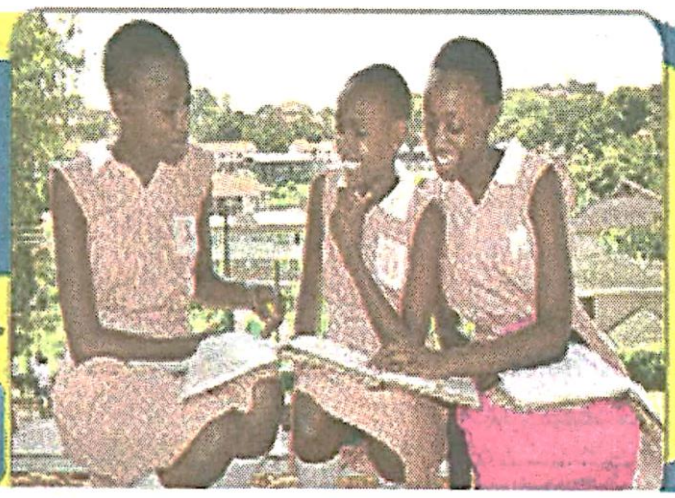
ISSUE 39

P6 & P7

PASS PLE



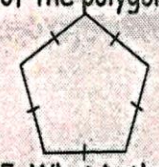
Bukedde YOUR GUIDE TO A BETTER LIFE THROUGH EDUCATION

1.Calculate the average of: 5y, 9 , 7 , 3y

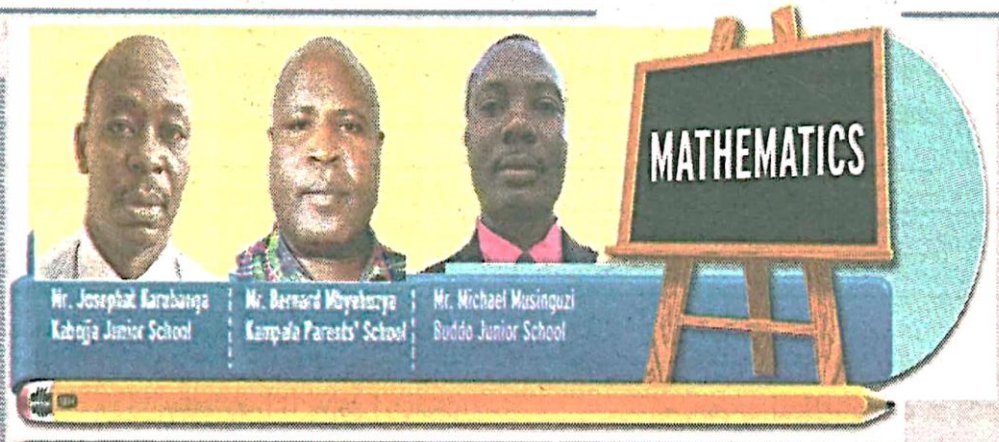
2. Work out: $\bar{}16 + \bar{}9$

3. An examination started at 8:30 pm and ended after 2 ¾ hours. At what time did the examination end?

4. Find the sum of the interior angles of the polygon below.



5. What is the smallest number divisible by either 9 or 8?

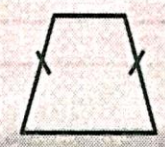


SECTION A

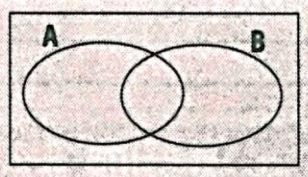
6. At Kivumbi's shoe shop, there are 200 pairs of shoes of different sizes. The probability of picking a pair of shoes size 9 is 1/4 . How many pairs of shoes are not size 9 in this shop?

7. The median of five cobsecutive integers is -1. Find their range

8. Show the lines offoldings symmetry the figure below can have.



9. If A = {a, b, c , d , e , f} and B = {a , e , i , o , u}. Represent the information above on the Venn diagram.



10. Expand 7894 using powers of ten.

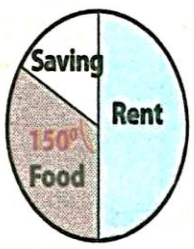
SECTION B

11. Mupadha scored the following marks in a number of exercises in class last term:
8 , 10 , 6 , 9 , 12, 5 , 11 , 13 , 10 and 15.
(a) What was her mean mark?

