TEST 1

Section 1 (Test 1)

1. 5,321,964: Five million, three hundred and twenty-one thousand, nine hundred and sixty four.

2. 61

3. $12\frac{1}{2}\% = \frac{25}{200} = \frac{1}{8}$

4. 4.08
   x 0.6
   _____
   2.448
   _____

5. 37 x 25 = (37 x [20]) + (37 x 5)

6. Area = $169cm^2$
   Length of Square = $\sqrt{169}$ = 13cm

7. $\frac{27}{1}$ x $\frac{10}{3}$ = 90

8. 25 x 8 = 200 + 5 = 205 sweets

9. 529 x 50 = 26, 450

10. 136 ÷ 4 = 34 books per shelf

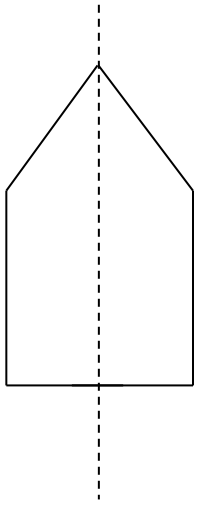
11. Volume of Cuboid = 12cm x 12cm x 6cm = 864cm^3

12. 220 ÷ 60 = $3\frac{2}{3}$ hrs

13. Lamp post = 3m

14. 6:50 a.m.

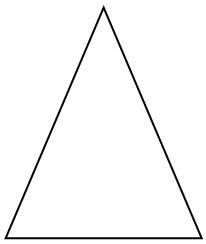
15.



16. Mathematics = ~~IIII~~ ~~IIII~~ II

17. G H

18. Modal Age = 12 yrs

19. 

20. 19 x 10 = 190 boys

Section 2 (Test 1)

21. 40 % = 240

$\frac{40}{100}$ = 240

$\frac{4}{10}$ = 240

Therefore, $\frac{10}{4}$ x $\frac{240}{1}$ = 600

Number = 600

22. Girls = $\frac{2}{5}$

Boys = $\frac{3}{5}$

Boys = $\frac{3}{5}$ x $\frac{35}{1}$ = 21 boys

23. Cost Price = \$5,600

V.A.T. $= 12\frac{1}{2}\% = \frac{1}{8}$

V.A.T. on C.P. $= \frac{1}{8}$ x 5,600 = \$700

Total Price = \$5,600 + \$700 = \$6,300

24. Yes, Anya is correct. She saw that her **remainder of 6** could give **1** more group of '**4**' so she added **1** more to **12** and got **13**. Her reminder was then **2**. Anya then arrived at an answer of **13**, remainder **2**.

25. Oranges = N

Mangoes = 3 x N

Therefore, N + 3N = 4N (4N is Oranges and Mangoes together)

4N = 640

N = 640 ÷ 4 = 160

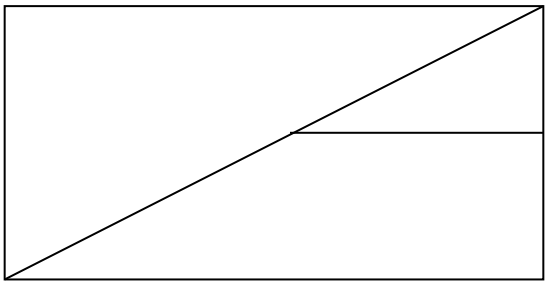
Oranges = 160

Mangoes = 3 x 160 = 480

160 Limes added

Total Fruits = 640 + 160 = 800

Mangoes = $\frac{480}{800}$ x 100 = 60 %

26. 

27. Average = 68 marks
Total = 68 x 4 = 272 marks

New Average = 70
New Total = 68 x 5 = 350 marks
Therefore, Marks needed = 350 - 272 = 78 marks

28. S.I. = P x R x T = $\frac{36{,}000 \times 12 \times 3}{100}$ = \$12,960

Money to Repay = \$36,000 + \$12,960 = \$48,960

29. Pumpkin = 3 kg 20 g = 3000 g + 20 g = 3,020 g
4 Pieces = 3,020 g
Therefore, 1 piece = 3,020 ÷ 4 = 755 g

30. Snacks $= \frac{1}{5}$

Dinner $= \frac{3}{10}$

Total Spent $= \frac{1}{5} + \frac{3}{10} = \frac{2}{10} + \frac{3}{10} = \frac{5}{10} = \frac{1}{2}$

Allowance Left $= \frac{2}{2} - \frac{1}{2} = \frac{1}{2}$

31. Company A = Reg Time 10 hrs = \$40 per hour = 10 x \$40 = 400

Over Time = One Half times Reg rate

$= 1\frac{1}{2}$ x 40 $= \frac{3}{2}$ x $\frac{40}{1}$ = \$60 per hour

2 hours Over Time = \$60 x 2 = \$120

Total Earnings = \$400 + \$120 = \$520

Company B = Reg Time \$45 per hour = \$45 x 12 hrs = \$540

Company B offers a better wage.

32. $90° = 0$

$> 90° =$ A, C

$< 90° =$ B, D

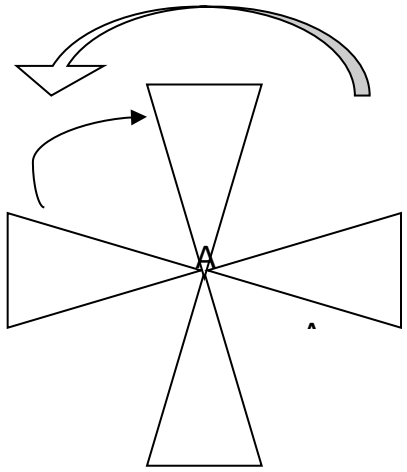
33.

ITEM	COST PER PORTION	QUANTITY	COST
Fried Rice	$ 25.00	1	$ 25.00 +
Fried Chicken	$ 45.00	1 + 1	$ 90.00 +
Pepper Shrimp	$ 60.00	2	$ 120.00 +
Gin. Beef	$ 30.25	1 + 1	$ 60.50
		TOTAL	$ 295.50

$ 25.00 +
$ 45.00 +
$ 120.00 +
$ 30.25
$ 220.25

$ 295.50 -
$ 220.25
$ 75.25

34.



2 - 90° turns anti-clockwise
1 - 90° turn clockwise

35.

12 x $100	=	$1,200.00 +
45 x $ 20	=	$ 900.00 +
2 x $ 50	=	$ 100.00 +
9 x $ 10	=	$ 90.00 +
75 x $0.25	=	$ 18.75 +
6 x $0.10	=	$ 00.60
Amt Deposited	=	$ 2,309.35

36. Area of Triangle = $42cm^2$

Triangle = $\frac{1}{2}$ Rectangle

Therefore, Area of Rectangle = $42cm^2$ x 2 = $84cm^2$

The triangle is half the area of the rectangle so we multiply the area of the triangle by 2 to get the area of the rectangle.

37. Vol. of Cuboid Tank = $8{,}000cm^3$

Area of Base = $800cm^2$

Depth of Tank = $\frac{8000}{800}$ = 10 cm

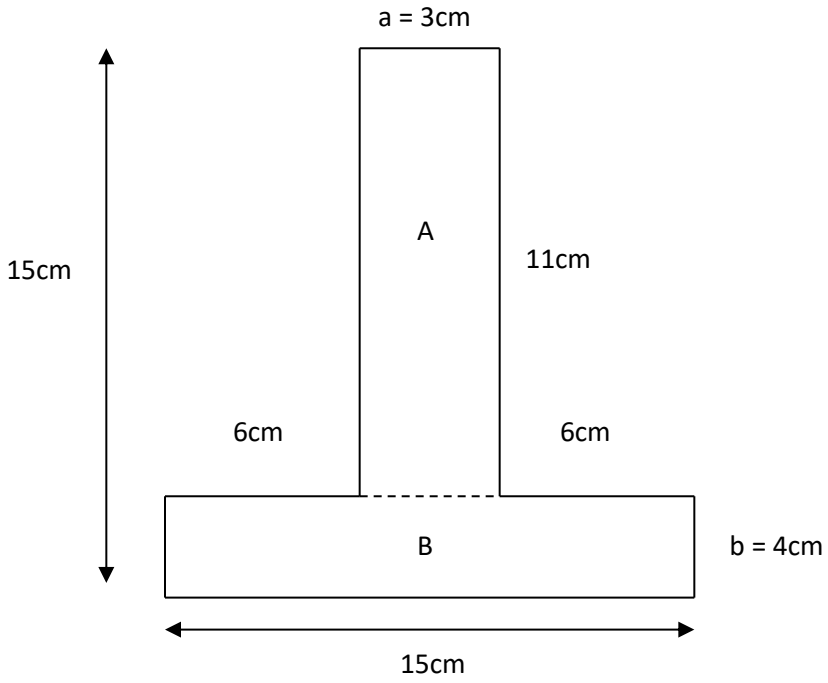
38. Total weight of Packages = 900 g + 2.45kg + 2,030 g + 3.02 kg

= 0.900 + 2.45 + 2.030 + 3.02

= 8.4 kg

Mean = 8.4 kg ÷ 4 = 2.1 kg (or 2100 g)

39.



b = 15cm - 11cm = 4cm
a = 15cm - (6cm + 6cm) = 15cm - 12cm = 3cm

Area of A = 11 x 3 = 33cm^2
Area of B = 15 x 4 = 60cm^2
Total Area = 93cm^2

40. Average Height = 9cm
Therefore, Total Height = 9 x 4 = 36cm

Day 1 = 4cm +
Day 2 = 8cm +
Day 4 = 14cm
Total = 26cm

Height for Day 3 = 36cm - 26cm = 10cm

Section 3 (Test 1)

41. Peppers Picked = 800
Rotten = 25% = $\frac{1}{4}$ = $\frac{1}{4}$ x $\frac{800}{1}$ = 200 peppers

Peppers Left = 800 - 200 = 600 peppers
Market = $\frac{2}{3}$ x 600 = 400 peppers

No. of Bags = 400 ÷ 100 = 4 bags x $50 = $200
Peppers Left = 600 - 400 = 200
No. of Heaps = 200 ÷ 5 = 40 heaps @ $10 per heap = $400
Total Money Made From Sales = $200 + $400 = $600

42. Distance between 5th and 9th post = 5 posts + 4 spaces

= 17 m

5 posts = 1m x 5 = 5m

Therefore, 4 spaces = 17 m - 5 m = 12 m

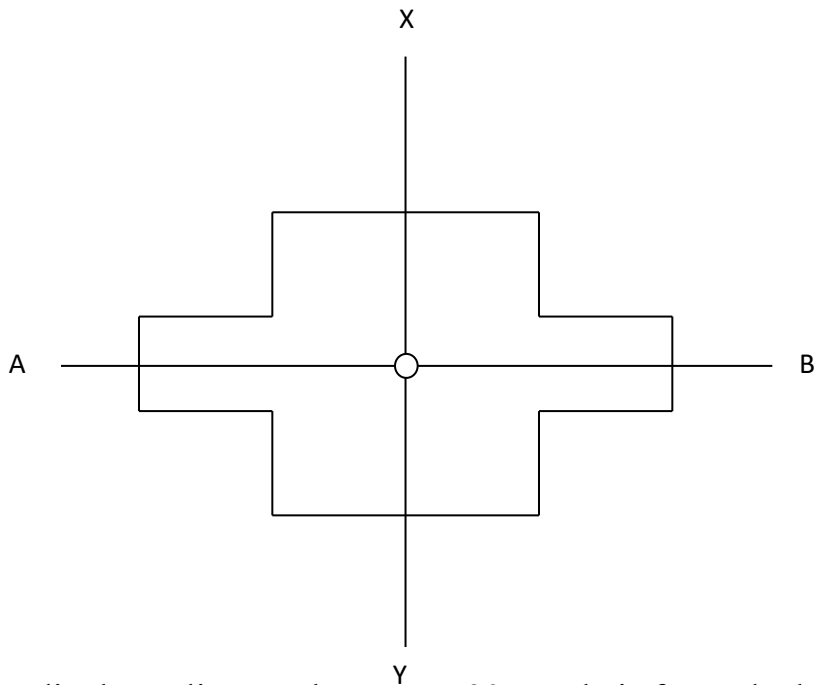
1 space = 12m ÷ 4 = 3m

Length of Driveway = A = 27 posts x 1m = 27m +

B = 26 spaces x 3m = 78m

105m

43.



XO is perpendicular to line OB because a 90° angle is formed where these two lines meet.

44. Monday and Thursday = 30%

3,520 + 3,980 = 7,500 = 30%

Total Produced = $\frac{100}{30}$ x 7,500 = 25,000

Wednesday's Production = 0.2 of 25,000 = $\frac{2}{10}$ x 25,000

= 5,000

Friday = x

Tuesday = 3x

Total = 4x

4x = 25,000 - (7,500 + 5,000) = 25,000 - 12,500

4x = 12,500

x = 12,500 ÷ 4 = 3,125

Tuesday = 3,125 x 3 = 9,375

Friday = 3,125

45.

Colours	Tally	Frequency	Total Points
Red	II	2	2
Blue	𝍸 III	8	16
Green	III	3	9
Yellow	𝍸 𝍸 II	12	48

25 tries - 17 tries = 8 tries for Blue

Modal Color : Yellow

Mean Points: 48 + 9 + 16 + 2 = 75

75 ÷ 25 = 3

TEST 2

SECTION 1

1) 789,568 = (7 × 100,000) + (**8** × 10,000) + (9 × 1,000) + (5 × 100) + (6 × 10) + (8 × 1)

2) Cube root of 216 = $\sqrt[3]{216} = 6$

3) 65% = $\frac{65}{100}$ = 0.65

4) 12.68 – 4.09 = 8.59

5) grams

6) √49 + √121 = 7 + 11 = 18

7) 1 Litre = 12 cups
∴ $2\frac{1}{4}$ Litres = $\frac{9}{4} \times \frac{12}{1}$ = 27 cups

8) 509 × 11 = 5,599

9) 468 books ÷ 12 classes = 39 books per class

10) 12,206 – 9,879 = 2,327

11) 12 Litres ÷ 8 bottles - 12,000ml ÷ 8 = 1,500ml

12) String A = 5.5cm
String B = 4.0cm
1.5cm

13) Triangular Prism

14) Mean = 82
Total = 82 × 4 tests = 328
Missing Score = 328 – (70 + 82 + 80) = 328 -232 = 96

16) 4 lollipops = $9.00
∴ 1 lollipop = $9.00 ÷ 4 = $2.25
$36.00 ÷ $2.25 = $\frac{36}{1} \div 2\frac{1}{4} = \frac{36}{1} \times \frac{4}{9} =$ 16 Lollipops

17) Missing Tally = 70 – (18 + 29 + 13) = 70 – 60 = 10
Hyundai = 𝍸 𝍸 = 10

18) Rectangular Based Prism = 5 Vertices

19) Ricky = 56 shells
Jill = 0.25 = $\frac{1}{4}$
$= \frac{1}{4} \times \frac{56}{1} =$ 14 shells
Ricky + Jill = 56 + 14 = 70 shells

20) 23 cookies ÷ $11\frac{1}{2}$ = 23 ÷ $11\frac{1}{2}$
$= \frac{23}{1} \div \frac{32}{2} = \frac{23}{1} \times \frac{2}{23}$
= 2
∴ 1 drawing = 2 cookies

SECTION 2

21) 1 Box = 24 doughnuts
Sister ate = 3 doughnuts
Brother ate = $\frac{2}{7}$ of (24 – 3) = $\frac{2}{7} \times \frac{21}{1}$ = 6 doughnuts
Mary and Father = 9 doughnuts
Total eaten = 3 + 6 + 9 = 18 doughnuts
Left = 24 – 18 = 6 doughnuts
Percent not eaten = $\frac{6}{24} \times \frac{100}{1}$ = 25%

22) Savings = \$450
Total Spent = \$150
Money Left = \$450 – \$150 = \$300
Decimal Fraction left = $\frac{\$300}{\$450} = \frac{2}{3} =$ $3\overline{)2^{0\,20\,20}}$ 0.666^{-}

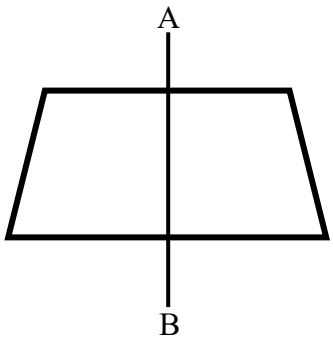
23) (N × N) + 17 = ? ÷ 3 = 22
∴ Go backwards = 22 × 3 = 66
66 – 17 = 49
√49 = 7

24) To Get Ready = 32 mins.
Travel = 27 mins.
Total Time = 32 + 27 = 59 mins.
Latest Time To Leave Home = $^{7}\cancel{8}:30^{+60}$ a.m.
– :59
7:31 a.m.

25) Cash Price = \$4,590
Hire Purchase = Down-payment of \$900
+ 12 monthly Installments of \$400 = 12 × \$400
= \$4,800
Hire Purchase = \$900 + \$4,800 = \$5,700

Savings = H.P. – C.P. = \$5,700 – \$4,590 = \$1,110

26)



Trapezium
1 Pair Parallel Sides
0 - 90° Angles

27) 1.03, $\frac{4}{25}$, 20%, 0.12

1.03, 0.16, 0.20, 0.12

Descending Order = 1.03, 20%, $\frac{4}{25}$, 0.12

28) 8 Shelves – Total
6 Shelves Packed
8 Boxes Used - 7 full boxes / 4 tins from 8th box
1 Box = 24 Tins
7 Full Boxes = 24 tins × 7 boxes = 168 tins
No. of Full Shelves = 6
No. of Tins per Full Shelf = 168 ÷ 6 = 28 tins
Shelf 7 = 4 tins
∴ Shelf 7 needs = 28 – 4 = 24 more tins
Shelf 8 needs = 28 tins
Total Tins needed = 24 + 28 = 52 tins

29) Length = 20cm / 1 space = 20cm ÷ 4 = 5cm
Distance of Path = 7 sides × 5cm = 35cm

30) Day 9 = 1
Day 8 = $1 \div 2 = \frac{1}{1} \times \frac{1}{2} = \frac{1}{2}$
Day 7 = $\frac{1}{2} \div 2 = \frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$
Day 6 = $\frac{1}{4} \div 2 = \frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$
Day 6 = $\frac{1}{8} = \frac{1}{8} \times \frac{100}{1} = 12\frac{1}{2}\%$

Working backwards we divide each day's answer by 2 which is the opposite of multiplying by 2 to double the lily's size.

