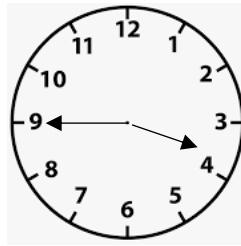
29.

Port A



Departure Time

Port B



Arrival Time

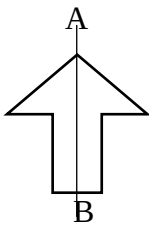
30. 1 kg

31. a. 9cm^2 b. 3cm^2

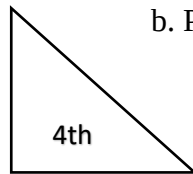
32. a. \$345

b. 4115

33.



34. a.



b. Polygons

35. a. 8.2

b. 4.1

36. a.

<i>Length of Straw</i>	16	17	18	20	22	25	30
<i>Number of Straw</i>	3	2	3	5	4	2	1
<i>Total Lengths (cm)</i>	48	34	54	100	88	50	30

b. 20cm

c. 20cm

Section 3

37. Less

10% off \$1000 = \$100.

$\$1000 - \$100 = \$900$

10% off \$900 = \$90

Total Discount = $\$100 + \$90 = \$190$

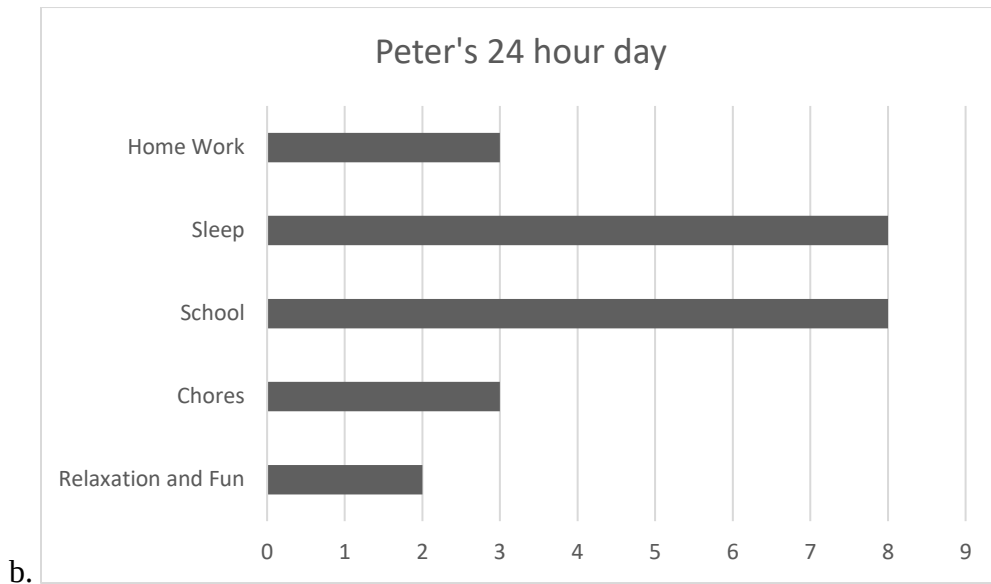
20% off \$1000 = \$200

Difference = \$10

38. a. 90m b. 5 times

39. a. $\frac{1}{4}$ turn b. $6 - \frac{1}{4}$ turns

40. a. $12\frac{1}{2}\%$



TEST 19

Section 1

1. One million, five hundred and six thousand, four hundred and five.
2. $\frac{3}{4}$
3. 510
4. $\frac{16}{32}$
5. 1015 animals
6. $\frac{1}{3}$
7. 1545
8. 23, 29, 31, 37
9. B
10. 412.50
11. 5
12. 60 tablets
13. 35 minutes
14. 8 small packs
15. 9cm
16. South
17. Triangle A has a right angle. Triangle B has two equal sides and two equal angles.
18. 540cm
19. 145 students
20. Grapes = 35, Mangoes = 45, Total = 145

Section 2

21. 10
22. 0.4
23. 200 cell phones
24. $10\frac{2}{3}$
25. Computational Answer = 50.08

Approximate Answer = 50.00

0.08 is less than 0.50, there you cannot add 1 to the nearest whole number. You can add 1 to the nearest whole number only if it is 0.50 and above.

26. 22.5% 27. a. \$500 b. \$200

28. Answer: 9th 35, 10th 32

Number in the top circle: 1st add 2 i.e. $5 + 2 = 7$,

Then double 2 = 4, $7 + 4 = 11$, then double 4 = 8, $11 + 8 = 19$ and so on.

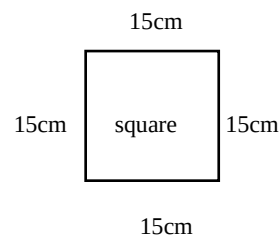
Number in the bottom, you multiply by 2 throughout $2 \times 2 = 4$, $4 \times 2 = 8$, $8 \times 2 = 16$,

$16 \times 2 = 32$

29. a. 100% b. 55% c. 45%

30. 1st : The carpenter has to cut the 60cm strip of wood into 4 equal pieces, because a square has 4 equal sides.

2nd : He place the pieces together to form an enclosed 4 sided shape ensuring that there are 4 square corners / 4 – $\frac{1}{4}$ turns at each intersection.



31. $3 - 2\text{kg}$, $3 - 1\text{ kg}$, $3 - \frac{1}{2}\text{ kg}$

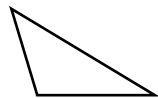
32. a. 12 litres b. 10 litres c. 8 litres

33. a. Isosceles

b. The height (perpendicular) is increased by 3cm. Triangle A = 3cm, triangle B = 6cm and triangle C = 9cm

Triangle A = 2cm, Triangle B = 4cm and triangle C = 6cm

34. Scalene



35. 3 items.