(b) Find her modal mark.

(c) What is the range in her marks?

23. The pie chart represents Okuya's expenditure in the months of June. He had 1,440,000/= altogether.

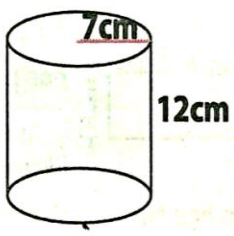


(a) How much money did he spend on his rent?

b) How much more does he spend on Food than savings?

c) What ratio of the total money does he save?

24. The diagram shows a cylinder of radius 7cm. Calculate;



(a) the volume of the cylinder.

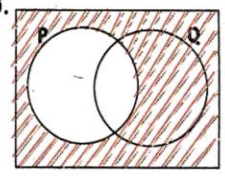
(b) the area of the shaded surface of the cylinder.

ANSWERS TO ISSUE 38 (24TH JULY)

1. $6 - 2k = k$
$6 - 2k + 2k = k + 2k$
$\frac{6}{3} = \frac{3k}{3}$ $k = 2$

2. $1 - \frac{2}{4} = \frac{4}{4} - \frac{3}{4}$
$\frac{4-3}{4} = \frac{1}{4}$

3.



4. int<sum = $1800(n-2)$
$= 180^0 (8 - 2)$
$= 180^0 (6)$
$= 180^0 \times 6$
$= 108^0$

5. CDXCIX
= CD XC IX
400 90 9 = 499

6. $4.78 \times 10\text{-}3$
$= 4.13 \times {}^1/_{1000}$
$= 0.001178$

7. $y + 50^0 + 50^0 = 180^0$
$y + 100^0 = 180^0$
$y + 100^0 - 100^0 = 180^0 - 100^0$
$y + 0 = 80^0$
$y = 80^0$
Or $y + 50^0 = 130^0$
$y + 50^0 - 50^0 = 130^0 - 50^0$
$y = 80^0$

8. $1.44 = 144$

PF	No
2	144
2	72
2	36
2	18
3	9
3	3
	1

PF	No
2	100
2	50
2	25
5	5
	1

$\frac{144}{100} = \frac{\sqrt{2x2x2x2x3x1}}{\sqrt{2 \times 2 \times 5 \times 5}}$
$= \frac{(2x2)x(2x2)x(3x3)}{(2 \times 2) \times (5 \times 5)}$
$= \frac{2 \times 2 \times 3}{2 \times 5}$
$\frac{\sqrt{144}}{\sqrt{100}} = \frac{12}{10} = 1.2$

9. $7 - 5m < 27$
$7 - 7 - 5m < 27 - 7$
$-5m < 20$
$-5m > 20$
$\frac{5}{-5} \quad \frac{5}{-5}$ $m => -4$

10. Right angled triangular prism

11. 1 km = 1000m
1m = 100cm
1km = 100,000cm
3.3km = 330,000cm
1 rev = C
$C = \pi d$
$= \frac{22}{7} \times 35 = 110cm$
rev = D ÷ C
$= \frac{330,000cm}{110cm}$
= 3000 revolutions
The wheel will make 3000 revolutions

12. (20m - 14m) = 6m
Distance of the arc (curve) =
${}^1/_4 \pi d = 2 \times {}^1/_4 \pi r$
$= \frac{1}{4} \times \frac{22}{7} \times 2 \times 14m$
$= \frac{1}{4} \times 22 \times 2 \times 2m$
$= 1 \times 22 \times 1m$
$= 22m$
D = 22m + 20m + 14m + 6m
= 62m