31) 3 - 90° Turns

32) 1 Case = 18 bottles

∴ 15 Cases = 18 × 15 = 270 bottles

1 bottle cost = \$26

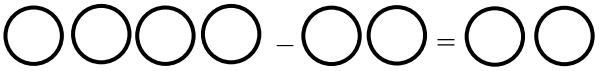
Sold = $66\frac{2}{3}\% = \frac{2}{3}$ of 270 bottles = $\frac{2}{3} \times \frac{270}{1} = 180$

Money Made from Bottles Sold = 180 × \$26

= \$4,680

33) 6 fewer marbles = 

Jim = 

∴ Tom =  =

$= \frac{6}{48} \times \frac{100}{1} = 12\frac{1}{2}\%$

34) Monthly Salary = \$16,000

Tax = 0.25 = $\frac{1}{4} \times \frac{16{,}000}{1}$ = \$4,000

Take Home Salary = \$16,000 – \$4,000 = \$12,000

Savings = $\frac{2}{3} \times$ \$12,000 = \$8,000

Left = \$12,000 – \$8,000 = \$4,000

Entertainment = 10% = $\frac{10}{100} \times \frac{\$4{,}000}{1}$ = \$400

Fraction of Monthly Salary spent on enter = $\frac{400}{16{,}000} = \frac{1}{40}$

35) Average = 85 pupils

∴ Total Pupils = 85 × 4 = 340 pupils

Mango Bar = 340 – (65 + 130 + 75) = 340 – 270 = 70

You first multiply the Average by the 4 flavours to get the total number of pupils in the survey. Then total the pupils shown on the graph and subtract the total from the total pupils in the survey. The answer represents the amount of pupils from mango.

36) Volume of Cuboid = L × W × H = 2 × 4 × 2 = 16cm^3
Model Has 26 Cuboids
Vol. of Model = 26 × 16 = 416cm^3

37) East + (90° + 90°) anti-clockwise = West
West + 90° anti-clockwise = South
South + (90° + 90°) clockwise = North
2 – 90° Turns clockwise

38) Vendor A = \$85.00 ÷ 4kg = \$21.25 per kg
Vendor B = \$29 per kg

Vendor A = 4kg @ \$21.25 = \$85.00
Vendor B = 3kg @ \$29.00 = \$87.00 plus 1 kg Free

Vendor A

39) Time shown = 3:05
Clock is 10 mins. fast
Correct time = 3:05 – 10 mins = 2:55
Trip to Market = 35 minutes
Time at Market = 1 hr 15 minutes
Trip Home = 30 minutes
Total Time =

	hr.	mins.
		35
+	1	15
		30
	1	80
		–60
	(1^{+1}) 2	: 20

	hr.	mins.
Time Arrived Home =	2	: 55
+	2	: 20
	5	: 15

40) Modal Colour = Pink

SECTION 3

41) Tim = 96 stickers

Ryan = $\frac{1}{4}$ less stickers = 96 – ($\frac{1}{4} \times \frac{96}{1}$) = 96 – 24 = 72

Mary = $1\frac{1}{2} \times (96 + 72) = \frac{3}{2} \times \frac{168}{1}$ = 252

Total Stickers = 420

Mary = $\frac{252}{420} \times \frac{100}{1}$ = 60%

42) $\frac{1}{3}$ of Class = Girls

$\frac{2}{3}$ of Class = Boys

Girls for tennis = $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

Boys for tennis = $\frac{2}{3}$

Tennis = $\frac{2}{3} + \frac{1}{6} = \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$ = 25 pupils

Total No. of Pupils in class = $\frac{6}{5} \times \frac{25}{1}$ = 30 pupils

Boys = $\frac{2}{3} \times \frac{30}{1}$ = 20

43) Perimeter of Rectangle = (L + W) × 2
= (20cm + 12cm) × 2 = 32 × 2 = 64cm
Perimeter of 10 Rectangles = 64cm × 10 = 640cm
Wire Left = 60cm
Roll of Wire = 640cm + 60cm = 700cm

44) Obtuse Angle = Angle 'y'

An Obtuse Angle is more than 90° but less than 180°. One space on the clock

is $360° \div 12 = 30°$. Angle 'y' is 4 spaces = $30° \times 4 = 120°$

45) Mon. = 45
Tues. = 40
Wed. = 55
Fri. = 40
Total = 180

Mean = $180 \div 4 = 45$

$\therefore$ Thursday Bar = 45 students

TEST 3

SECTION 1

1) 862,315 Place Value is:
Hundreds of Thousand

2) 9

3) $120\% = \frac{120}{100} = 1\frac{20}{100} = 1\frac{1}{5}$

4) $4.28 \div 4 = 1.07$

5) $9 \times (12 - 5) = 9 \times 7$

6) Oct 26th, 2019 to Nov 18th, 2019 = 23

7) Volume of Cuboid = Area of Face × 23cm
$= 1{,}000cm^2 \times 23cm$
$= 23{,}000cm^3$

8) $8^2 = 64$
$\therefore 64 - 53 = 11$

9) Ate = $\frac{3}{14}$
Gave Away = $\frac{2}{7}$
$\therefore$ Ate + Gave Away = $\frac{3}{14} + \frac{2}{7} = \frac{3}{14} + \frac{4}{14} = \frac{7}{14}$
Fraction Left = $\frac{14}{14} - \frac{7}{14} = \frac{7}{14} = \frac{1}{2}$

10) Tom = 12 marbles
John = $12 \times 3 = 36$ marbles
Jack = $36 \div 2 = 18$ marbles
Total Marbles among boys = 12 + 36 + 18
= 66 marbles

11) Distance = 5cm

12) Trapezium

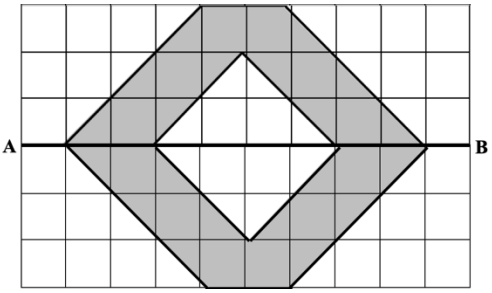
13) Modal height = 143cm

14) Peri. Of Square = Side × 4 = 20cm
1 Side = $20 \div 4 = 5$cm
Area of Square = S × S = 5cm × 5cm
$= 25cm^2$

15) \$563.75 ≈ \$600.00

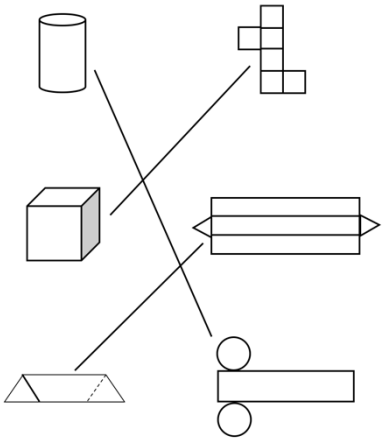
16) $864 \div 72 = 12$
Divisor = 12

17)



18)  = \$5
6  = \$5 × 6 = \$30
Gary - \$65 – \$30 = \$35
Gary = \$35 ÷ 5 = 

19)



20) No. of Pupils = 10 + 12 + 7 + 8 = 27

TEST 3

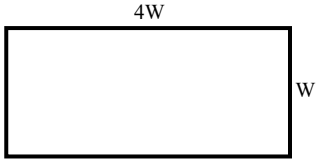
SECTION 2

21) $\frac{2}{3}$ = \$138
All Money = $\frac{3}{2} \times \frac{138}{1}$ = \$207

22) 2008-Brother = $\frac{1}{2}$ of John's Age
2010-Brother = 14 years
2008-Brother = 14 – 2 years = 12 years
∴ John = 12 yrs. × 2 = 24 yrs. in 2008
2010- John = 24 yrs. + 2 yrs. = 26yrs.

23) 30 mins = $\frac{1}{3}$ full
30 mins × 3 = 90 mins = Full Tank
∴ 52 mins = $\frac{52}{90} = \frac{26}{45}$ fraction of tank full

24) Area of Sq. = 100cm^2
Area of Rect. = 100cm^2
= 2 × 50/ 4 × 25/5 × 20



∴ 5 × 20 = 100cm^2
Width = 5cm
Length = (4 × 5) 20cm
Peri of Rect. = (20cm + 5cm) × 2
= 25cm × 2 = 50cm

25) Local Calls = 310 mins × .30 per min
= \$93
Foreign Calls = $1\frac{1}{2}$ hrs.
= 90 mins × 1.10 per min
= \$99
Total = 93 + 99 = \$192
V.A.T. = $12\frac{1}{2}\% = \frac{1}{8} \times \frac{\$192}{1}$ = \$24
Total V.A.T. inclusive = \$192 + \$24
= \$216

26) 1 package = 20cm + 13cm = 33cm ribbon
13 packages = 33cm × 13pk.
= 429cm ribbon used
Roll of Ribbon = Ribbon Used + Ribbon Left
= 429cm + 41cm = 470cm

27) 40 mins = 1-90° turn
$3\frac{1}{3}$ hrs. = 200 mins
No. of 90° turns in 200 mins = 200 ÷ 40
= 5-90° Turns

Change $3\frac{1}{3}$ hrs to minutes. Since 40 minutes equal 1-90° turn, divide 200 mins by 40 mins. The answer will be the number of 90° turns made in the $3\frac{1}{3}$ hrs.

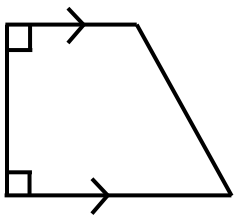
28) Simple Interest = $\frac{Pr. \times Rate \times Time}{100}$
= $\frac{\$12{,}000 \times 12 \times T}{100}$ = \$7,200
Time = $\frac{S.I. \times 100}{\text{Pr} \times Rate} = \frac{\$7{,}200 \times 100}{\$12{,}000 \times 12}$ = 5 years

Monthly Instal. = (Pr. + S.I.) ÷ (5 × 12 months)
= (\$12,000 + \$7,200) ÷ 60
= \$19,200 ÷ 60 = \$320

29) Mean = 75 marks
Total in 4 tests = 75 mks. × 4 = 300 marks

New Mean = 85 marks
New Total = 85 mks. × 5 test = 425 marks
Extra Marks Needed = 425 – 300
=125 marks

No, Kyle cannot increase his mean to 85 After writing his 5th test. To do so he will Need a score of 125 marks in the 5th test. The test is marked out of 100, so this will Not be possible.

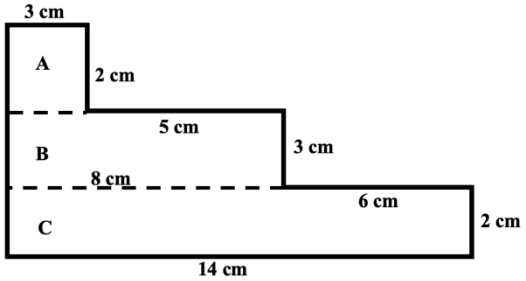
30)  Trapezium

TEST 3

31) Cade 20.8 mins 3rd
Isabelle 21.2 mins 4th
Chayanne 20.5 mins 2nd
Asia-Lee 20.0 mins 1st

32) Cupcakes baked = 9 doz. = 9 × 12 = 108
Sold = $\frac{1}{3} \times \frac{108}{1}$ = 36 cupcakes @ \$12 each
= \$432
∴ Remainder = 108 – 36 = 72 cupcakes
$\frac{5}{12}$ remainder donated = $\frac{5}{12} \times \frac{72}{1}$
= 30 cupcakes
Now Left = 72 – 30 = 42 cupcakes
3 in package = 42 ÷ 3
= 14 packs @ \$9 per pack
= \$126
Money Made = \$432 + \$126 = \$558

33)



Area of Rect. A = L × W = 3cm × 2cm
= 6cm^2
Area of Rect. B = L × W = 8cm × 3cm
= 24cm^2
Area of Rect. C = L × W = 14cm × 2cm
= 28cm^2
Area of Shape = 6cm^2 + 24cm^2 + 28cm^2
= 58cm^2

34) Shrimp - $2\frac{1}{2}$kg @ \$35 per 500g
= \$35 × 5 = \$175
King Fish - 3kg @ \$40 per kg
= \$40 × 3 = \$120
Carite Fish - $2\frac{1}{2}$kg @ \$30 per kg
= \$30 × 2.5 = \$75
Total Bill = \$175 + \$120 + \$75 = \$370
Change = \$400 – \$370 = \$30

35) 🧍 = 4 pupils
All pupils = 10 × 4 = 40
Percent to represent Volleyball
= $\frac{6}{40} \times \frac{100}{1}$ = 15%

36) (i) Cuboid (ii) Triangular Prism

37) Volume = 4,500cm^3
36 Cubes = 4,500cm^3
1 Cube = 4,500 ÷ 36 = 125cm^3
1 side Cube = $\sqrt[3]{125}$ = 5cm
∴ Height of Model = 5cm × 6 = 30cm

38)

Item	Quantity	Unit Price	Cost
Tomatoes	4kg	\$8.00 per kg	\$32.00
Sweet Potato	10kg	**(\$55.00 ÷ 10)** per kg	\$55.00
Cassava	4kg	\$7.11 per kg **\$7.11 × 4**	**\$28.44**
		Sub Total	**\$115.44**
		V.A.T. $12\frac{1}{2}$%	$\frac{1}{8} \times \frac{115.44}{1}$ = **\$14.43**
		Total	**\$115.44 + \$14.43 =129.87**

39) Std. 4 = 62 lunches
Std. 5 = 43 lunches
Total Std. 4 + 5 = 62 + 43 = 105 lunches
$\frac{3}{5}$ = 105 lunches
All Lunches = $\frac{5}{3} \times \frac{105}{1}$ = 175 lunches
Std. 2 = 175 – (22 + 25 + 62 + 43)
= 175 – 152 = 23 lunches

40) Spoilt = $\frac{1}{4}$
Green = $\frac{2}{5}$
Spoilt + Green = $\frac{1}{4} + \frac{2}{5} = \frac{5}{20} + \frac{8}{20} = \frac{13}{20}$
Ripe = $\frac{20}{20} - \frac{13}{20} = \frac{7}{20}$
= $\frac{7}{20}$ = 35 mangoes
All = $\frac{20}{7} \times \frac{35}{1}$ = 100 mangoes purchased

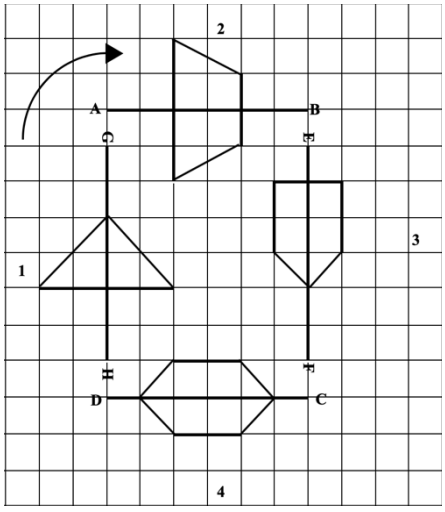
TEST 3

SECTION 3

41) Total Earnings for June = \$5,000
Weekly = 8 hours per day × 5 days
= 40 × \$20 = \$800
Monthly Regular Time = \$800 × 4
= \$3,200
Overtime = \$5,000 – \$3,200 = \$1,800

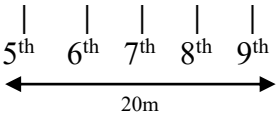
O.T. rate Saturday = Time and a Half
$= 1\frac{1}{2} \times \$20$
$= \frac{3}{2} \times \$20$
= \$30
O.T. rate Sunday = Double Time
= 2 × \$20 = \$40
Hrs. O.T. for Saturdays = 2x
Hrs. O.T. for Sunday = x
Total O.T. = 3x
Overtime Earnings = \$1,800
3x = \$1,800
x = \$1,800 ÷ 3 = \$600
Saturday Over Time = (\$600 × 2) ÷ 30
= \$1,200 ÷ 30
= 40 hours

42)



1 – triangle 3-pentagon
2- trapezium 4- hexagon
The pattern starts with a 3-sided figure, Then a 4-sided figure, then a 5-sided Figure and last a 6-sided figure.

43)



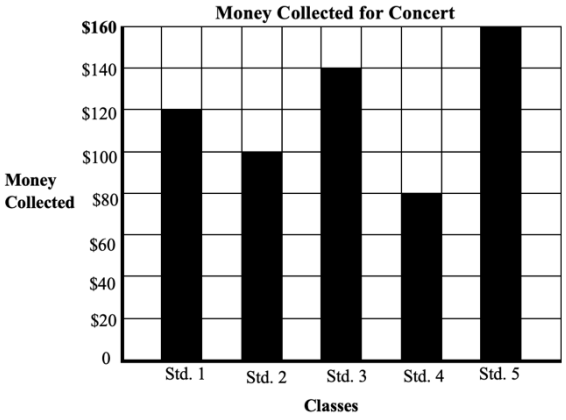
4 spaces = 20m
∴ 1 space = 20m ÷ 4 = 5m
Distance from 3rd umbrella to 20th umbrella
18 umbrellas = 17 spaces
Distance = 17 spaces × 5m = 85m

44) 7 angel fish + 3 mollies = \$74.50
Each Molly is \$1.50 more than each Angel fish
∴ 3 mollies = \$1.50 × 3 = \$4.50
\$74.50 – \$4.50 = \$70.00
∴ 10 fishes = \$70.00
1 fish = \$70 ÷ 10 = \$7

Angel Fish = \$7.00 each
Molly Fish = \$7.00 + \$1.50 = \$8.50

10 Angel Fish = \$7 × 10 = \$ 70.00
6 Mollies = \$8.50 × 6 = \$ 51.00 +
Total Cost \$121.00

45)



Mean = (\$120 + \$100 + \$140 + \$80) ÷ 4
= \$440 ÷ 4 = \$110

New Mean after we collect from Std. 5
= \$110 + \$10 = \$120
Total for 5 classes = \$120 × 5 = \$600
Bar for Std. 5 money = \$600 – \$440
= \$160

TEST 4

SECTION 1

1) 69, $\underline{5}372 = 5{,}000$

2) 12, 14, 16, 18, 20, 22, 24 = 7 even numbers

3) $\frac{81}{5} = 16\frac{1}{5}$

4)
$$\begin{array}{r} {}^{1}\cancel{2}{}^{1}7.{}^{4}\cancel{5}{}^{1}0 \\ -\ 1\,9.2\,8 \\ \hline 8.2\,2 \end{array}$$

5) $88 \div 4 = 28 - 6 = 22$

6) $9 \times 9 = 81$

$\square + 9 = 31$

$\square = 31 - 9$

$\square = 22$

7) $\frac{7}{8} = 49$

$\therefore$ All $= (49 \div 7) \times 8 = 56$

Or $\frac{8}{\cancel{7}} \times \frac{\cancel{49}}{1} = 56$

8)
$$\begin{array}{r} 495 \\ -\ 161 \\ \hline 334 \end{array}$$

9)
$$\begin{array}{r} \$82.30 \\ -\ \$62.05 \\ \hline \$20.25 \end{array}$$

TEST 4

10) $5N + 31 = 76$

$5N = 76 - 31$

$5N = 45$

$5 \times N = 45$

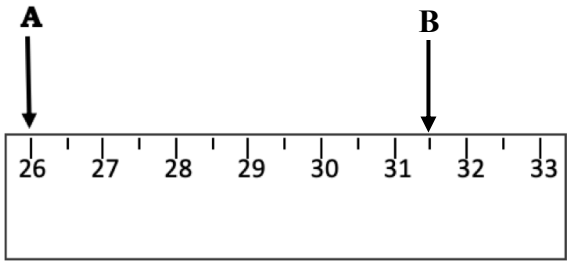
$N = 45 \div 5$

$N = 9$

11) $750g \div 3 = 250g$

12) 12:00
+ 4:40
16:40

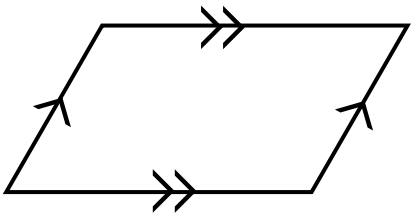
13)



