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

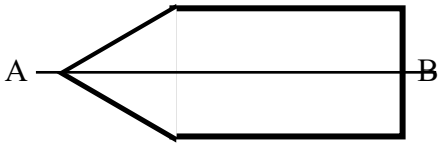
7) Triangular Prism

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

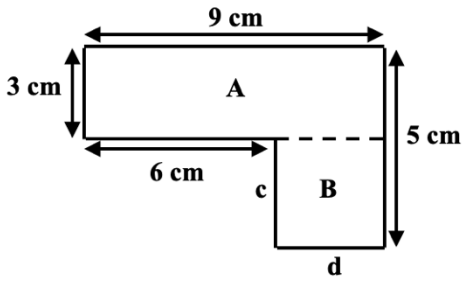
25) 2:05 = 12:00 + 2:05 = 14:05

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

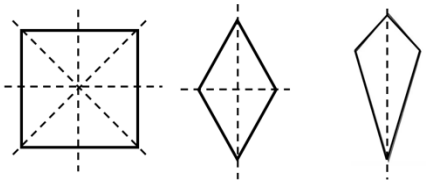
Chef C = 8.300kg – 5.650kg = 2.650kg

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