13. Let the amount that Peter earns be m

Peter	m
Musa	${}^1/_2 m$
Mary	${}^3/_4 m$
Total	sh.180,000

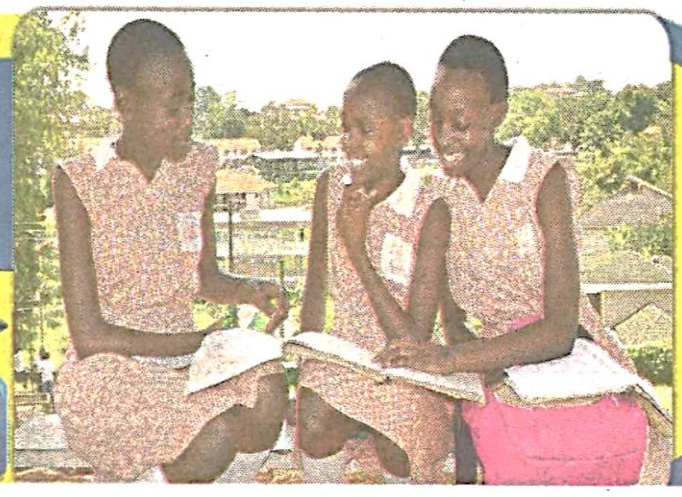
$m + {}^1/_2 m + {}^3/_4 m$ = sh. 180,000
$4 \times m + {}^1/_2 \times 4m + {}^3/_4 \times 4m$ = sh. 180,000
(4m + 2m + 3m) = sh. 180000 x 4
9m = sh. 180000 x 4
$\frac{9m}{9} = \text{sh. } \frac{180000 \times 4}{9}$
m = sh. 20,000 x 4
m = sh. 80,000
Peter earns sh. 80000
Musa earns sh. 40,000
Mary earns sh.60,000

14. $g + 65^0 + 80^0 = 180^0$
$g + 130^0 = 180^0$
$g + 130^0 - 130^0 = 180^0 - 130^0$
$g = 50^0$

ISSUE 41

P6 & P7

PASS PLE



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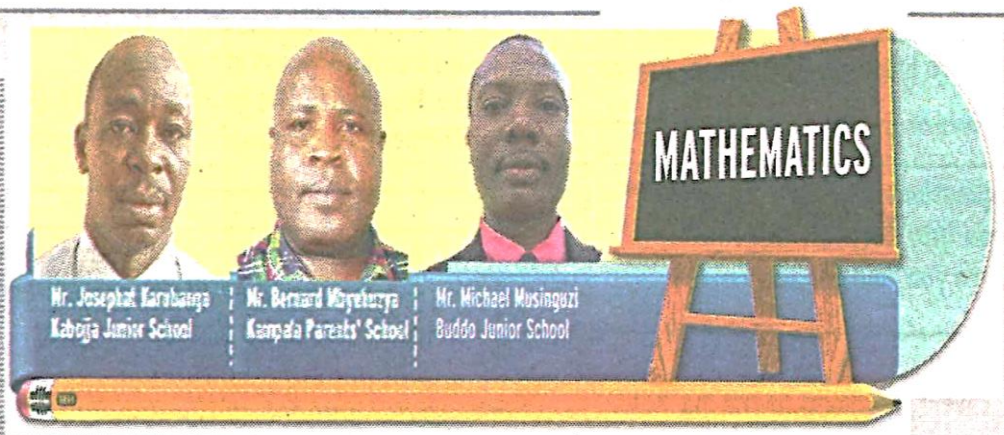


SECTION A

1. Work out: 880 ÷ 4

2. Write CMXX in words.

3. Find the supplement of 30^0 + y.

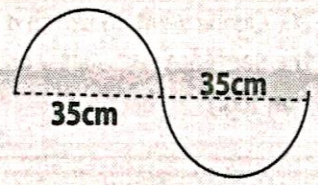
4. How many metres are in 7.5km?

5. After spending 20% of her salary, Anna remained with sh.150,000. How much is her salary?

6. If set P = {All triangular numbers less than 11}, find n(P)

7. If a dice is tossed once, what is the probability that a composite number will show up?

8. Find the length of the rope shown below:

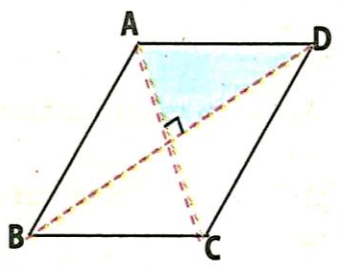


9. Using a ruler and a pair of compasses only, construct an angle of 45^0

10. Work out: (-7) x (-3).

SECTION B

11. The figure ABCD is a rhombus where diagonal BD = 24cm and AC = 18cm



a) Find the area of the rhombus.

b) Calculate the perimeter of the figure.