14) Triangular Prism

15) Cylinder

16)



17) Height $= \frac{Volume}{L \times W} = \frac{800}{40} = 20cm$

TEST 4

18) $120 \div 20 = 6$

 = 6 houses

19) Mode = Chocolate

20) 152
136
166
+ 154
608 ÷ 4 = 152cm

Mean = 127

SECTION 2

21) $4\frac{3}{5} \div 2\frac{3}{10}$

$= \frac{23}{5} \times \frac{10}{23} = \frac{2}{1} = 2$

22) 475
– 285
190

$\therefore \frac{190}{475} \times \frac{100}{1} = 40\%$ not sold

23) Friend = 0.3 = $\frac{3}{10}$

Sister = $\frac{2}{5}$

$\therefore \frac{3}{10} + \frac{2}{5} = \frac{3}{10} + \frac{4}{10} = \frac{7}{10}$ given away

$\frac{10}{10} - \frac{7}{10} = \frac{3}{10}$ kept

24) $N \times 15 = ? + 10 = 70$

$\therefore 70 - 10 = 60$

$60 \div 15 = 4$

$N = 4$

TEST 4

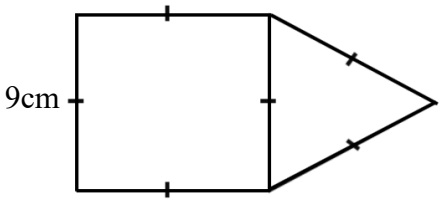
25) 1st Boy = 20 + 10/20 = 50
2nd Boy = 10 /+ 20 = 30
3rd Boy = 20 = 20

100
– 40
60 ÷ 3 = 20

1st Boy = 50

26) 340 ÷ 60 = 5 Shelves (60 × 5 = 300 Tins)
40 Tins left
5 Complete Shelves

27)



Perimeter of Shape = 5 sides × 9cm
= 45cm

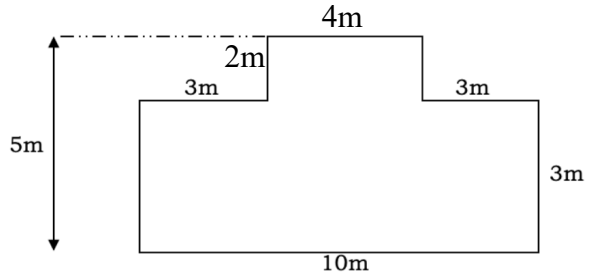
28) 3 – 90° angles

29) Purple – 16
Pink – 11

30) Mean = 70
Total of 6 Test = 70 × 6 = 420 marks
7th Test = 70 marks
New Total = 420 + 70 = 490
New Mean = 490 ÷ 7 = 70

TEST 4

31)



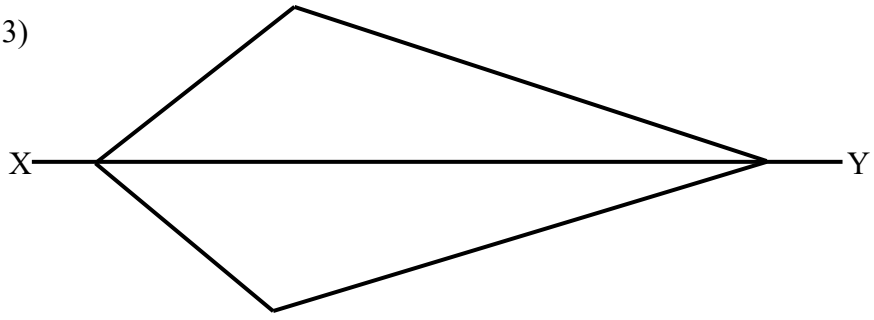
Area of A = 400 × 200 = 80,000cm^2
Area of B = 1,000 × 300 = 300,000cm^2
Total Area = 380,000cm^2

Area of Tile = 10 × 10 = 100cm^2
No. of Tiles = $\frac{\text{Area of Shape}}{\text{Area of Tile}} = \frac{380,00}{100}$
= 3,800 Tiles

32) Perimeter of Square Price of Land = 30m × 4
= 120m
Space between Poles = 3m
∴ Number of Poles = 120 ÷ 3 = 40 Poles

No, Anna is not correct. When poles are placed around a shape we do not need to add an Extra pole since we will meet the 1st pole placed when we have reached the last space.

33)



Kite

TEST 4

34) S.I. = P × R × T

$= \frac{\$80{,}000 \times 10 \times 5}{100}$

$= \frac{4{,}000{,}000}{100}$ = \$40,000

Total to repay = \$80,000 + \$40,000 = \$120,000

Monthly Installments = $\frac{\$120{,}000}{60}$ = \$2,000

35) Nathan used the method of dividing the \$40 by 2 to calculate $\frac{1}{5}$ of the boy's allowance. He Then multiplied his answer by 5 because $\frac{5}{5}$ represents the boy's full allowance. This was done by finding the reciprocal of the fraction $\frac{2}{5}$ which did the two steps of dividing by 2 and multiplying by 5.

36) (i) Parallelogram
(ii) 2 pairs of parallel sides.
4 sides equal
(iii) Kite

37) 200 Bags to Pack
1 Bag = 3 sandwiches + 2 cookies = 5 items per bag
150 sandwiches + 100 cookies = 250 items ÷ 5 items
= 50 bags packed

200 bags – 50 bags = 150 bags to be packed

∴ $\frac{150}{200} \times \frac{100}{1}$ = 75% of bags left to be packed

38) Bus = 10
Taxi = 25 +
Walk = 15
Total = 50

100 students – 50 students = 50 students
Private Car = 50 students

Mode of Transportation = Private Car

39) Area of Rectangle = L × W
= 9 × 4
= 36cm^2

TEST 4

Perimeter of Square = 36
1 side = 36 ÷ 4 = 9cm
Area of Square = 9 × 9 = 81cm^2
Difference in Area of Square and Rectangle = 81cm^2 – 36cm^2 = 45cm^2

40) Car A = 4 hours 25 mins
Car C = 4 hours 25 mins + 20 mins = 4 hours 45 mins
Car D = 4 hours 25 mins – 12 mins = 4 hours 13 mins
Car B = 4 hours 45 mins – 15 mins – 4 hours 30 mins

First Place: Car D
Second Place: Car A
Third Place: Car B
Fourth Place: Car C

SECTION 3

41) Tim – x
Jack – 2x
Brian – 4x

7x = $700
x = $700 ÷ 7 = $100

Tim = x = $100
Jack = 2x = $100 × 2 = $200
Brain = 4x = $100 × 4 = $400

42) First Discount = 20%
$\frac{20}{100}$ × $2000 = $400 off
New Price = $2000 – $400 = $1,600

Additional Discount = 10%
= $\frac{10}{100}$ × 1,600 = $160 off

Sale Price = $1,600 – $160 = $1,440
Plus $12\frac{1}{2}$ % V.A.T. = $\frac{1}{8} \times \frac{\$1,440}{1}$ = $180

Customer will pay = $1,440 + $180
= $1,620.00

TEST 4

43) Perimeter of Rectangle = (L + W) × 2
= (20 + 16) × 2
= 36 × 2 = 72cm^2

Perimeter of Square = 72 ÷ 2 = 36cm (1 side = 36 ÷ 4 = 9cm)

Area of Rectangle = L × W
= 20cm × 16cm = 320cm^2

Area of Square = S × S
= 9 × 9 = 81cm^2

Difference in both shapes = 320cm^2 – 81cm^2= 239cm^2

44) 54 ÷ 4 = 13 complete patterns, then first 2 shapes which will be

53rd 54th

45) Mean = 66

∴ Total = 66 × 5 = 330 marks

330 – (80 + 55 + 75) = 330 – 120 = 120
John and Allan have the same mark = 120 ÷ 2
= 60 marks

TEST 5

SECTION 1

1) Ninety-six thousand, four hundred and five.

2) Factors of 15 = 1, 2, 5, 15 = 4 factors

3) $0.68 = \frac{68 \div 4}{100 \div 4} = \frac{17}{25}$

4) $4.13 \times 0.4 = 1.652$

5) $(14 - 10) \times 8 = 8 \times \underline{\mathbf{4}}$

6) 2.06km – 1.65km = 0.41km shorter from Jason's house to the school

7) $y + 3^3 = 48$
$y + (3 \times 3 \times 3) = 48$
$y + 27 = 48$
$y = 48 - 27$
$y = 21$

8) Class = 45 pupils
Boys = 9
Girls = $45 - 9 = 36 = \frac{36 \div 9}{45 \div 9} = \frac{4}{5}$

9) Combinations to make 11 are:

1 + 10*	
2 + 9	9 – 2 = 7
3 + 8	8 – 3 = 5
4 + 7	7 – 4 = 3
6 + 5	6 – 5 = 1

So the number is 74.

TEST 5

10) 2019
– 28
1991 Tom was born

11) $75.35 = 1 × $50 = $50
1 × $20 = $20
1 × $5 = $5
35 cents in coins:
1 × 25c = 0.25
1 × 10c = 0.10
3 bills / 2 coins

12)

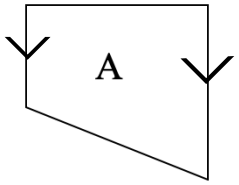
$$\begin{array}{r} 5\ \square\ 2 \\ \times \quad\quad 9 \\ \hline 5\ 3\ 2\ 8 \end{array}$$

$\square = 9$

$$9 \overline{)\ 5\ 3\ {}^{8}2\ {}^{1}8}$$
$$5\ \mathbf{9}\ 2$$

13) Kilograms

14) A = 1 pair of parallel lines

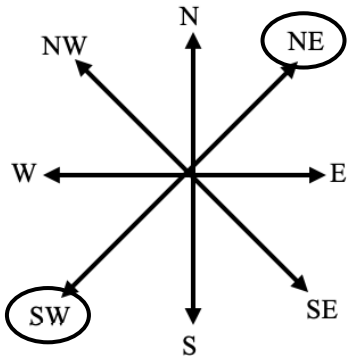


15) Perimeter of shape = 32cm
Length of x = 32cm – (2cm + 5cm + 3cm + 8cm + 8cm)
= 32cm – 26cm = 6cm

16) Allan = 36 marbles
Paul = 82 marbles
David = 68 marbles
Total = 36 + 82 + 68 = 186 marbles
Mean = 186 marbles ÷ 3 boys = 62 marbles

TEST 5

17)



North East

18) Triangular Based Pyramid

19) Mode = 19 runs

20) 60 Children ÷ 10 ☺ = 6 ☺

TEST 5

SECTION 2

21) $0.3 = \frac{3}{10}$

$\frac{3}{10} \times \frac{\$990}{1} = \$297$

$\$297 \approx \$300$

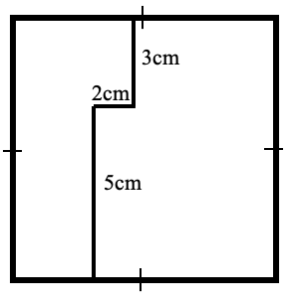
22) Pumpkin = 3kg 40 g

∴ 1 piece = 3,040g ÷ 4 = 760g

23) Joe's journey to school

750m + 750m + 750m + 1,250m = 3,500m = 3.5km

24)



1 Side Square = 5cm + 3cm = 8cm

Area of Square = Side × Side

= 8cm × 8cm

= $64cm^2$

25) Sue = 3 laps

John = 3 × 4 = 12 laps

26) 1^{+0}, 1^{+1}, 2^{+1}, 3^{+2}, 5^{+3}, 8^{+5}, **13**$^{+8}$, 21^{+13}, **34**$^{+21}$, 55

27) 1st Stop = 19 people left

2nd Stop = 17 people got on

After Second Stop = 63 people

Start of Journey = 63 + (19 – 17) = 63 + 2 = 65 persons

28) 18 Triangles

TEST 5

29) $\frac{2}{5}$ of Savings = \$60

Total Savings = $\frac{5}{2} \times \frac{60}{1}$ = \$150

To calculate all of Marias' savings since \$60 represents 2 parts out of the 5 parts of her savings, divide \$60 by 2 to get 1 part. Then, multiply your answer of \$30 by 5 parts to get the whole \$30 × 5 = \$150. Using the reciprocal of the $\frac{5}{2}$ is the same as dividing by 2 and multiply by 5.

30) 1 Apple Pie = \$37.00 + 1 Free Apple Pie.
Mother needs 5 Apple Pies.
She must purchase 3 Apple Pies × \$37 = \$111
Mother's bill will be \$111 and she will get
6 Apple Pies.

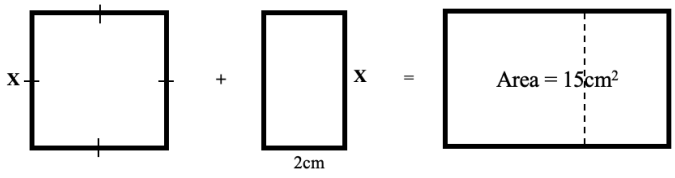
31) 3 apples = \$30
∴ 1 apple = \$30 ÷ 3 = \$10

1 apple + 2 grapes = \$18
2 grapes = \$18 – \$10 (apples) = \$8
∴ 1 grape = \$8 ÷ 2 = \$4

1 grape + 1 watermelon = \$2
∴ 1 watermelon = \$4 (grape) – ? = \$2
= \$4 – \$2 = \$2
1 watermelon = \$2

1 apple + 1 grape + 1 watermelon = \$10 + \$4 + \$2
= \$16.00

32)

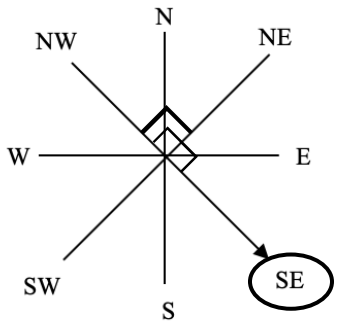


Area of Rectangle = L × W = 1 × 15
3 × 5
5 × 3
15 × 1

Length of Rectangle = 5cm

TEST 5

Side of Square 'x' = 5cm – 2cm = 3cm

33) 

3 – 90° Turns

34) Rotten = 0.4 = $\frac{4}{10}$ of harvested pepper

Good = 0.6 = $\frac{6}{10}$ of harvested pepper

Sold 60% of $\frac{6}{10} = \frac{60}{100} \times \frac{6}{10} = \frac{360}{1000} = \frac{36}{100}$

$= \frac{9}{25}$ harvested pepper

∴ Rotten + Sold = $\frac{4}{10} + \frac{9}{25} = \frac{20}{50} + \frac{18}{50} = \frac{38}{50}$ harvested pepper

Not sold = $\frac{50}{50} - \frac{38}{50} = \frac{12}{50}$ = 384 harvested pepper

∴ All Harvested = $\frac{50}{12} \times \frac{384}{1}$ = 1,600 peppers

Peppers Harvested = 1,600 peppers

35) Mean = 90 marks

Total = 90 × 3 = 270 marks

Total = 90 × 4 = 360 marks

Lowest mark needed in 4th Test = 360 – 270 = 90 marks

36) Billy = $1,242.00

Brother = $\frac{5}{9} \times \frac{1{,}242}{1}$ = $690

∴ remainder = $1,242 – $690 = $552

Sister = 0.25 = $\frac{25}{100} = \frac{1}{4} \times \frac{552}{1}$ = $138

Money Left = $552 – $138 = $414

37) Traffic Light A = 3 seconds } 12 seconds

TEST 5

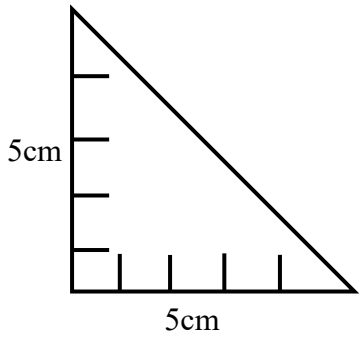
Traffic Light B = 4 seconds

38) My Age = 6 years
Neighbour = 6 years ÷ 2 = 3 years

I am 3 years older than my neighbour. If I am 71 years old then 71 – 3 = 68 years
Neighbour = 68 years.

39) Day 10 = Full
Day 9 = $1 \div 2 = \frac{1}{1} \times \frac{1}{2} = \frac{1}{2}$

40)



TEST 5

SECTION 3

41) Regular Time 80 hours @ \$40 per hour = $80 \times \$40$
$= \$3,200$

Saturday = Time and a Half = $1\frac{1}{2} \times \$40$
$= \frac{3}{2} \times \$40 = \$60$ per hour

Sunday + Public Holiday = Double Time
$= \$40 \times 2 = \$80$ per hour

1 week = \$4,560 – (Regular Time) \$3,200
= \$1,360
Sunday Over Time = 8 hours × \$80 = \$640
∴ Saturday Over Time = \$1,360 – \$640 = \$720
Saturday Over Time Hours = \$740 ÷ \$60 = 12 hours

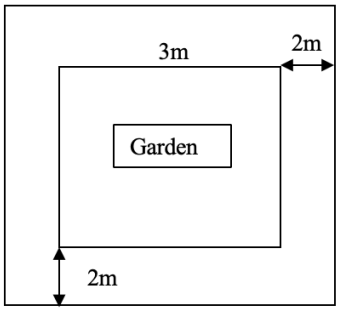
42) Similarities
(i) 1 pair of Parallel Sides
(ii) 1 line of Symmetry

Differences
(i)One is a Quadrilateral 4 Sides/ Pentagon 5 Sides
(ii) Trapezium – No 90° angle
Pentagon – 2-90° angles

43) 1 year = \$21,000
∴ 4 years = \$21,000 × 4 = \$84,000
Simple Interest = \$84,000 – \$60,000 = \$24,000
Monthly Interest = \$21,000 ÷ 12 = \$1,750
Rate of Interest Per Annum = $\frac{\text{S. I.} \times 100}{\text{P} \times 4}$
$= \frac{\$24,000 \times 100}{\$60,000 \times 4} = 10\%$ per annum

TEST 5

44)



Area of Pathway = (7m × 7m) – (3m × 3m)
= (700cm × 700cm) – (300cm × 300cm)
= 490,000cm^2 – 90,000cm^2
= 4000,000cm^2
Area of Tile = 20cm × 20cm = 400cm^2
No. of Tiles Needed = 400,000cm^2 ÷ 400cm^2
= 1,000 Tiles
Cost of Tiles = 1,000 × $11 = $11,000

45) Total Newspapers sold = 405
Mon. = 45
Tues. = 55
Wed. =
Thurs. = 40
Fri. =
Sat. = 70
Sun. = 75
Total = 285

Wed and Fri = 405 – 285 = 120
Wed = 120 ÷ 2 = 60
Fri = 60

Sunday has the greatest number of newspapers sold. One reason for this could be because many people are at home on a Sunday, so they buy the newspaper to relax and read.