36. a. 355 marks b. 71%

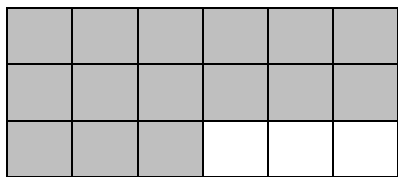
37. a. Avocado = 4 and Pineapple = 5 b. Pineapple = 2 Avocado = 1
38. a. $x = 90\text{m} - 35\text{m} = 55\text{m}$, $y = 120\text{m} - 35\text{m} = 85\text{m}$
- b. 40%
- c. $\frac{3}{5}$
39. a. 8 right-angled triangle b. Rhombus
- c. i) The diagonals bisect each other at right angles.
- ii) Opposite sides are equal and parallel.
- iii) Opposite angles are equal.
- iv) Angles are bisected at the vertices.
40. a. 12 years b. 2005 c. 12 years d. 12 years

TEST 20

Section 1

- | | | | | |
|-----------------|---------------|----------------------|-------------------|-------------------------|
| 1. \$708 406.84 | 2. 45 | 3. 12 | 4. 50.35 | 5. 30 five dollar bills |
| 6. 7.75 | 7. $>$ | 8. b. $15600 \div 4$ | 9. $5\frac{5}{7}$ | |
| 10. \$28 | 11. 8:20 p.m. | 12. 42.75kilograms | 13. Friday | |

14. P Q



S

R

15. Square based pyramid
16. 0
17. Parallelogram
18. $4^{\text{th}} = 00$ $5^{\text{th}} = 00$
19. 
20. 25 students

Section 2

21. 5, 6, 7, 8, 9 22. 133.0 23. 12 broken bottles 24. $3\frac{3}{10}$

25. 7 26. $1\frac{5}{6}$ 27. a. 0.26 b. 28 members

28. 600 is a multiple of 15 and 20.

15 is a factor of 600. $600 \div 15 = 40$

20 is a factor of 600. $600 \div 20 = 30$

29. a. Student 2

b. Student 2 multiplied the problem by 10, hence making the divisor a whole number.

$$44.5 \div 5 = 8.9$$

or he can also have worked the problem as division of common fraction

$$\text{e.g. } 4.45 = \frac{445}{100} \text{ and } 0.5 = \frac{5}{10}$$

$$\text{therefore } \frac{445}{100} \times 1 \times \frac{0}{5} = \frac{89}{10} = 8.9 \text{ converted to a decimal.}$$

30. a. 2 hrs. 30 mins. b. 150km

31. a. 12 litres b. 4 litres c. $\frac{1}{6}$

32. Park A = 3 rolls, Park B = $3\frac{1}{2}$ rolls

33. Statements: The name of the quadrilateral ABCD is a **Trapezium**.

AB and DC are **parallel** lines. The angles which are greater than a $\frac{1}{4}$ turn

are **angle A** and **angle B**.

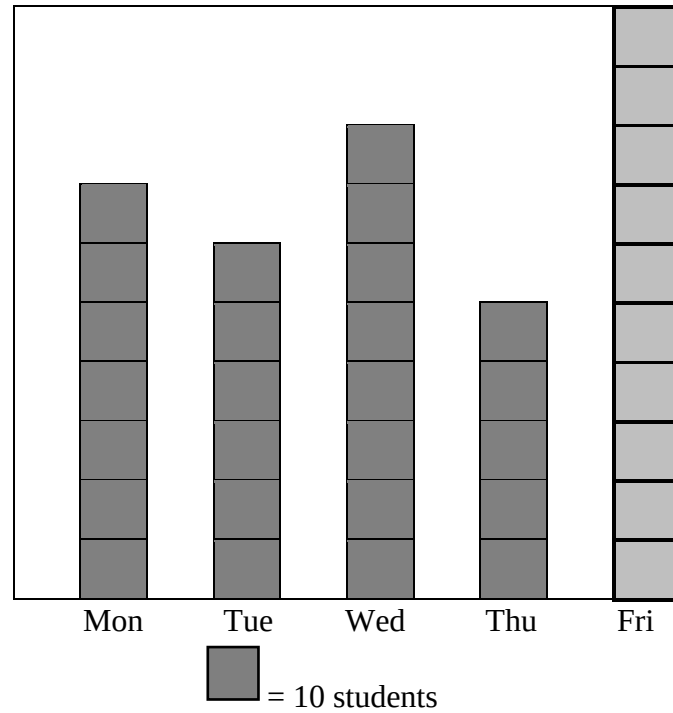
34. a. Mode b. Runs scored by a batsman in 5 innings are 76, 63, 84, 76, 11.

Mode : 76 runs

$$\text{Mean} = (76 + 63 + 84 + 76 + 11) \div 5 = 62 \text{ runs}$$

$$\therefore \text{mean} = 62 \text{ runs}$$

35. a.



c. \$72.50

Section 3

37. a. 200 stamps b. 40 stamps c. 40%

38. a. \$600 b. \$3450 c. \$150

39. a. $5^{\text{th}} = 45$, $6^{\text{th}} = 63$, $7^{\text{th}} = 84$

b. 1^{st} , $3 + 6 = 9$ 2^{nd} , $9 + 9 = 18$ 3^{rd} , $18 + 12 = 30$ 4^{th} , $30 + 15 = 45$ 5^{th} , $45 + 18 = 63$ 6^{th} ,

$63 + 21 = 84$ 7^{th}

40. a. $\begin{array}{cccccccc} \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & 45 \end{array}$

$\begin{array}{cccccccc} \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & \text{||||} & 45 \end{array}$

b. 4 oranges