12. While driving at 72km per hour, a motorist took $1^2/_3$ hours to move from town A to town B. She rested for 20 minutes before resuming her journey to town C 300km away at a speed of 100km per hour.

a) How far is town C from town C?

b) Work out the average speed for the whole journey.

13. A helicopter flew town A on a bearing of 140^0 to town B 180km away. It then flew on a bearing of 230^0 to town C 210km away.

a) Draw a sketch to show the helicopter's flight.

b) Using a scale of 1cm to represent 30km, draw an accurate diagram of the flight.

ANSWERS TO ISSUE 40 (31ST JULY)

1. 346
- 333
13

2. 12p - 2 (3p + 4)
=12p - 2 x 3p + -2 x 4
= (12p - 6p) + 8
= 6p + 8

3. $6p - qp^2$
$= \frac{6p - qp^2}{3p}$
$= \frac{6p}{3p} + \frac{qp^2}{3p}$
= 2 + 3p
$6p + qp^2 = 3p(2+3p)$

4. 9.56 x 1000
$= \frac{956}{100} \times \frac{1000}{1}$
$= \frac{956 \times 10}{1 \times 1}$
= 9660

5. $g + 60^0 = 180^0$
$g + 60^0 - 60^0 = 180^0 - 60^0$
$g + 0 = 120^0$
$g = 120^0$
OR. two int<opp ext<
$50^0 + 70^0 = g$
$120^0 = g \quad g = 120^0$

6.

p^1	p^0
2	4

$= 16_{ten}$
$(2xp^1) + 4xp^0 = 16$
2p + 4 x 1 = 16
2p + 4 = 16
2p + 4 - 4 = 16 - 4
2p + 0 = 12
$\frac{2p}{2} = \frac{12}{2}$ p = 6
p = base six

7. BP = SP + Loss
= sh. 4500 + 10% of sh. 4500
$=sh.4500+(\frac{10}{100}xsh4500$
= sh. 4500 + sh. 450
= sh. 4950

8. $2\pi rh = 440cm^2$
$2x3^1/_7 x7cm \times h = 40cm^2$
$2x22x\cancel{7}cm \times h = 440cm^2$
$\cancel{7}$
$2 \times 22 \times 1cm \times h = 440cm^2$
$= 44cmh = 44cm^2$
$\frac{\cancel{44cm}h}{\cancel{44cm}} = \frac{\cancel{44cm}^2}{\cancel{44cm}}$
h = 10cm

9. $\frac{n(n+1)}{2} = \frac{30(30+1)}{2}$
$= \frac{30\ (31)}{2} = \frac{30 \times 31}{2}$
= 465

10. Cost of each egg
sh. $\frac{9000}{30}$ = sh. 300

Profit of one egg
P = S.P - C.P
sh.500 - sh.300 = sh.200

Profit on 10 eggs
sh. 200 x 10 = sh. 2000

profit on the tray
30 x 500 = sh.15000
sh15000 - sh9000
= sh. 7000

12. *Length of the clot*
= 14m (2m + 2m)
= 14m - 4m
= 10m

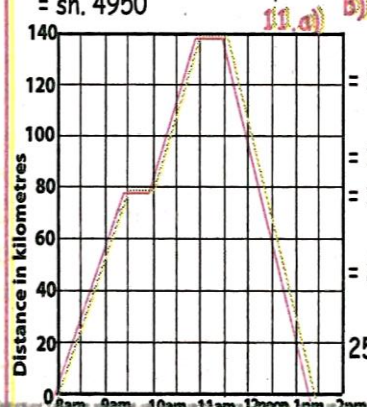
width of the cloth
= 12m - (2cm + 2cm)
= 12m - 4cm
= 8m

Area of the table
A = L x W
= 14m x 12m
= $168m^2$

Area of the cloth
A = L x W
= 10m x 8m = $80m^2$

Area not covered =
Area of the table
- Area of the table cloth
$= 168m^2$
$- 80m^2$
$88m^2$

11. a)