TEST 6

SECTION 1

1) 372,106 = Tens of Thousand

2) $\sqrt[3]{125} = 5$

3) $95\% = \frac{95}{100} = \frac{19}{20}$

4) $0.728 \div 0.4 =$ $4 \overline{)7.28}$ → 1.82

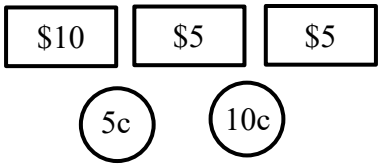
5) $8916 \approx 8900$

6) $\sqrt{144} \times 3^2 = 12 \times 9 = 108$

7) $3\frac{2}{3} \times 2\frac{1}{7} = \frac{11}{3} \times \frac{15}{7} = \frac{55}{7} = 7\frac{6}{7}$

8) $6126 \div 6 = 1021$

9)



10) $8 \overline{)936}$ → 118

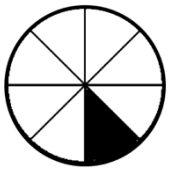
11) Volume of Cuboid = L × W × H
= 6 × 6 × 12
= 432cm^3

12) kilometres

13) 6m

14) 5 × $10 = $50

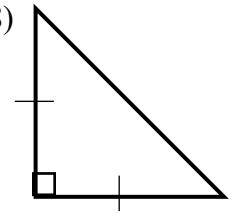
15)



16) Perimeter = 54cm
∴ 1 side = 54cm ÷ 3 = 18cm

17) Chapter 4 = 31 pages

18)



19) Dog 17
Cats 𝍸 |||

20) Hexagon

SECTION 2

21) Mean = 16
∴ Total = 16 × 5 = 80

Ans: 82

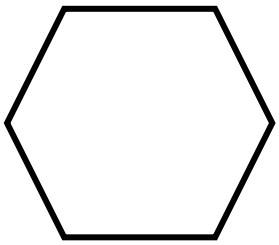
22) Sue Father
$7 + $13 = $20
Total = $280 ÷ 20 = 14 amts of Savings
Father = $13 × 14 = $182

Add both Sue and Father's contribution. The total is then used to divide $280 by The amount. The answer represents how many times Sue saved. Therefore the 14 times will give her a contribution of $13 × 14 = $182 that was contributed by father.

TEST 6

23) $20 + $10 + $5 + $1 = $36
Total = $288
No. of each bill = $288 ÷ $36
= 8 of each bill

24) Cube = 12 edges
∴ 78 ÷ 12 = 6 cm length of side
12 × 6 = 72cm for frame
78 – 72cm = 6cm of wire left

25)  Hexagon

26) Cost Price = $224.00
$12\frac{1}{2}$% VAT = $\frac{1}{8} \times \frac{224}{1}$ = $28
VAT inclusive price = $224 + $28
= $252

27) Total Population = 520 students
Boy = 40% = $\frac{40}{100} \times \frac{520}{1}$ = 208 Boys
∴ Girls = 520 – 208 = 312 Girls
$\frac{5}{6}$ girls = long hair
$\frac{1}{6}$ girls = short hair = $\frac{1}{6} \times \frac{312}{1}$ = 52 girls
52 girls have short hair

28) S.I. = $\frac{P \times R \times T}{100} = \frac{\$30{,}000 \times 12 \times 5}{100}$ = $18,000
Total to repay = $30,000 + $18,000
= $48,000
Monthly Inst. = $48,000 ÷ 60
= $800

29) Common Fraction $\frac{3}{8}$
Percentage 55%
Decimal Fraction 0.66

30) Discount = $66\frac{1}{2}$% = $\frac{5}{8}$
Sale Price = $\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$
$\frac{3}{8}$ = $3,600
Original Price = $\frac{8}{3} \times \frac{\$3{,}600}{1}$ = $9,600

31) Concert Hall = 450 seats
V.I.P. = $\frac{1}{5} \times \frac{450}{1}$ = 90 seats
Artiste Seats = $33\frac{1}{3}$%
= $\frac{1}{3} \times$ (450–90)
= $\frac{1}{3} \times \frac{360}{1}$ = 120 seats

General Audience = 360 – 120
= 240 seats

Total Money Collected = $42,000
V.I.P. Money = $18,000
General Artiste = $42,000 $18,000
= $24,000
Cost of Ticket for Gen. Seating
= $24,000 ÷ 240 = $100

32) Length of Cube = 3cm
Volume of Cube = S × S × S
= 3cm × 3cm × 3cm
= 27cm^3
No. of Cubes In Model = 72
Volume of Model = 72 × 27cm^3
= 1,944cm^3

TEST 6

33) Home to P.O.S = 153 mins = 2hrs 33mins
Time at Mall = 2hrs 12 mins
P.O.S to Home = 153mins – 20mins
= 133mins/ 2hrs 13mins
Total Time Used = hrs mins

	2	33
+	2	12
	2	13
	6	58

Departure Time 11:11 a.m.
\+ 6:58
17:69 – 60 = 9mins
18:09
18:09
– 12:00
6:09 p.m.

34) Win = 5 points
Draw = 3 points
Loss = 0 points

20 games

Games Played	Results	Points
11	Won	55÷5
6 (6×3)	Draw	18
3	Loss	0

35) 1 Bag = 8 mangoes
∴ 23 Bags = 23 × 8 = 184 mangoes
7 mangoes left
Total mangoes picked = 184 + 7
= 191 mangoes

36) Mean = 20
Total = 20 × 3 = 60

Mean = 20
Total = 20 × 4 = 80

Data – 19, 23
∴ 60 – (19 + 23) = 60 – 42 = 18

80 – (19 + 23 + 18) = 80 – 60 = 20
Data with 3 number = 19, 23, 18
Data with 4 numbers = 19, 23, 18, 20

37) Area of Backyard = 23m × 14m = $322m^2$
Area of Garden = 8m × 7m = $56m^2$
Area of Pathway = $322m^2 – 56m^2$
= $266m^2$

38) 10:30 a.m. to 11:00 a.m. = $6
11:00 a.m. to 3:50 p.m. = 5hrs × $5
= $25.00
Total Paid = $6 + $25 = $31.00

39) 3 – 90° Turns

40) Lines of Symmetry = PQ, WX, AC, BD

SECTION 3

41) Chicken and Fries – 3 - $90.00
Hamburger – 1 + 1 - $25 + $25
Popcorn – 1 + 1 - $7 + $7
Ice Cream – 1 - $6
Already spent = $90 + $25 + $7 + $6
= $128
Total spent = $200 – $15 = $185
Still Left to spend = $185 – $128 = $57

Possible addition
2 Hamburgers 2 × $25 = $50
1 Popcorn = 1 × $7 = $ 7
$57

TEST 6

42) Mean = 34,000
Total = 34,000 × 5 mths = 170,000

Feb = 170,000 – (20,000 + 40,000 + 20,000 + 10,000)
= 170,000 – 90,000
= 80,000
Bar drawn to 80

Many tourists may have come for Carnival in February.

43) 5 – four-seaters
10 – three-seaters

43 pupils to be seated
5 × 4 = 20
43 – 20 = 23 not divisible by 3

4 × 4 = 16
43 – 16 = 27 divisible by 3 (27 ÷ 3 = 9)

4 – four-seaters = 4 pupils × 4 desks
= 16 pupils
9 – three-seaters = 3 pupils × 9 desks
= 27 pupils
27 + 16 = 43 pupils

44) Volume of Tank = L × W × H
= 10.5m × 3.5m × 4m
= 147m^3
$\therefore \frac{2}{3}$ filled = $\frac{2}{3}$ × 147m^3 = 98m^3
1m^3 = 1,000 Litres
98m^3 = 1,000 × 98 = 98,000 Litres

TEST 7

SECTION 1

1) 70<u>5</u>298 = 5,000

2) 71

3) $\frac{43}{7} = 6\frac{1}{7}$

4)
$$\begin{array}{r} 0.375 \\ +\ 37.000 \\ \hline 37.375 \end{array}$$

5) 575cm ÷ 100 = 5.75m

6)
$$\begin{array}{r} 123 \\ -\ 81 \\ \hline 42 \end{array}$$

7) $6\frac{2}{5} + 3\frac{3}{10} = 6\frac{4}{10} + 3\frac{3}{10} = 9\frac{7}{10}$

8) 816 ÷ 8 = 102

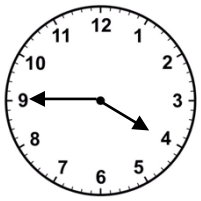
9) 675 ÷ 27 = 25

10)
$$24 \overline{)\ 504}\quad 21$$

11)
$$\begin{array}{r} 2.5 \\ +\ 0.800 \\ \hline 3.300\text{km} \end{array}$$

12) 20th + 10 days = 30th April
30th + 10 days = 10th May

13)



14) Trapezium

15) 6 + 5 + 7 = 18 fruits
Apples = $\frac{6}{18} = \frac{1}{3}$ of the fruits

16) Triangular Based Pyramid

17) EF or GH

18) 80 + 64 + 88 + 78 + 82 + 88 = 480
Mean = 480 ÷ 6 = 48

19) 8 × 2 = 16 students shown
28 – 16 = 12 students for Apple
12 ÷ 2 =  Apple

20) Popcorn – 𝍸 𝍸 𝍸 |
Ice-Cream – 𝍸 𝍸 ||
Chocolate – 𝍸 𝍸 𝍸 𝍸 ||

SECTION 2

21) Total Spectators = 3,322
No. of Sections = 11
Spectators per Section = 3,322 ÷ 11 = 302

22) Joey's Marbles = 64
$\frac{5}{8}$ Joey's marbles = $\frac{5}{8} \times \frac{64}{1}$ = 40 marbles
40 marbles = $\frac{1}{2}$ Paul's marbles
40 × 2 = 80 marbles (All Paul's marbles)
Total of Joey and Paul's marbles
= 64 + 80 = 144 marbles

TEST 7

23) 51, 52, (53), 54, 55, 56, 57, 58, (59), 60, (61), 62, 63, 64

$$\begin{array}{r} 59 \\ \times\ 61 \\ \hline 3540 \\ +\ \ 59 \\ \hline 3599 \end{array}$$

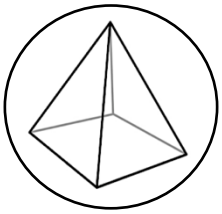
24) 7 + 11 + 3 + 9 = 30 students

25) Lisa – 20+10
Sue – 10
Jane -
} 40 / 30 + 40 = 70, 10 + 40 = 50, 40

160
– 40
120 ÷ 3 = 40 per girl

Lisa = 70 sweets

26)



27) Shirt = 0.75m
Jacket = 2.50m
8 Shirts = 0.75 × 8 = 6m
5 Jackets = 2.5 × 5 = 12.5m
Material needed = 6 + 12.5
= 18.5 ≈ 19m

28) Four Right Angles = Square
Only Two Lines of Symmetry = Rhombus
Only One Par of Parallel Sides = Trapezium

29) 24 Benches ÷ 2 lengths in room
= 12 benches
Length of room = 12 benches × 2.5m
= 30m

30)

Colours	No. of Times	Points
Yellow	1(1)	5 + 5
Black	1	10
White	2	30
Red	1(1)	20 + 20
Total		**90**

7 throws – 5 throws = 2 throws
90 – 65 = 25 points
Only 2 combinations to give a total of 25 points would be another Yellow and another Red.

31) Richard = 14 years
David = Richard + 16 years = 14 + 16
= 30 years
David = Susan + 8 years = 30 years
∴ Susan = 30 – 8 = 22 years
Susan = Pam × 2 = 22 years
∴ Pam = 22 ÷ 2 = 11

32) Mean Height = 1.55m
Total Height = 1.55 × 4 boys = 6.2m
Heights of 3 of the boys
= 1.6m + 135cm + 1.75m
= 1.6m + 1.35m + 1.75m = 4.7m
Height of 4th Boy = 6.2m – 4.7m = 1.5m

33) 1 tin peas = 250g
∴ 5 tins peas = 250g × 5 = 1,250g
= 1.25kg
Weight of Watermelon
= 1.25kg – 2 tins peas
= 1.25kg – 0.5kg = 0.75kg

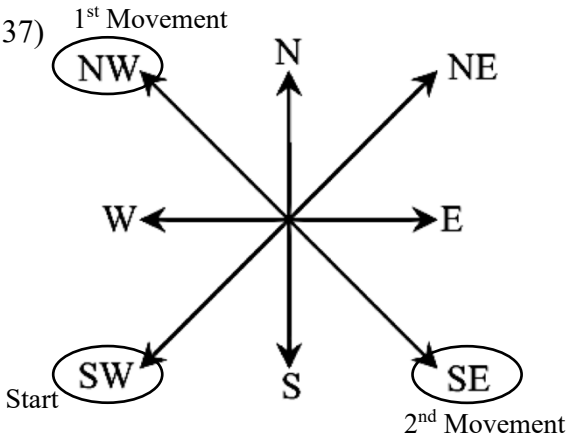
TEST 7

34) Mother must divide the chocolates using the unequal dividing method:
-First subtract the 6 chocolates from the Total chocolates of 75 and give the 6 to the daughter (75 – 6 = 69 chocolates left). Now divide the 69 chocolates left by 3 Since there are 3 children who will get The chocolates (69 ÷ 3 = 23 chocolates to each child). Finally distribute 23 chocolates to each of the 3 children, add the extra 6 already given to the daughter to show her amount was 29 which is 6 more than each of her brother's amounts.

35) Weekly Salary = \$2,400
Food = $\frac{3}{8} \times \frac{2,400}{1}$ = \$900
∴ Money spent on food for 4 weeks
= \$900 × 4 = \$3,600.00

36) Hourly Rate = \$40
Hours worked per day = 8 hrs
Hours worked per week = 8 hrs × 5 days
= 40 hours
Weekly Earnings = \$40 × 40hrs = \$1,600
Earnings for 7 weeks = \$1,600 × 7 weeks
= \$11,200

37)



South-East

38) You take your last piece of information And work backwards doing the opposite operations:
28 × 3 = 84
84 + 1 = 85
85 – 36 = 49
√49 = 7

39) 1 Box = 36 Pencils
50 Boxes = 36 × 50 = 1,800
No. of students = 600
Amt. of pencils per students = 1800 ÷ 600
= 3 pencils

40) Mean = 32 points
Total for 5 games = 32 × 5 = 160 pints
Total for 4 games = 26+34+29+31 = 120
Fifth Score = 160 – 120 = 40 points

SECTION 3

41)

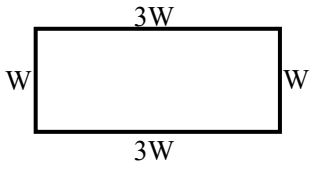
2cm	4cm	8cm	16cm	32cm
Day	Day	Day	Day	Day
5	7	9	11	13

Day 11 = 32 ÷ 2 = 16cm
Day 9 = 16 ÷ 2 = 8cm
Day 7 = 8 ÷ 2 = 4cm
Day 5 = 4 ÷ 2 = 2cm

Day 5 = 2cm tall

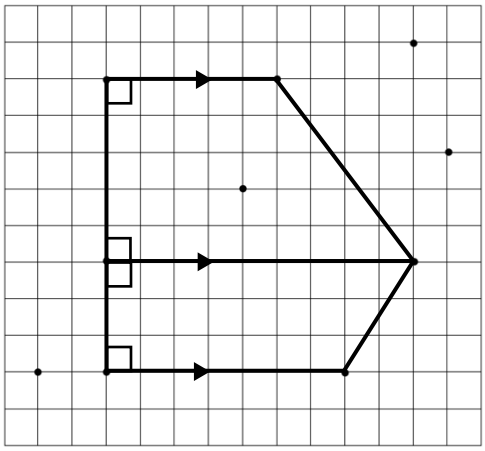
TEST 7

42) Perimeter of Equilateral Triangle
= 8cm × 3 = 24cm



Perimeter of Rectangle = 8W
8W = 24cm
W = 24 ÷ 8 = 3cm
Length = 3 × 3 = 9cm
Width = 3cm
Area of Rectangle = 9 × 3 = 27cm^2

43)



44) 5 balls + 3 bats = \$900.00
7 balls + 3 bats = \$1,020.00
∴ 2 balls = \$1,020 – 900 = \$120
1 ball = \$60

5 balls = \$60 × 5 = \$300
3 bats = \$900 – \$300 = \$600
1 bat = \$600 ÷ 3 = \$200

6 balls + 6 bats = (6 × \$60) + (6 × \$200)
= \$360 + \$1200 = \$1,560

45) Mon. = 80 juices
Wed. = 100 juices
Thurs. = 120 juices
Fri. = 20 juices
Total 320 juices

Tues = 410 – 320 = 90 juices
Modal Thursday
Many children were absent on Friday.

TEST 8

SECTION 1

1) 6 098 427

2) $5^2 = 5 \times 5 = 25$

3) $\frac{7}{20} \times \frac{100}{1} = 35\%$

4) \$2,100 ÷ 35 = \$60 for 1 book
5 books = \$60 × 5 = \$300

5) 1.44 ÷ 1.2 =

$$12 \overline{)\ 14.4}\ \ 1.2$$

6) 6.057kg = 6057g

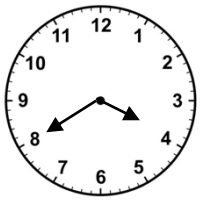
7) $\frac{\sqrt{36}}{3} = \frac{6}{3} = 2$

8) $8 - \frac{2}{3} = 7\frac{3}{3} - \frac{2}{3} = 7\frac{1}{3}$

9) 316 × 15 = 4,740

10) \$100 + \$50 + \$20 + \$3 + 0.50c = \$173.50

11)
$$\begin{array}{r} 5{,}200 \\ -\ \ 796 \\ \hline 4{,}404 \end{array}$$

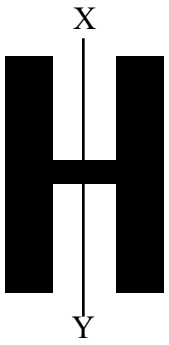
12) 

13) 10 m

14) 6.4 × 6 = 38.4cm

15) Rectangular Based Pyramid

16) 39kg

17) 

18) Mean = 16
Total = 16 × 5 = 80
Missing No. = 80 – (24 + 12 + 7 + 10)
= 80 – 53 = 27

19) 1 Rotation = 4-90° turns
2 Rotations = 4 × 2 = 8-90° turns
½ Rotation = 2-90° turns
Total = 8 + 2 = 10-90° turns

20) 36 – (12 + 10 + 3) = 36 – 25 = 11
𝍸 𝍸 |

SECTION 2

21) Area of 1 box = 3cm × 3cm = $9cm^2$
Area of figure = 6 boxes × $9cm^2$ = $54cm^2$

22) Mean
= (15.02+18.25+14.93+20.18+13.07) ÷ 5
= 81.35 ÷ 5 = 16.27 mins

TEST 8

23) Andrew - \$60 + \$40
Paul - \$40
Jim –

\$60 + \$40 + \$40 = \$140
\$200 – \$140 = \$60
\$60 ÷ 3 = \$20

Andrew = \$100 + \$20 = \$120
Paul = \$40 + \$20
Jim = \$20

24) Scale = 9.15kg
Each Side = 9.15kg ÷ 2 = 4.575kg
1 Corn = 375g
3 Corn = 375g × 3 = 1125g
2 Sugar = 4575g – 1125g = 3450g
1 Sugar = 3450g ÷ 2 = 1725g

5 cans = 375g × 5 = 1,875g
2 Flour = 4575g × 2 = 9,150g
3 Sugar = 1725g × 3 = 5,175g
Total Weight = 16,200g = 16.2kg

25) 0.65 + 0.5 = 1.15
1.15 + 0.6 = 1.75
1.75 + 0.7 = 2.45
2.45 + 0.8 = <u>3.25</u>
2.25 + 0.9 = 4.15
4.15 + 1.0 = <u>5.15</u>

26) If the divisor is 16 the largest whole number that can be a remainder is 15. If the remainder is more than 15 we can get another group with 16 in the group.

27) Discount = 15%
Sale Price = 100% – 15% = 85% = $\frac{85}{100}$
$\frac{85}{100}$ = \$3,825
∴ Original Price = $\frac{100}{85} \times \frac{3825}{1}$ = \$4,500

28) Peter = 465 marbles
David = 465 – 15 = 450 marbles
Sue = 450 – 126 = 324 marbles
Total Marbles = 465 + 450 + 324
= 1,239
Equal Amount per child = 1,239 ÷ 3
= 413 marbles
Peter = 465–413 = 52 marbles to give Sue
David = 450–413 = 37 marbles to give Sue

29) 10 laps = 560m
∴ 1 lap = 560 ÷ 10 = 56m
Peri. Of Square Park = 56m
1 Side Park = 56m ÷ 4 = 14m
Area of Park = 14m × 14m = 196m^2

30) 150 boxes × 10 pencils = 1,500 pencils
Seniors = $\frac{2}{5} \times \frac{1,500}{1}$ = 600 pencils
Remaining Pencils = 1,500 – 600 pencils
= 900 pencils
Infants = 0.5 = $\frac{1}{2} \times \frac{900}{1}$ = 450 pencils
Std. 4 = 60% of pencils = $\frac{60}{100} \times \frac{600}{1}$
= 360 pencils
Std. 4 = 360 ÷ 5 pencils = 72 pupils
Infant Pupils = 72 × 2 = 144
Pencils Needed for Infants = 144 × 5
= 720 pencils
Extra Pencils Needed for Infants
= 720–450 = 270 pencils

31) 0.3 + 40% + $\frac{1}{8}$ = 30% + 40% + 12½%
= 82½%

32) Volume filled in Cube = 4m × 4m × 2m
= 32m^3
Litres = 32m^3 × 1,000 Lit. = 32,000 Litres
Volume filled in Cuboid = 3m × 7m × 4m
= 84m^3
Litres = 84m^3 × 1,000 Lit. = 84,000 Litres
Diff. In Capacity = 84,000 – 32,000
= 52,000 Litres

TEST 8

33) Discount = Original Price – Sale Price
= \$6,900 – \$4,600 = \$2,300

34) (i) Equilateral Triangle
(ii) Scalene Triangle
(iii) Isosceles Right Angled Triangle

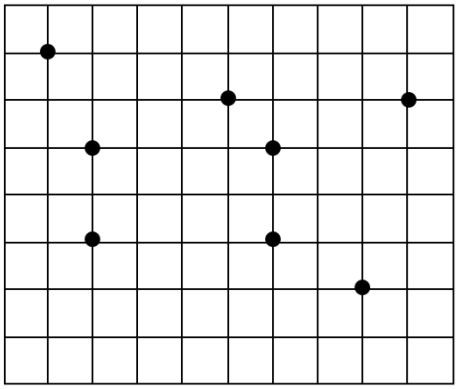
35) S.I. = $\frac{Prin. \times Rate \times Time}{100}$
= $\frac{\$30{,}000 \times 12 \times 5}{100}$ = \$18,000
Total To Repay = \$30,000 + \$18,000
= \$48,000
Monthly Instal. = \$48,000 ÷ 60 = \$800
Amount Repaid after 35 months
= \$800 × 35 = \$28,000

36) Triangular Prism
No. of Edges – 9

37) Mathematics = 95%
Grammar = 85%
Creative Writing = 85%
Spelling = $\frac{15}{50} \times \frac{100}{1}$ = 30%

Roger can spend more study time on Revision of his Spelling

38)



39) 14 × \$100 = \$1,400
9 × \$50 = \$ 450
26 × \$20 = \$ 520
19 × \$10 = \$ 190
12 × \$1 = \$ 12
60 × .25c = \$ 15
Total Deposited \$2,587

40) Mean = 16
Total = 16 × 5 = 80
Fourth and Fifth number
= 80 – (18 + 22 + 19) = 80 – 59 = 21
Fourth and Fifth number = 21 ÷ 2
= 10.5, 10.5

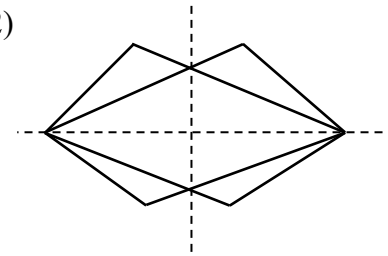
SECTION 3

41) Option A = $\frac{\$120{,}000 \times 8 \times 7}{100}$ = \$67,200
Total To Repay = \$120,000 + \$67,200
= \$187,200

Option B = $\frac{10}{100} \times \frac{\$120{,}000}{1}$ = \$12,000
Remaining Balance = $\frac{\$108{,}000 \times 6 \times 7}{100}$
= \$45,360
Total Paid = \$12,000+\$108,000+\$45,360
= \$165,360

Jerry should choose Option B

42)



TEST 8

43) Peri. Of Shape = (24cm + 15cm) × 2
= 78cm
Unlike finding the Area of the shape, the Distance around the shape will still have The same 2 lengths and the same 2 widths

44) Jack Hammer = $350 per day
Power Drill = $200 per day
Transport = $250

Total Bill = $4,150
Power Drill = 3 extra days = $200 × 3
= $600
Transport + Extra Days for Drill
= $250 + $600 = $850
Total Bill – Extra Cost
= $4,150 – $850 = $3,300
Drill plus Hammer per day
= $350 + $200 = $550
∴ No. of days Hammer rented
= $3,300 ÷ $550 = 6 days

45) Comprehension = 200 ÷ 5 = 40
$= \frac{40}{200} \times \frac{100}{1} = 20\%$
Music + Story = 200 – (20 + 40 + 50)
= 200 – 110 = 90 books

Music is 10 more books than Story book
∴ 90 – 10 = 80 books left
80 ÷ 2 types of books = 40 books
Music = 10 + 40 = 50 books
$= \frac{50}{200} \times \frac{100}{1} = 25\%$
Story = 40 books = $\frac{40}{200} \times \frac{100}{1} = 20\%$

TEST 9

SECTION 1

1) 65,212.79 = $\frac{9}{100}$

2) Composite Numbers = 4, 6, 8, 9
4 + 6 = 10

3) 16.3
+ 7.25
23.55

4) 3^{+3}, 2^{+2}, 6^{+3}, 9^{+3}, 6^{+2}, 12 = 9

5) $9^2 - \sqrt{196} = 81 - 14 = 67$

6) $\frac{12 \div 6}{36 \div 6} = \frac{b}{6}$, b = 2

7) 96 ÷ 7 = 13 gifts

8) c, b

9) 1 × $50 = $ 50.00
6 × $20 = $120.00
3 × $5 = $ 15.00
3 × .25 = .75
$185.75

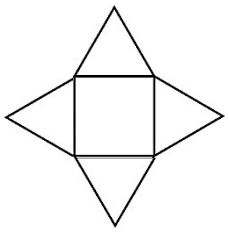
10) 5 3 **3**
+ 6 **6** 9
1202

11) 3.5cm ≈ 4cm

12) $\frac{5}{8}$

13) .750 kg (750g)
1.020 kg
.910 kg (910g)
2.680 kg

14) 31st January

15) 

16) $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$

17) 8 sides × 8 = 64cm

18) 12 – 8 = 4 more students

19) 8 × 4 = 32 ice-creams
42 – 32 = 10
10 ÷ 4 = 2 ½ = 

20) Nickelodeon

SECTION 2

21) $6\frac{3}{4} \times 3\frac{3}{5} = \frac{27}{4} \times \frac{18}{5} = \frac{243}{10} = 24\frac{3}{10}$

22) $\frac{1}{3} = 27$
$\therefore \frac{3}{3} = 27 \times 3 = 81$
N + 59 = 81
N = 81 – 59 = 22

23) 55% = $\frac{55}{100} = \frac{11}{20}$
$\frac{11}{20} = 110$
$\frac{20}{11} \times \frac{110}{1} = 200$

TEST 9

24) Walked = 1.05 km
Cycled = + 2.350 km (2,350m)
Total Covered = 3.400 km

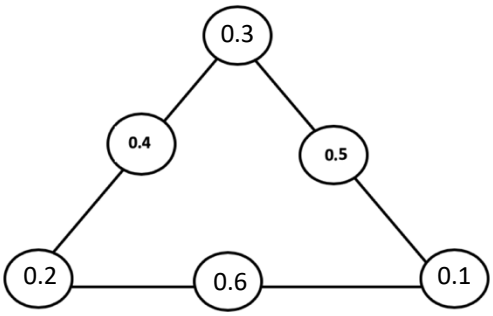
Triathlon Course = 5.500 km
Subtract Walked + Cycled = – 3.400 km
Ran = 2.100 km

25) Discount = 25%
100% – 25% = 75%
Sale Price = $\frac{75}{100} \times \frac{475}{1}$ = $356.25

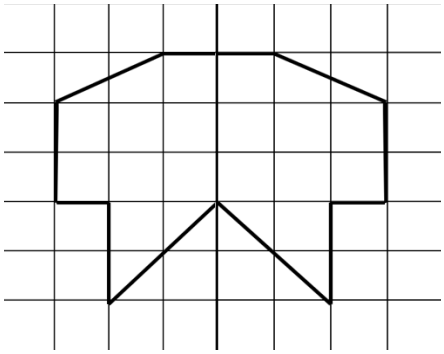
26) Factory A = 150 computers per day
Factory B = 150 +70
= 220 computers per day
Total Produced = 150 + 220
= 370 computers per day
Amount of Computers Produced = 4,070
∴ No. of Days to Produce = 4,070 ÷ 370
= 11 days

27) Allan = 3 × $65 = $195
Peter = $270 ÷ 45 = 6 Days
Keith = $630 ÷ 9 = $70 per day

28)



29)



30) Pumpkin = 2050g ÷ 1000
= 2.050kg ≈ 2kg

31) S.I. = $\frac{P \times R \times T}{100} = \frac{\$12{,}000 \times 12 \times 4}{100}$ = $5,760

Amt. To Repay = $12,000 + $5,760
= $17,760
Monthly Instal. = $17,760 ÷ 48
= $370.00

32) Mean = 63
Total = 63 × 4 innings = 252 runs
New Mean = 63 + 3 = 66
New Total = 66 × 5 innings = 330 runs
6th Inning = 0 runs
New Mean = 330 ÷ 6 innings = 55 runs

33) Divide $18.50 by 5 to get $3.70 as the Cost of 1 orange at Vendor A. Divide $33 By 12 to get $2.75 as the cost of 1 orange At Vendor B. When you compare answers, Vendor B has the better offer.

34) Suresh's Time = 16.9–0.3 = 16.6 seconds

Suresh – 16.6 sec – 1st
Uric - 16.8 sec – 2nd
Allan – 16.9 sec – 3rd
Ryan – 17.2 sec – 4th
Richard – 18.6 sec – 5th

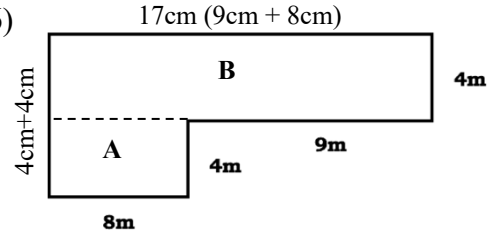
The times are arranged from the shortest To the longest. The runner with the shortest time completed the race the fastest. That runner would place first. Suresh therefore came first.

35) One Cube has 12 edges needed to make The frame.

Larger Cube = 12 edges × 8cm = 96cm
156cm – 96cm = 60cm
Smaller Cube = 60cm ÷ 12 edges
= 5cm length of edge

TEST 9

36)



Area of A = 800cm × 400cm
= 320,000cm^2
Area of B = 1700 × 400
= 680,000m^2
Total Area of floor = 1,000,000m^2

Area of tile = 20 × 20 = 400cm^2
No. of tiles needed = $\frac{1,000,000}{400}$ = 2,500
Cost of Tiles = 2,500 × \$9 = \$22,500
Total Cost = \$22,500 Tiles
\$ 2,000 + Labour
\$24,500

37) 37 Poles = 36 Spaces on a straight line
Space between Poles = 5m
∴ Distance of road = 36 space × 5m
= 180m

38) 15 horses = 30 days food
∴ 1 horse = 30 × 15 = 450 days food
6 horses = 450 ÷ 6 = 75 days of food.

39) Mean needed = 90
Total Score needed = 90 × 4 Test
= 360 marks
Marks made = 85 + 90 + 88 = 263 marks
Mark needed for Science = 360 – 263
= 97 marks

40) -One has no 90° angles
-One has 4-90° angles

-One has 1 line of symmetry
-One has 4 lines of symmetry

-One has 1 pair of parallel sides
-One has 2 pairs of parallel sides

-One has 2 equal sides
-One has 4 equal sides

SECTION 3

41) 15 Litres = 15 × 1,000 = 15,000cm^3
∴ Height = $\frac{15,000}{1,500}$/ Volume ÷ (L × W)
= 10cm
Height of water = $\frac{3}{5} \times \frac{10}{1}$ = 6cm
$\frac{3}{5}$ filled = $\frac{3}{5} \times \frac{15,000}{1}$ = 9,000cm^3
∴ Water needed to fill container
= 15,000 – 9000 = 6,000cm^3

42) Mangoes in bag = 600
Tom = 30% = $\frac{30}{100} = \frac{3}{10} \times \frac{600}{1}$
= 180 mangoes
Mangoes Left = 600 – 180 = 420
Jack received = 0.4 = $\frac{4}{10} \times \frac{420}{1}$
= 168 mangoes
Mangoes Left = 420 – 168 = 252
Heaps Made = 252 ÷ 6 = 42
Cost per heap = \$15
∴ Money Made = \$15 × 42 = \$630

TEST 9

43) No. of Rect. Faces = 3
No. of Triangular Faces = 2
No. of Edges = 9
No. of Vertices = 6

3 edges measure 60cm

44) The pattern follows that each new line Added has 1 more marble then the last Line of the previous pattern.

4^{th}	5^{th}	6^{th}	7^{th}	8^{th}
15	15+6	21+7	28+8	36+9
	21	28	36	45

45) Wed: 50 Tables × 6 = 300 Chairs

Fri. 40 Tables ÷ 6 = 240 Chairs

Mean No. of Tables
= 10 + 25 + 50 + 30 + 40 = 155÷5 = 31
Mean No. of Chairs
= 60 + 150 + 300 + 180 + 240 = 930 ÷ 5
= 186
Difference = 186 – 31 = 155

TEST 10

SECTION 1

1) 68,325 = (6 × 10,000) + (8 × 1,000) + (3 × 100) + (2 × 10) + (5 × 1)

2) 67

3) $\frac{75}{9} = 8\frac{3}{9} - 8\frac{1}{3}$

4) 9000 – 70 = 8,930

5) 8:00 a.m.
– :45 mins
7:15 a.m.

6) Mean = 9
Total = 9 × 6 = 54
54 + 30 = 84
New Mean = 84 ÷ 7 = 12

7) $26.65

8) 803 + 2□8 = 575 ; 803 – 575 = 228 ; □ = 2

9) 35.10 ÷ 5 = 7.02

10) 9630

11) Volume = 80,000cm^3
1,000cm^3 = 1 Litre
80,000 ÷ 1000 = 80 Litres

12) 13.6 + 7.9 + 25.4 + 11.1 = 58
Mean = 58 ÷ 4 = 14.5

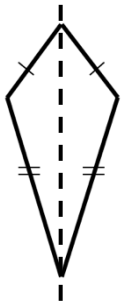
13) String A = 6.5cm
String B = 4.0cm
Total Length = 10.5cm ≈ 6cm

14) $6^3 \times 5 = 216 \times 5 = 1{,}080$

15) $\frac{5}{8}$ = 15 Litres
∴ Full = $\frac{8}{5} \times \frac{15}{1} = 24$

16) N × 4 = ? – 12 = 20
20 + 12 = 32
32 ÷ 4 = 8

17)



18) Equilateral Triangle

19) 6 faces, 12 edges and 8 vertices

20) Modal Height = 150cm

SECTION 2

21) N × 4 = ? ÷ 3 = 6 r 2
6 × 3 = 18
18 + 2 = 20
20 ÷ 4 = 5
N = 5

TEST 10

22) Frame of Cuboid:
4 × 15cm = 60cm
4 × 14cm = 56cm +
4 × 22cm = 88cm
Wire Needed = 204cm

Frame of Triangular Prism:
2 × 12cm = 24cm
4 × 9cm = 36cm +
3 × 20cm = 60cm
Wire Needed = 120cm

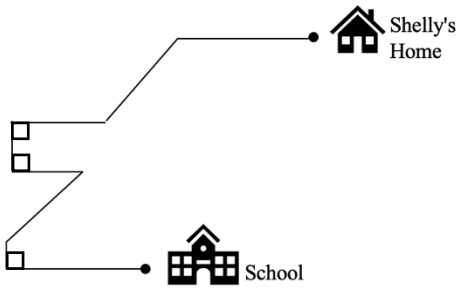
No. of Rolls Needed = 324cm ÷ 150cm
= 2 r 24cm
∴ 3 rolls of wire needed

23) Company X = 83 T.V.'s per day
Company Y = 67 T.V.'s per day
Together Total = 150 T.V.'s per day

3,450 T.V.'s ÷ 150 T.V.'s = 23 days

24) Area of Overlapping = 3cm × 6cm
= 18cm^2

25)



26) 5 Drinks = 5 × \$7 = \$ 35
5 Popcorn = 5 × \$15 = \$ 75 +
Already Spent = \$110
\$200.00 – \$6.90
= \$193.10 spent on snacks
\$193.10 – \$110.00
= \$83.10 still to spend
3 Nacho + Cheese = \$9.50 × 3 = \$28.50
6 Chocolate Bars = \$9.10 × 6 = \$54.60
\$83.10

27) $\frac{2}{3}$ distributed
∴ $\frac{1}{3}$ left
Lost = $\frac{5}{6} \times \frac{1}{3} = \frac{5}{18}$
Distributed + Lost = $\frac{2}{3} + \frac{5}{18}$
$= \frac{12}{18} + \frac{5}{18} = \frac{17}{18}$
Left in bag = $\frac{18}{18} - \frac{17}{18} = \frac{1}{18}$ = 8 marbles
Total No. of Marbles started with in bag 18 × 8 = 144 marbles

28) 16.896 ÷ 1.2 =

$$12 \overline{)\ 168.96}\quad 14.08$$

29) Area of 1 small Sq. = 3cm × 3cm = 9cm^2
Shape has 14 Sq. = 14 × 9cm^2
Area of Shape = 126cm^2

30) $6\frac{5}{12}$, $2\frac{5}{6}$, $1\frac{3}{4}$, $3\frac{1}{2}$

$\frac{5}{12} + \frac{10}{12} + \frac{9}{12} + \frac{6}{12}$
$= \frac{24}{12}$
$6\frac{5}{12}, + 2\frac{10}{12}, + 1\frac{9}{12} = 9\frac{24}{12} = 11$
Ans: $6\frac{5}{12}$, $2\frac{5}{6}$ and $1\frac{3}{4}$

31) 6.5kg potatoes @ \$4.50 per kg = \$ 29.25
$2\frac{1}{2}$kg tomatoes @ \$12.00 per kg = \$ 30.00
7.35kg onions @ \$5 per kg = \$ 36.75
Total = \$ 96.00
$12\frac{1}{2}$% V.A.T. = \$ 12.00
\$108.00

Change = \$120,00 – \$108.00
= \$12.00

TEST 10

32) Peri. Of Rect. = (L + W) × 2
= (25cm + 15cm) × 2
= 40cm × 2 = 80cm
Peri. Of Sq. = 80cm
Side = 80cm ÷ 4 = 20cm
Area of Sq. = 20cm × 20cm = $400cm^2$

33) 3 notebooks + 2 pens = \$90
4 notebooks + 2 pens = \$100
∴ 1 notebook = \$100 – \$90 = \$10
1 pen = (\$90 – \$30) ÷ 2
= \$60 ÷ 2 = \$30

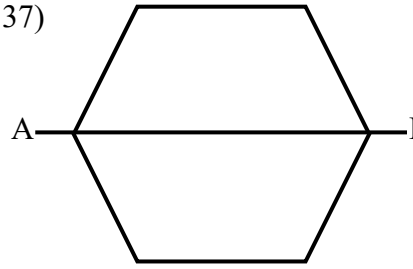
5 notebooks = \$10 × 5 = \$ 50
3 pens = \$30 × 3 = \$ 90
Total = \$140
Calculate for 1 notebook as shown above And for 1 pen as shown above. Take the price of one and multiply it by the amount needed.

34) Differences
(i) Shape R – All sides are equal/
Shape Q – Adjacent Sides Equal
(ii) Shape R – 2 pairs of parallel sides
Shape Q – no parallel sides.

35) Mean = 65 marks
Total = 65 × 5 = 325 marks
New Mean = 65 + 5 = 70
New Total = 70 × 6 = 420 marks
Marks needed = 420 – 325 = 95 marks

36) No. of hours parked from 9:23a.m. to 1:45p.m. = 4 hours 22 mins
4 hrs. 22 mins. = 5 hours payment
= 5 × \$6.50
= \$32.50

37)



Hexagon

38) 9 drawings × 5 cars = 45 cars
∴ Ford = 55 – 45 = 10 cars
10 cars ÷ 5 = 2 drawings for Ford

39) V.A.T. = $12\frac{1}{2}\% = \frac{1}{8}$
∴ \$4,500 VAT inclusive = $\frac{8}{8} + \frac{1}{8} = \frac{9}{8}$
Dis. Price = $\frac{8}{9} \times \frac{4,500}{1}$ = \$4,000

\$4,000 + \$1,000 = \$5,000 Original Price

40) Isabelle won the prize
She sold = 100 boxes – 10 unsold boxes
= 90 boxes

TEST 10

SECTION 3

41) 2 doz. Sweet pepper = 2 × 12
= 24 s.p. seedlings
4 doz. Lettuce = 4 × 12
= 48 lettuce seedlings
Total Cost of S.P. and Lett. = $120
6 S.P. seedling = $18
∴ 1 S.P. seedling = $18 ÷ 6
= $3 per seedling

Original purchase 24 S.P. + 48 lettuce = $120
(24 × $3) + 48 lettuce = $120
$72 + 48 lettuce = $120
48 lettuce = $120 – $72
48 lettuce = $48
∴ 1 lettuce = $48 ÷ 48 = $1

Already Spent = $120 + $18
= $138
Add 12 S.P. = 12 × $3 = $ 36
Add 24 lettuce = 24 × $1 = $ 24
New Total $198

42) Varun – 3 incorrect
∴ Corr. = 80 – 3 = $\frac{77}{80} \times \frac{100}{1}$ = 96.25%
Jaden – 5 incorrect
∴ Corr. = 80 – 5 = $\frac{75}{80} \times \frac{100}{1}$ = 93.75%
Omg – 4 incorrect
∴ Corr. = 80 – 4 = $\frac{76}{80} \times \frac{100}{1}$ = 95%

Varun made a total of 77 correctly Spelt which is $\frac{77}{80}$ multiply by 100 to Calculate a percentage of 96.25% so he Made greater then 95% which qualifies Him for the next Spelling Bee rounds.

43) Area of Floor = L × W = 23m × 18m
= 414m^2
Area of Workstations = 65m^2 × 2
= 130m^2
Area to be tiled = 414m^2 – 130m^2
= 284m^2
Area of tiles to be used = 0.3m × 0.3m
= 0.09m^2
No. of tiles needed = 3,155$\frac{1}{2}$ = 3,156 tiles
11 tiles per box
∴ No. of boxes = 3,156 ÷ 11
= 286 r 10 tiles
= 286 + 1 extra box
= 287 boxes of tiles

44) Mean Age = 11 years 1 month
× 5
55 years 5 months

Nick = 55 yrs. 5 mths. – (11yr. 3mths. + 10yr. 9mths. + 10yr. 7mths. + 11yr. 7mths.)
= 55 yrs. 5 mths. – 44 yrs. 2 mths.
= 11 yrs. 3 mths.

Modal Age = 11yrs. 3 mths.

45)

	Edges	Faces	Vertices
Cylinder	2	3	0
Sq. Based Pyramid	8	5	5
Triangular Prism	9	5	6
Cuboid	12	6	8

TEST 11

SECTION 1

1) 8,059,307.26

2) 5

3) $2\frac{5}{8} = \frac{21}{8}$

4) Perimeter = 8 + 2 + 4 + 5 + 4 + 7 = 30cm

5)
$$\begin{array}{r} 3{,}241 \\ \times \quad 24 \\ \hline 64{,}820 \\ 12{,}9\mathbf{6}4 \\ \hline 77{,}7\mathbf{8}4 \end{array}$$

6) Pentagon

7) 1.4 × 1.2 = 1.68

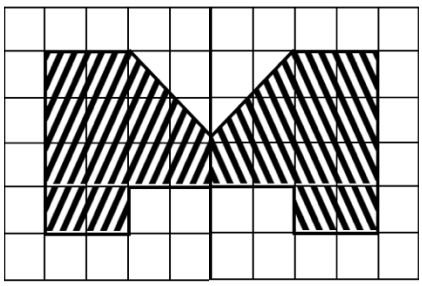
8) 26 × 16

9) √36 + 3

10) $12\frac{1}{4} \div 3\frac{1}{2} = \frac{49}{4} \times \frac{2}{7} = \frac{7}{2} = 3\frac{1}{2}$

11) Box A = 25 Chocolates
Box B = 25 × 3 = 75 Chocolates
Boxes A + B = 25 + 75
= 100 Chocolates

12)
	hrs.	mins.
	6	12
–	3	56
	2	16

13) 

14) Peri of Sq. = 36cm
1 side = 36cm ÷ 4 = 9cm
Area of Sq. = S × S = 9 × 9 = 81cm^2

15) 13 × 19 = 247 + 9 = 256

16) Modal Age = 10yrs. 6mths.

17) Volume of Cube = S × S × S
= 2cm × 2cm × 2cm
= 8cm^3
No. of Cubes in Model = 9 cubes
Volume of Model = 9 × 8cm^3 = 72cm^3

18) Mean = 72
Total = 72 × 5 = 360
New Mean = 85
New Total = 85 × 6 = 510
Number added = 510 – 360 = 150

19) 3-90° turns anti-clockwise

20) Pupils in class = 29

SECTION 2

21) $33\frac{1}{3}\% = \frac{1}{3}$
6 doz. = 12 × 6 = 72 eggs
Spoilt = $\frac{1}{3} \times \frac{72}{1}$ = 24 eggs

Eggs Left = 48 eggs
Recipe = $\frac{5}{12} \times \frac{48}{1}$ = 20 eggs
Eggs Left = 48 – 20 = 28 eggs
Fraction of Eggs Left = $\frac{28}{72} = \frac{7}{18}$

22) 3.25 × 1.2 = 3.9 ≈ 4

TEST 11

23) Area of Base of tank = $400cm^2$
∴ Volume = $400 \times 20 = 8{,}000cm^3$
Volume $\frac{2}{5}$ filled = $\frac{2}{5} \times \frac{8{,}000}{1} = 3{,}200cm^3$
$1000cm^3$ = 1 Litres
3,200 ÷ 1000 = 3.2 Litres of water

24) Money earned 1-week Mon. to Sun.
= \$2,020
Saturday Overtime = 7hrs × \$60 per hr.
= \$420
∴ Regular Time Pay = \$2,020 – \$420
= \$1,600
Weekly Hours Worked = 8hrs × 5 days
= 40 hrs
Rate of Regular Hrs. = \$1,600 ÷ 40hrs
= \$40 per hour.

25) Model A Volume = $1{,}920cm^3$
No. of Cubes = 30
Vol. of 1 Cube = $1{,}920cm^3 \div 30 = 64cm^3$
1 side Cube = $\sqrt[3]{64} = 4cm$
Height of Model A = 4cm × 4 = 16cm

Model B Volume = $1{,}152cm^3$
No. of Cubes = 18
Vol. of 1 Cube = $1{,}152 \div 18 = 64cm^3$
1 side Cube = $\sqrt[3]{64} = 4cm$
Height of Model B = 4cm × 3 = 12cm

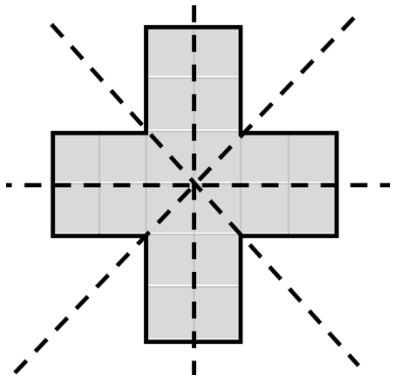
Difference in the height between model A and model B = 16cm – 12cm = 4cm

26) Drama = 18 – 6 = 12 people
People Left = 75 – (18 + 12) = 75 – 30
= 45 people
Romance = $\frac{3}{5} \times \frac{45}{1}$ = 27 people
People Left = 45 – 27 = 18 people
Comedy = 0.33 = $\frac{1}{3} \times \frac{18}{1}$ = 6 people
Crime = 18 – 6 = 12 people

27) 80 cupcakes × \$2 = \$160
80 cupcakes ÷ 2 = 40 containers
Profit made = \$80
∴ Sale of Cupcakes = \$160 + \$80
= \$240
1 Container = \$240 ÷ 40 = \$6

28) 4 pieces string = 70cm
1st piece string = 23cm
2nd piece string = 8cm
3rd piece string = 5cm + 8cm = 13cm
4th piece string = 23cm + 3cm = 26cm
Length of string left = 70cm – (23 + 26)
= 70cm – 49cm
= 21cm
21cm – 5cm (for piece 3) = 16cm
16cm ÷ 2 pieces = 8cm

29)



30) 284 × 35

Paul can break the multiplier into 30 and 5. He will then multiply 234 × 30 and 234 × 5. He will add the product of both Multiplication sums and the total will be The answer of 234 × 35.

31) No. of Pupils scoring more than modal Score of 75 = 6 pupils
∴ $\frac{6}{15} \times \frac{100}{1}$ = 40%

TEST 11

32) Box = 900 toys
Children 4-9 yrs. = $\frac{4}{5} \times \frac{900}{1}$ = 720 toys

Babies = 900 – 720 – 180 toys
Boy (children 4-9 yrs.) = 0.4 = $\frac{4}{10} \times \frac{720}{1}$
= 288 toys
Girls (children 4-9 yrs.) = 720 – 288
= 432 toys
Girls = 6 ages groups = 432 toys
No. of Toys per group = 432÷6 = 72 toys

33)

4	**9**	**2**
3	5	**7**
8	1	6

34) 15^{+6}, 21^{-3}, 18^{+6}, 24^{-3}, 21^{+6}, 27^{-3}, 24^{+6}, **$\underline{30^{-3}}$**

35) 3 tokens bought + 1 free = 4 tokens
36 tokens ÷ 4 = 9 purchases made
9 × 3 tokens = 27 tokens × \$6 = \$162

36) 100m – (15.75m + 20.75m)
100m – 36.5m = 63.5m between the two runners.

37) Chance = 72 stamps
= $\frac{8}{12}$ of Daniel's stamps
Daniel = $\frac{12}{8} \times \frac{72}{1}$ = 108 stamps

Chance + Daniel
= 72 stamps + 108 stamps = 180 stamps

38) Mean = 200 toys
∴ Total = 200 toys × 4mths = 800 toys

Missing bar for October
= 800 – (75 + 250 + 400)
= 800 – 725 = 75

December may have the highest number Of sales because Christmas is in that month.

39)

40)

Solid	Number of Vertices	Number of Faces	Number of Edges
Triangular-Based Pyramid	**4**	**4**	**6**
Cone	**1**	**2**	**1**
Triangular Prism	**6**	**5**	**9**

SECTION 3

41) Rotten Oranges = $\frac{1}{5}$
Orange Juice = $\frac{2}{3} \times \frac{4}{5} = \frac{8}{15}$
∴ $\frac{8}{15}$ = 32 oranges
Oranges Purchased = $\frac{15}{8} \times \frac{32}{1}$
= 60 oranges

TEST 11

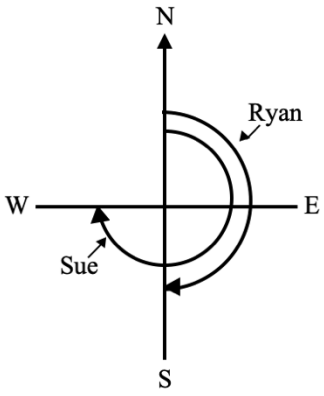
42) 322×24
322×34

Marsha multiplied using a multiplier that was 10 more than the correct multiplier. She can multiply 322 by 10 and then subtract her answer by the product of 322×4.

322	322	322
× 34	× 24	× 10
10,948	7,728	3,220

$$\begin{array}{r} 10{,}948 \\ -\ 3{,}220 \\ \hline 7{,}728 \end{array}$$

43)



After the 4th turn they will both be facing North.

44) Mean = 80 marks
Total = $80 \times 4 = 320$ marks
New Mean = $80 - 3 = 77$
New Total = $77 \times 5 = 385$
Creative Writing = $385 - 320 = 65$ marks

Science = $85 + 10 = 95$ marks
Lang. Arts and Soc. Studies
$= 320 - (85 + 95)$
$= 320 - 180 = 140$
Lang. Arts = $140 \div 2 = 70$ marks
Soc. Studies = 70 marks

45) Vol. of Cuboid = L × W × H
$= 60\text{cm} \times 50\text{cm} \times 40\text{cm} = 120{,}000\text{cm}^3$
Vol. of Tank = $\frac{7}{8} \times \frac{120{,}000}{1} = 105{,}000\text{cm}^3$

Angel Fish = 500cm^3
Guppy = $500\text{cm}^3 \div 2 = 250\text{cm}^3$
Volume needed for both fishes
$= 500\text{cm}^3 + 250\text{cm}^3 = 750\text{cm}^3$
No. of Fishes in tank = $105{,}000\text{cm}^3 \div 750$
= 140 of each fish
Maximum Guppy = 140
Maximum Molly = 140

TEST 12

SECTION 1

1) 203 056

2) If x is Odd, then x + 3 = even

3) $\frac{79}{100} = 0.79$

4) Perimeter of rectangle = 46cm
Width = 8cm
∴ 2 Length = 46 – (8 × 2)
= 46 – 16 = 30
Length = 30 ÷ 2 = 15cm

5) 39.26 – 7.68 = 31.58

6) 64.37 ≈ 64.4

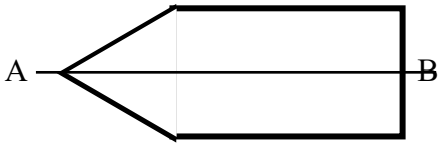
7) Triangular Prism

8) 9205

9) $11\frac{2}{5} = \frac{57}{5}$

10) Area of 1 Square = 2cm × 2cm = $4cm^2$
Area of Shape = 8 Sq. × $4cm^2$ = $32cm^2$

11)



12) $(2^2 \times 3) \div (8 - 2^2) = (4 \times 3) \div (8 - 4)$
= 3

13) $6\frac{2}{3} \div 2\frac{1}{6} = \frac{20}{3} \times \frac{6}{13} = 3\frac{1}{13}$

14) 42 – 19 = 23
23 + 36 = 59 stickers

15) 250 × 6 =1,500g
∴ 1 tin = 1,500 ÷ 4 = 375g

16) Mean = 35
Total = 35 × 7 = 245
Mean = 26
Total = 26 × 2 = 52
Old Total 245 + Additional Total 52 = 297
New mean = 297 ÷ 9 = 33

17) 48 ÷ 6 = 8
□ = 8
Tyler = 8 × 3 = 24

18) Length of Large Sq. = 15cm
Length of Small Sq. = 15cm ÷ 2 = 7.5cm
Peri. Of Small Sq. = 7.5 cm × 4 = 30cm

19) Modal = Football = 30
30 – 10 = 20 = ☺☺☺☺ = Cricket

20) A

SECTION 2

21) Rotten = 40%
Good = 60%
Green = $\frac{1}{4}$ of 60% = $\frac{1}{4} \times \frac{60}{1}$ = 15%
Rotten + Green = 40% + 15% = 55%
∴ Ripe = 100% – 55% = 45% = 72 plums
Orange bought = $\frac{100}{45} \times \frac{72}{1}$ = 160 oranges

22) Monthly Instal. = $1,550
Total Repaid = $1,550 × 24 = $37,200
S.I = $37,200 – $30,000 = $7,200
Rate = $\frac{S.I. \times 100}{P \times T} = \frac{\$7,200 \times 100}{\$30,000 \times 2}$ = 12%

TEST 12

23) Store A = Dis. 20 %

∴ Sale Price = 80% of \$1,600 + $12\frac{1}{2}$% VAT

$= \frac{80}{100} \times 1{,}600 = \$1{,}280$

VAT $12\frac{1}{2}\% = \frac{1}{8} \times \frac{\$1{,}280}{1} = \$160$

Total Price = \$1,280 + \$160

= \$1,440

Store B = 40% Dis.

∴ Sale Price = 60% of \$1,800 + $12\frac{1}{2}$% VAT

$= \frac{60}{100} \times \frac{\$1{,}800}{1} = \$1{,}080$

VAT $12\frac{1}{2}\% = \frac{1}{8} \times \frac{\$1{,}080}{1} = \$135$

Total Price = \$1,080 + \$135

= \$1,215

Better Offer at Store B

24) No, if the denominators are different then the parts are not equal in size. To add fractions we need to make each fraction the same size so we can add the pieces.

e.g. $\frac{1}{2} + \frac{1}{4} / \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$

so $\frac{1}{2} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$

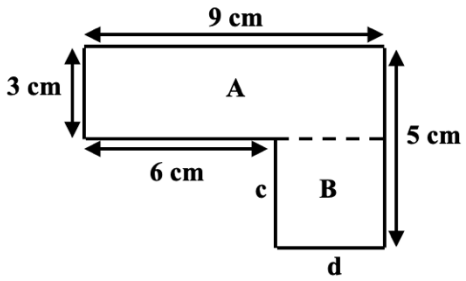
25) 2:05 = 12:00 + 2:05 = 14:05

Trip $2\frac{4}{5}$ hr = 2:48 –

11:17 + 15 min

= 11:32 a.m.

26)



c = 5cm – 3cm = 2cm

d = 9cm – 6cm = 3cm

Area of A = L×W = 9cm × 3cm = $27cm^2$

Area of B = L×W = 2cm × 3cm = $6cm^2$

Total Area = $27cm^2 + 6cm^2 = 33cm^2$

27) Start of Concert = 1,529 people

After 1 hour = 314 people left

New Amt. 1,215 people

Men = x

Women = 4x

∴ 5x = 1,215

x = 1,215 ÷ 5 = 243

Men = 243 Women = 243 × 4 = 972

28) Pentagon Quadrilateral

29) 6 hrs. = 426 pages

∴ 1 hr = 426 ÷ 6 = 71 pages

$\frac{3}{10}$ = 426 pages

∴ Full book = $\frac{10}{3} \times \frac{426}{1}$ = 1,420 pages

Pages left = 1,420 426 = 994 pages

71 pages = 1 hr

∴ 994 ÷ 71 = 14 hours

Time to read entire book = 14hrs + 6hrs

= 20hrs

30)

	No. of Faces	No. of Edges	No. of Vertices
Cube	6	12	8
Cylinder	3	2	0
Sq. Based Pyramid	5	8	5
Tr. Prism	5	9	6
Cone	2	1	1

Cube, Cylinder and Square Based Pyramid

31)

kg	**g**
6	000
+ 2	650
8	300
16	950 = 16,950g ÷ 3 = 5,650g

= 5.650kg

Chef A = 6.000kg – 5.650kg = 0.350kg

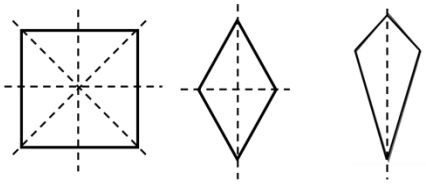
Chef C = 8.300kg – 5.650kg = 2.650kg

Total Weight = 3.000kg

TEST 12

32) $10\frac{1}{2} \times \frac{1}{4} = \frac{21}{2} \times \frac{4}{1}$ = 42 T-shirts given out
∴ Football = 64 – 42 = 22 T-shirts
No. of Drawings = 22 ÷ 4 = $5\frac{1}{2}$ T-shirts

Modal Sport = Football

33) 

34) Ashley = x
Mel = 3x
Total Sold = 120 boxes
4x = 120
x = 120 ÷ 4 = 30
Mel = 30 × 3 = 90 boxes

35) Kyle = 21.64 sec. → 4th
Ryan = 21.06 sec. → 1st
Peter = 21.36 sec. → 2nd
Kirk = 21.57 sec. → 3rd

Peter cam second in the race

36) Stuff Toys = 45 animals
Gave Away = 9
Left = 45 – 9 = 36
$\frac{36\div9}{45\div9} = \frac{4\times20}{5\times20} = \frac{80}{100}$ = 0.8 toys left

37) Cherry = 21
Drawing for Cherry = $3\frac{1}{2}$ figures
∴ 1 figure = $\frac{21}{1} \div 3\frac{1}{2} = \frac{21}{1} \times \frac{2}{7}$ = 6 per figure

16 Drawings = 16 × 6 = 96 persons
Chocolate = 120 – 96 = 24
Drawings = 24 ÷ 6 = 4 figures

38) 12 × \$20 = \$240
18 × \$5 = \$ 90 +
7 × \$10 = \$ 70
Total = \$400

$12\frac{1}{2}$% V.A.T. = $\frac{1}{8} \times \frac{400}{1}$ = \$50
He needs \$50

39) Dis. = 10%
Sale Price = 90% of \$320 = $\frac{90}{100} \times \frac{\$320}{1}$
= \$288
2nd Dis. = 10%
Sale Price = 90% of \$288 = $\frac{90}{100} \times \frac{\$288}{1}$
= \$259.20
$12\frac{1}{2}$% V.A.T. = $\frac{1}{8} \times \frac{\$259.20}{1}$ = \$32.40
Price of Shirt V.A.T. inclusive
= \$259.20 + \$32.40 = \$291.60

40) Over 60% = Pass
Students in class = 3 + 7 + 5 + 3 + 1 + 7 + 4
= 30 pupils
Over 60% = 1 + 7 + 4 = 12 pupils
Under 60% = 30 – 12 = 18 pupils
Fraction Failing Maths = $\frac{18}{30} = \frac{9}{15} = \frac{3}{5}$ of class

TEST 12

SECTION 3

41) Plan A

325 mins @ .55c per min = $178.75
175 mins @ .35c per min = $ 61.25 +
66 msgs. @ $1.00 per msg. = $ 66.00
Sub Total $306.00

$12\frac{1}{2}$% V.A.T. = $\frac{1}{8} \times \frac{\$306.00}{1}$ = $38.25

Total Bill = $306.00 + $38.25 = $344.25

Plan B

325 mins @ .65c per min = $211.25
175 mins @ .15c per min = $ 26.25 +
66 msgs. @ .65c per msg. = $ 42.90
Sub Total $280.40

$12\frac{1}{2}$% V.A.T. = $\frac{1}{8} \times \frac{\$280.40}{1}$ = $35.05

Total Bill = $280.40 + $35.05 = $315.45

Plan B is cheaper by $344.35 – $315.45
= $28.80

42) Blue Jean = 15%
Flamingo = 25% = $\frac{1}{4}$
Hum. Bird = 20%
Egret = 25% = 0.25

12 pupils left = 15%
(10% Blue Jean + 5% H.B.)

All Pupils = $\frac{100}{15} \times \frac{12}{1}$ = 80 pupils

Blue Jean = 10% needed = $\frac{10}{100} \times 80$
= 8 pupils

Hum. Bird = 5% needed = $\frac{5}{100} \times \frac{80}{1}$
= 4 pupils

43) Vol. of 1 cube of 3cm × 3cm × 3cm
= 27cm^3
Model A = 14 cubes × 27cm^3 = 378cm^3
Model B = 44 cubes × 27cm^3 = 1,188cm^3
Difference in Vol. of Models
= 1,188cm^3 – 378cm^3 = 810cm^3

44) Area of 1 Desk = 16m^2
∴ Area of 9 Desks = 16m^2 × 9 = 144m^2
Area of Sq. Made by Desk = 16m × 16m
= 256m^2
Area of Walkway between desk
= 256m^2 – 144m^2 = 112m^2

45)

T.V. =	3hrs	30 mins
Reading =		27 mins
Playing =	2hrs	25 mins
Bath etc. =	1hr	30 mins
	6hrs	112 mins
	7hrs	52 mins

112 mins – 60 mins

12 hrs – 7 hrs 52 mins = 4hrs 08 mins
∴ 4 hrs. 08 mins ÷ 2 = 2 hrs. 04 mins.

Comp. Games = 2 hrs 4 mins
Online Lessons = 2 hrs 4 mins

TEST 13

SECTION 1

1) 403,926
Four Hundred and three thousand, nine Hundred and twenty-six

2) 357

3) $\frac{3}{100} = 0.03$

4) 3629
$-\ \underline{2981}$
$\underline{\ 648}$

5) 2.12, 2.10, 2.01, 0.21

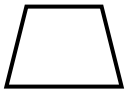
6) 6 × \$100 = \$600.00
3 × \$20 = \$ 60.00
5 × \$5 = \$ 25.00
6 × .25 = \$ 1.50
\$686.50

7) $6^3 \div 4 = (6 \times 6 \times 6) \div 4 = 216 \div 4 = 54$

8) $\frac{5}{7} = 45$
$\therefore \frac{7}{5} \times \frac{45}{1} = 63$

9) 10 apple pies $\div 8 = \frac{10}{1} \div \frac{8}{1}$
$= \frac{10}{1} \times \frac{1}{8} = \frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$

10) $6\overline{)6186}$ 1031

11) Trapezium 

12) $4.125 \div 2.50 = 4125g \div 250 = 16\frac{1}{2}$
= 16 completely full bottles

13) Greg – 2mins 45 seconds

14) Cylinder

15) Length = 15cm
$\therefore W = \frac{1}{3} \times \frac{15}{1} = 5$
Area of rectangle = 15 × 5 = 75cm^2

16) 3-90° angles

17) Mean = (35 + 26 + 42 + 43 + 24 + 40) ÷ 6
= 210 ÷ 6 = 35 runs

18) 8:05
$-\ \underline{7:13}$
$\underline{0:52}$
Journey from home to school = 52 mins

19)

Transport	Tally	Frequency
Bus	||||	4
Taxi	𝍸 |	6
Walk	𝍸	5
Private Car	𝍸 ||||	9
		24

Private Car = 24 – (4 + 6 + 5)
= 24 – 15 = 9

20) Volume of Cube = 9cm × 9cm × 9cm
= 729cm^3

SECTION 2

21) Area of Square = 81cm^2
$\therefore$ 1 side = $\sqrt{81}$ = 9cm

Length of Rect. = 9cm × 2 = 18cm
Width of Rect. = 9cm ÷ 2 = 4.5cm
Perimeter of Rect. = (18 + 4.5) × 2
= 22.5 × 2 = 45cm

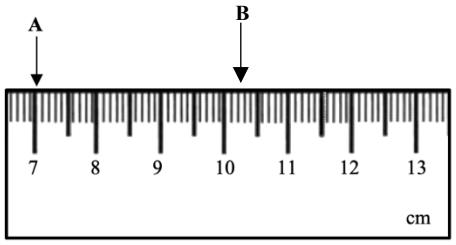
TEST 13

22) Karen = 648 stickers
Pam = 648 – 36 = 612 stickers
Karen + Pam = 648 + 612 = 1,260 stickers
Sue $\frac{2}{3} \times \frac{1,260}{1} = 840$
Total Stickers = 1,260 + 840 = 2,100

23)

Name of Solid	No. of Edges	No. of Flat Faces	No. of Vertices
Triangular Based Pyramid	6	4	4
Cuboid	12	6	8
Triangular Prism	9	5	6

24)



25) 9 Boxes = 139.5cm
1 Box = 139.5 ÷ 9 = 15.5cm in height
6 Boxes = 15.5 × 6 = 93cm

26) Working backwards – 18 +12 = 30
30 × 4 = 120
120 ÷ 8 = 15
Answer: 15

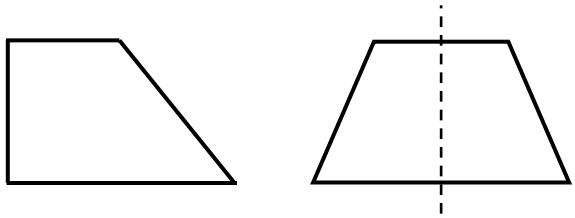
27) Vol. of 1 Cube = 2 × 2 × 2 = 8cm^3
Vol. of Shape = 42 cubes × 8 = 336cm^3

28) Boys = $\frac{2}{5}$ slices
Left = $\frac{5}{5} - \frac{2}{5} = \frac{3}{5}$
Girls = $33\frac{1}{3}\% = \frac{1}{3}$ of $\frac{3}{5} = \frac{1}{5}$
Total Eaten by Boys + Girls = $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$
∴ Adults = = $\frac{5}{5} - \frac{3}{5} = \frac{3}{5} = 8$ Slices
Total No. of Slices = = $\frac{5}{2} \times \frac{8}{1} = 20$ Slices
Children at Party = 20 – 8 = 12 children

29)

Item	Cost Per Portion	Quantity	Cost
Fried Rice	$60.00	2 Portions	$120.00
Chinese Chicken	$110.00	$1\frac{1}{4}$ Portions	$137.50
Chow Mein	$80.00	$\frac{1}{2}$ Portion	$40.00
Pepper Shrimp	$205.00	$\frac{1}{2}$ Portion	$102.50
		Total	$400.00
		V.A.T. $12\frac{1}{2}\%$	$50.00
		Total Bill	$450.00

30)

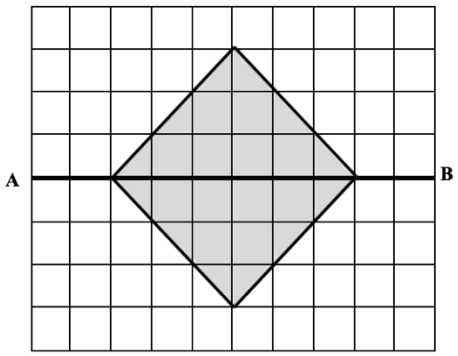


31) Cash Price = $3,500.00
Hire Purchase = $500 D/Payment
12 Instal = $300 × 12 = $3,600
Total Hire Purchase = $500 + $3,600
= $4,100
Savings = H.P – C.P = $4,100 – $3,500
= $600
She would save $600 if she bought it at the Cash Price

32) Mean = 75 runs
Total = 75 × 2 = 150 runs
New Mean = 50
∴ New Total = 50 × 3 = 150 runs
3rd Score Added = 150 – 150 = 0 runs

TEST 13

33)



Square

34) 1 model = 478 sticks
6 models = 478 × 6 = 2,868 sticks needed

1 bag = 475 sticks
6 bags = 2,850 sticks bought

2,868 – 2,850 = 18 sticks short

No, John needed to buy 1 more bag of sticks so that the group would have the remaining 18 sticks needed to complete the 6 models

35) Tyler = $ 7.00
Grandmother = $ 8.00 +
Total Saved = $15.00 each time

Amount Saved = $135.00
No. of times saved = $135 ÷ 15 = 9 times

Grandmother's contribution = $8 × 9
= $72

36)

Transport	Tally	Frequency	Total Points
1	𝍸 ||||	9	9
2	||	2	4
3	𝍸 𝍸	10	30
4	||||	4	16
		Total Points	59

Modal Colour Green

37) 1st pair of shoes = $360
Discount 15% = $\frac{15}{100} \times \frac{360}{1}$ = $54 off
Sale Price = $320 – $54 = $266

2nd pair of shows $400
Discount 20% = $\frac{20}{100} \times \frac{400}{1}$ = $84 off
Sale Price = $400 – $80 = $320

Total Bill less V.A.T. = $306 + $320
= $626
V.A.T. = $\frac{1}{8} \times \frac{\$626}{1}$ = $78.25
V.A.T. inclusive Bill = $626 + $78.25
= $704.25

38) Seats In Hall = 540
54% = Unoccupied
100% – 15% = 85% = Occupied
People Seated = $\frac{85}{100} \times \frac{540}{1}$ = 459 people

39) Rajiv = 126 plants
Ben = 126 – 32 = 94 plants
Mikhail = 94 – 17 = 77 plants
Total plants = 126 + 94 + 77 = 297 plants
Mean =. 297 ÷ 3 = 99 plants

40) 8, 4, 0 and 3
3,048

SECTION 3

41) $1 US = $7 T.T.
∴ US for $4550 T.T. = $4550 ÷ 7
= $650 US

Check Out Tue. 12th
Mon. 11th = $100 US
Sun. 10th = $150 US
Sat. 9th = $150 US
Fri. 8th = $150 US
Thur. 7th = $100 US
Checked in on Thurs. 7th

TEST 13

42) Arrival Time = 12:45p.m.
Time Spent In. Arima = 2hrs. 15mins
Departure Time = Hrs. Mins.

+	12	45
	2	15
	15 :	00

15:00 – 12:00 = 3:00p.m.

Journey Home
= Time Arrived Home – Departure Time
= 5:05
– 3:00
2:05 = 2hrs. 5 mins.

∴ Journey To Arima = 2hrs 5mins + 25 mins
= 2hrs 30mins

Departure Time From Home
= Arr. Time To Arima – Length of Journey

Hrs.	Mins.
12	45
– 2	30
10 :	15 a.m.

43) S.I = $\frac{P \times R \times T}{100} = \frac{\$15{,}000 \times 12 \times 5}{100}$ = \$9,000

Amt. To Repay = \$15,000 + \$9,000
= \$24,000
5 years = \$24,000 to repay

∴ 1 year = \$24,000 ÷ 5 = \$4,800
36 payments = 3 yrs. × \$4,800
= \$14,400 paid back

Remaining Bal. = \$24,000 – \$14,400
= \$9,600
Pay Off Bal. = \$9,600

44) Area of Sq. = S × S = 8 × 8 = 64cm^2
Tri. S = $\frac{1}{4}$ Area of Sq.
= $\frac{1}{4} \times \frac{64}{1}$ = 16cm^2

Triangle S is an Isosceles Triangle. The lines in the Square that represent 2 sides of Triangle S are part of the 2 diagonal lines of symmetry for the square. This makes triangle S $\frac{1}{4}$ of the square. The area of Triangle S will therefore be $\frac{1}{4}$ the area of the square.

45) Mean = \$80
Total = \$80 × 4 weeks = \$320
Missing Bar Week 3
= \$320 – (\$80 + \$80 + \$90)
= \$320 – \$250 = \$70

Percent Saved in Weeks 3 + 4 = \$70 + \$90
= $\frac{\$160}{\$320} \times \frac{100}{1}$ = 50

TEST 14

SECTION 1

1) 3,130.78 = $\frac{8}{100}$

2) 7518 ≈ 7500

3) 180 – 65 = 40 + 75

4) 9^{+5}, 14^{+6}, 20^{+7}, $\mathbf{27^{+8}}$, 35^{+9}, 44

5) 0.75 = $\frac{75}{100} = \frac{3}{4}$

$\frac{3}{4} \times \frac{280}{1} = 210$

6) $\frac{5}{12} + \frac{1\times4}{3\times4} = \frac{5}{12} + \frac{4}{12} = \frac{9}{12}$

$\frac{12}{12} - \frac{9}{12} = \frac{3\div3}{12\div3} = \frac{1}{4}$ juice left in carton

7) Bob = 2 × $5 = $10.00
3 × 10c = $00.30 +
$10.30

Terry = 1 × $10 = $10.00
2 × 25c = $00.50 +
$10.50

Total = $10.30
+ $10.50
$20.80

8)
$$\begin{array}{r} 358 \\ \times\ 19 \\ \hline 3580 \\ +\,3222 \\ \hline 6802 \end{array}$$

9) Bill = $18.75
∴ Change = $20.00
– $18.75
$ 1.25 ÷ .25 = 5 (25c coins)

10)
$$\begin{array}{r} 2025 \\ +\ 7\square6 \\ \hline 2811 \end{array} \qquad \begin{array}{r} 2811 \\ -\ 2025 \\ \hline 786 \end{array} \qquad \square = 8$$

11) Perimeter = 16 sides of small sq. × 2cm
= 32cm

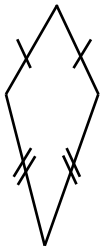
12) 7 apples = 1kg 400g = 1400g
∴ 1 apple = 1400 ÷ 7 = 200g
To balance scale to read 1kg/1000g
1400g – 1000g = 400g removed
400 ÷ 200 = 2 apples

13) 18 days

14) 2,450ml ÷ 1000 = 2.450 litres

15) Faces = 5
Vertices = + 6
Total = 11

16)



17) 3

18) Language 𝍸 5

19) Modal = Action Movies

20) Mean = 4 + 8 + 5 + 3 + 6 + 4 = 30 ÷ 6 = 5
Jerry = 5

TEST 14

SECTION 2

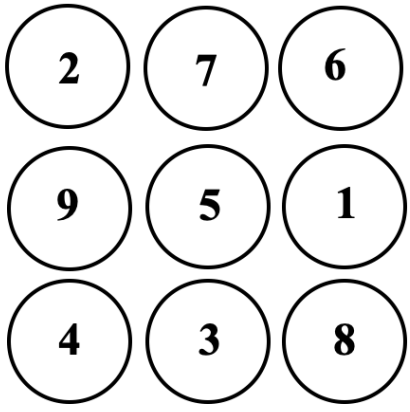
21) Oranges + Grapefruits = 360
Oranges = 3x
Grapefruits = x
Total = 3x + x = 4x = 360
x = 360 ÷ 4 = 90
Oranges = 90 × 3 = 270 oranges

22) Mean Time = 16.5
14.9
17.3
16.9
14.4
80.0 ÷ 5 = 16 seconds

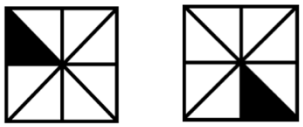
23) Total Avocadoes = 428
1 Box = 15 Avocadoes
No. of boxes = 428 ÷ 15 = 28 full boxes
+ 1 extra box for the 8 extra Avocadoes.
Total boxes = 28 +1 = 29

24) Concert starts at 7:00 p.m.
First Part of Concert + 55 mins
7:55 p.m.
Intermission = 15 mins
$7^{+1}:(70)^{-60}$
8:10 p.m.
Second Part of Concert + 1:20
Concert Ended 9:30 p.m.

25)



26)



4th 5th

The pattern is: Skip 1, colour. Skip 2, Colour. Skip 3, colour. You keep adding 1 extra to skip and then colour the next triangle.

27) 12 spaces = 360°
∴ 1 space = 360° ÷ 12 = 30°
Movement from 8 to 5 anti-clockwise
= 9 spaces = 9 × 30° = 270°
No. of 90° = 270° ÷ 90° = 3

28) 8 of Triangle Q will Cover the Sq.

Area of Sq. = 4 blocks × 4 blocks
= 16 blocks
Area of Tri. = 2 blocks
No. of Tri. = 16 ÷ 2 – 8

29) Vehicles Parked = 125
Car = $\frac{2}{5} \times \frac{125}{1} = 50$
Remaining Vehicles = 125 – 50 = 75
Pick-Ups = 20% of 75 = $\frac{20}{100} \times \frac{75}{1} = 15$
SUV = 75 – 15 = 60
Decimal Fraction to represent SUV:
$\frac{60 \div 5}{125 \div 5} = \frac{12 \times 4}{25 \times 4} = \frac{48}{100} = 0.48$

30) Book = 250 pages
$\frac{1}{2}$ hr = 30 mins = 60 pages
∴ 1 min = 60 pg. ÷ 30 mins = 2 pgs.

Pages Left to read = 250 – 60 = 190 pgs.
Time to read 190 pgs. = 190 ÷ 2
= 95 mins
95 mins = $1\frac{35}{60} = 1\frac{7}{12}$ hr.

TEST 14

31)

No. of Faces	No. of Edges	No. of Vertices
5	12	8

32) Mean = 70 runs
Total in 3 innings = 70 × 3 = 210 runs
New Mean = 70 + 3 = 73 runs
Total in 4 innings = 73 × 4 = 292 runs
Runs made in 4th inning = 292 –210
= 82 runs

33)

Cups of Milk	2	4	6	**8**	10	12
Flour	6	**12**	18	24	30	**36**

34)

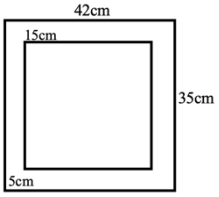
1	4	9	**16**	25	36	49	64	81

Squares of Numbers

35) Rotten = 20%
Good = 100% – 20% = 80%
Kept = $\frac{1}{4}$ of 80% = $\frac{1}{4} \times \frac{80}{100} = \frac{1}{5}$ or 20%

Rotten and Kept = 20% + 20% = 40%
Remainder Sold = 300 pepper = 60%
60% = 300
$\frac{60}{100} = 300$
Total Peppers Harvested
= (300 ÷ 60) × 100 = 5 × 100 = 500 pep.

36)

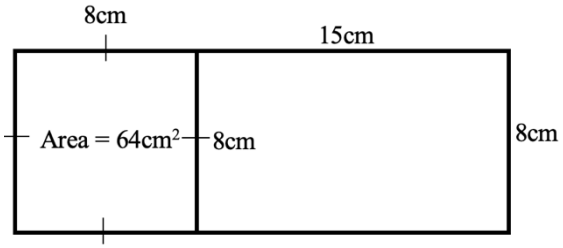


Frame = 42cm × 35cm
Photo = (42 –10) × (35 – 10)
= 32cm × 25cm

Area of Frame = L × W = 42cm × 35cm
= 1,470cm^2
Area of Photo = L × W = 32cm × 25cm
= 800cm^2
Area of Border Around Frame
= 1,470cm^2 – 800cm^2 = 670cm^2

37) Discount = $12\frac{1}{2}\% = \frac{25}{200} = \frac{1}{8}$ off
$\frac{8}{8} - \frac{1}{8} = \frac{7}{8} = \frac{7}{8} \times \frac{\$368}{1} = \$322$

38)



Area of Sq. = 64cm^2
1 side = $\sqrt{64}$ = 8cm
Width of Rect. = 8cm
∴ Perimeter = (15 + 8) + 8 + (15 + 8) + 8
= 62cm

39) Total To Repay = \$16,000
Principal = \$10,000
∴ S.I. = \$16,000 – \$10,000 = \$6,000
Years for loan = $\frac{100 \times S.I.}{Principal \times Rate}$
= $\frac{100 \times \$6{,}000}{\$10{,}000 \times 12}$ = 5 years

TEST 14

40) 2018 Mary = 22 years
2018 Pam = $\frac{1}{2}$ of 22 = 11 years

2019 = 33 + 2 = 35 yrs.
2020 = 35 + 2 = 37 yrs.
2021 = 37 + 2 = 39 yrs.
2022 = 39 + 2 = 41 yrs.
2023 = 41 + 2 = 43 yrs.
2024 = 43 + 2 = 45 yrs.

OR

22 + 11 = 33 yrs.
45 – 33 = 12 yrs.
12 yrs. ÷ 2 = 6 yrs.
2018 + 6 yrs. = 2024

SECTION 3

41) Total Distance in 5 laps = 1.2km
= 1200m
1 lap = 1,200 ÷ 5 = 240m
∴ Peri. of field = 240m

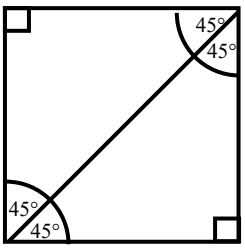
6W = 240m
W = 240m ÷ 6 = 40m

Length of Rect. = 40m × 2 = 80m
Width of Rect. = 40m
Area of Field = L × W = 80m × 40m
= 3,200m^2

42) Jadon left with 6 free games
Offer = Buy 3 games get 2 games free
∴ 6 free games ÷ 2 = 3 amts. of purchases
Each purchase = 3 games bought
∴ 3 purchases = 3 × 3 = 9 games bought
9 games = \$1,980
∴ 1 game = \$1,980 ÷ 9 = \$220

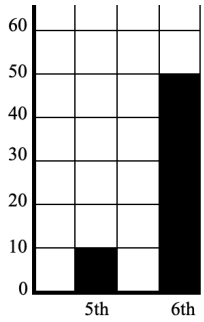
43) 5 rulers + 3 pencils = \$35.75
3 rulers + 1 pencil = \$16.25
∴ 2 rulers + 2 pencils = \$35.75 – \$16.25
= \$19.50
Ruler = x
Pencil = 2x
∴ 2 rulers = x + x = 2x
2 pencils = 2x + 2x = 4x
6x = \$19.50
x = \$19.50 ÷ 6 = \$3.25
ruler = \$3.25
pencil = (\$3.25 × 2) = \$6.50
1 ruler + 1 pencil = \$3.25 + \$6.50 = \$9.75
32 (of 1 pencil + 1 ruler) = \$9.75
× 32
\$ 312

44) 2 identical congruent, right-angles,
Isosceles triangles will form a square.



45) Mean after 4 innings = 70 +30 + 50 + 90
= 240 ÷ 4 = 60 runs
Mean after 5th innings = 60 – 10 = 50 runs
Total = 50 × 5 = 250 runs
Mean after 6th innings = 50 runs
Total = 50 × 6 = 300 runs

Missing Bars



Modal number of runs = 50

TEST 15

SECTION 1

1) 8 = 80,000

2) 5

3) $\frac{41}{7} = 5\frac{6}{7}$

4) 35.24 ÷ 5 = 7.048

5) (12 × 10) + (12 × 4) = 12 × **14**

6) $7^3 + \sqrt{144} = 343 + 12 = 255$

7) $4 - \frac{5}{4} = \frac{16}{4} - \frac{5}{4} = \frac{11}{4} = 2\frac{3}{4}$

8) \$20 + \$10 + \$5 = \$35.00
10c + 25c + 25c = \$00.60 +
\$35.60

9)
$$\begin{array}{r} 315 \\ \times\ \ 24 \\ \hline 7{,}560 \end{array}$$

10)
$$\begin{array}{r} 727 \\ +\ 1\square4 \\ \hline 911 \end{array} \qquad \begin{array}{r} 11 \\ -\ 4 \\ \hline 7 \end{array} \qquad \begin{array}{r} 911 \\ -\ 727 \\ \hline 184 \end{array}$$

$$\begin{array}{r} 727 \\ +\ 184 \\ \hline 911 \end{array}$$

11) 1 length = 2cm
Route AB = 12 lengths × 2 = 24cm

12) 1 : 5 0

13) 6th December, 2020 (17–11 = 6)

14) Volume of 1 cube = 3 × 3 × 3 = 27cm³
Volume of solid = 32 cubes × 27
= 864cm³

15) B,D

16)  Trapezium

17) C

18) Chocolate

19) 80 ÷ 20 = 4 = 4 persons

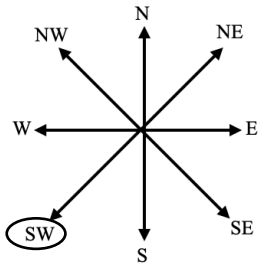
20) Mean = 20 + 24 + 18 + 21 + 37 = 120 ÷ 5
= 24

SECTION 2

21) 5 – 12-Seater Maxi-Taxis = 5 × 12
= 60 passengers

1 Maxi-Taxi rental = \$1,200
∴ 5 Maxi-Taxi rentals = \$1,200 × 5
= \$6,000

Money for tickets = \$10,500 – \$6,000
= \$4,500
60 people = \$4,500
∴ 1 person = \$4,500 ÷ 60 = \$75 per ticket

22) 

North-East

TEST 15

23) $\frac{3}{5}$ full = 60 × 80 × 30 = 144,000cm^3
144,000 ÷ 1,000 = 144 Litres
$\frac{3}{5}$ = 144 Litres
∴ $\frac{5}{5} = \frac{5}{3} \times \frac{144}{1}$ = 240 Litres

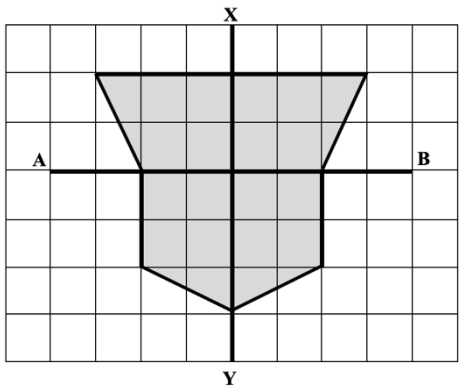
24)

Item	Quantity	Unit Cost	Total Cost
Pigeon Peas	$3\frac{1}{2}$	$30 per kg	**$105.00**
Callaloo Bush	4 Bun.	$7.50 per Bun.	**$30.00**
Tomatoes	3 kg	**$15.00** per kg	$45.00
Pumpkin	3 kg	**$4.50** per kg	$13.50
		Total	**$193.50**

25) 1 = 10 Houses
∴ 20 = 20 × 10 = 200 Houses
Jaguar Drive = 4 × 10 = 40 Houses
$= \frac{40}{200} \times \frac{100}{1}$ = 20%

26) Adult Ticket = $120
Child Ticket = $75
Children's Ticket Total = $7,500
Adult Tickets = $31,500 – $7,500
= $24,000
No. of Adults = $24,000 ÷ $120 = 200
$\frac{2}{3}$ Patrons = 200
Total Patrons = $\frac{3}{2} \times \frac{200}{1}$ = 300

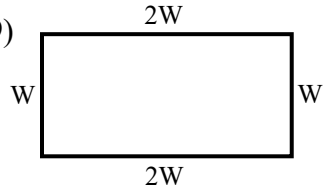
27)



Pentagon & Trapezium

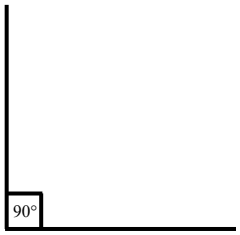
28) 1 container = 8.125 Litres = 8125ml
1 cup = 325ml
No. of cups = 8125 ÷ 325 = 25
Containers needed for 100 cups =100 ÷ 25
= 4 Containers

29)



Perimeter = 72cm
6W = 72cm
W = 72 ÷ 6 = 12
Length = 12 × 2 = 24cm
Width = 12cm

30)



31) 24 – (11 + 3 + 6) = 24 – 20 = 4
Size 2 = | |
Size $3\frac{1}{2}$ = | | | | 4

32) Brian pick x plums
Green plums = $\frac{3}{5}$
∴ Ripe plums = $\frac{2}{5}$
$\frac{7}{8}$ of ripe plums were good
∴ $\frac{7}{8}$ of $\frac{2}{5}$ are good plums
$\frac{7}{8} \times \frac{2}{5} = \frac{14}{40}$ x are good plums
∴ $\frac{14}{40}$ x = 35
∴ x = $\frac{40}{14} \times \frac{35}{1}$
$= \frac{20}{7} \times \frac{35}{1} = \frac{700}{7}$ = 100 plums

TEST 15

33) Total Weight of 3 boys = 91.3kg
Alex weighs 1.3kg more
91.3kg – 1.3kg = 90kg
90kg ÷ 3 boys = 30kg
Alex = 30kg + 1.3kg = 31.3kg

34) (b) 7,380 ends with a '0'. Multiples of 5 end with a '5' or a '0'. So Cade was able to identify 7,380 as the only number in the set which ends with a '0'.

35) Arrival Time = $^{22}\cancel{23}:05^{+60}$
Flight Time = 4:45 –
18:20
– 12:00
6:20 p.m.

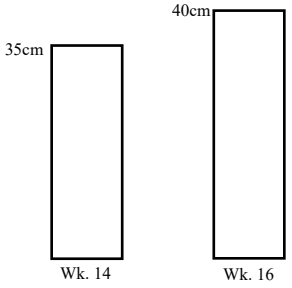
36) Collection = 165 stamps
Gave Lisa $33\frac{1}{3}\% = \frac{1}{3}$ of 165
$= \frac{1}{3} \times \frac{165}{1} = 55$ stamps
Jill Kept = 165 – 55 = 110 stamps

37) $\sqrt{81} + 8$, $\sqrt{64} + 7$

38) Cost Price = \$2,460
Profit = $75\% = \frac{75}{100} \times \$2{,}460 = \$1{,}845$
∴ Selling Price = C.P. + Pro.
= \$2,460 + \$1,845
= \$4,305

39) Nathan – 12 years
Mary – 12 years + 9 years = 21 years
Robert – 12 years – 6 years = 6 years
Tyler = 21 ÷ 3 = 7 years

40)



Mean Height = 5 + 10 + 15 + 20 + 25 +
30 + 35 + 40 = 180cm
= 180 ÷ 16 = 11.25cm

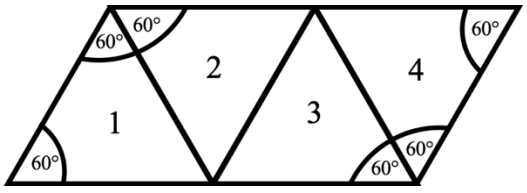
SECTION 3

41) 1 Cube = 6 faces
Area of face = 20 × 20 = 400cm^2
6 faces = 400 × 6 = 2,400cm^2
1 Cubes = 6 faces
Area of face = 10 × 10 = 100cm^2
6 faces = 100 × 6 = 600cm^2

Area of 1 sheet Bristol board
= 80cm × 70cm = 5,600cm^2
∴ 1 sheet = 2 large Cubes = 2,400 × 2
= 4,800cm^2
1 small Cubes = 600cm^2
2 small faces = 600 × 2 = 1,200cm^2

3 sheets of Bristol Board = 3 × 2
= 6 Large Cubes
3 × 1 = 3 small Cubes
Plus 3 × 2 = 6 faces = 1 small cube

42)



TEST 15

43) 40 hrs × \$40 = \$1,600
Overtime Rate = Time and a Half
= \$40 + \$20 = \$60
40 hrs Regular Time = \$1,600
Over Time = Tues = 4hrs
Wed = $\frac{1}{2} \times \frac{4}{1}$ = 2hrs
Fri = 3 × 2hrs = 6hrs
Total O.T. hrs = 4 + 2 + 6 = 12hrs × \$60
= \$720
1 Week Total Earnings
Regular Time = \$1,600
Over Time = \$ 720
\$2,320

44) Original Price = \$4,000
25% Discount = $\frac{25}{100} \times \frac{\$4,000}{1}$ = \$1,000 off
Sale Price = \$4,000 – \$1,000 = \$3,000
Further Discount = 20%
= $\frac{20}{100}$ × \$3,000 = \$600
New Discounted Price = \$3,000 – \$600
= \$2,400
V.A.T. $12\frac{1}{2}\% = \frac{1}{8} \times \frac{\$2,400}{1}$ = \$300
Total Cost V.A.T. inclusive
= \$2,400 + \$300

Down-payment = \$300
Balance = \$2,700 – \$300 = \$2,400
6 equal Instal. = \$2,400 ÷ 6
= \$400 monthly

45) Absent:
Mon. - 25
Tue. - 25
Thurs. - 25
Fri. - 25
Total 100

Average Absent = 23 pupils
∴ Total Abs. = 23 × 5 = 115 pupils
Wed. = 115 – 100 = 15 pupils

115 pupils = $33\frac{1}{3}\% = \frac{1}{3}$ School Pop.
$\frac{115}{1} \times \frac{3}{1}$ = 345 Full School Population

Fraction of School Pop. Absent on Fri.
$= \frac{45 \div 15}{345 \div 15} = \frac{3}{23}$
∴ Fraction Present on Fri = $\frac{23}{23} - \frac{3}{23} = \frac{20}{23}$