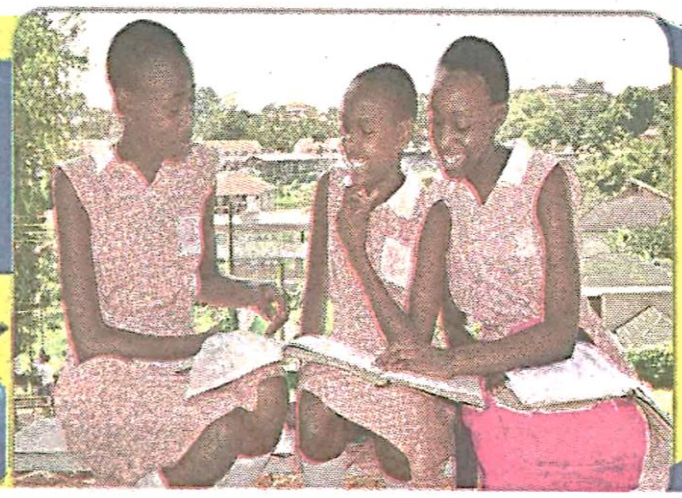


b) Avsp = 140km
$5^1/_2$hr
$= 140km \div 5^1/_2 hrs$
$= 140km \div {}^{11}/_2$
$= 140km \times \frac{2}{11}$ hrs
$= 280km$
$11\ hrs = 25^5/_{11} km/hr$
$= 25^2/_{11} k.p.h$

ISSUE 42

P6 & P7

PASS PLE



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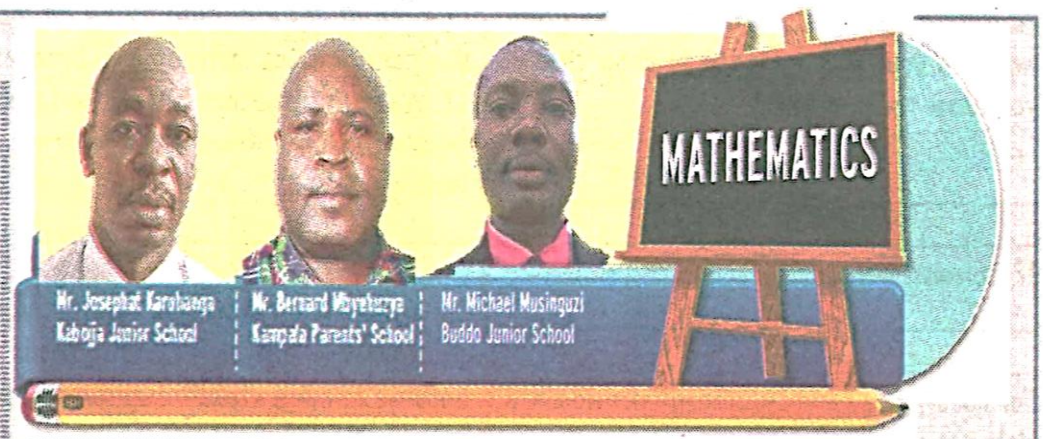


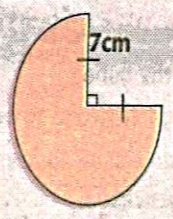
SECTION A

1. The product of two numbers is 720,their LCM is 120. Find their GCF

2. Round off 35.98 to the nearest tenths.

3. At a party, 2.5 litres of juice were served and each person took 25 ml. How many visitors attended the party?

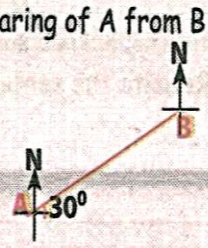
4. Find the total distance round the figure below



5. Solve $32_y = 112_{three}$

6. Find value of y if: $2^y \times 32 = 1$

8. Find the bearing of A from B in the figure below



7. In a village, there are $\frac{1}{4}$ more children than adults. Find the fraction of adults.

9. A mother had $\frac{3}{4}$ of a cake and gave $^2/_3$ of it to her husband. what fraction of her cake remained?

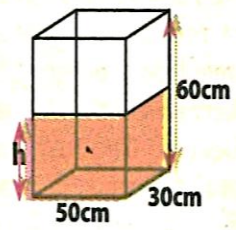
10. A car tyre rolled 50 times to cover a distance of 110 m. calculate the diameter of the tyre in cm

SECTION B

11. A drum was $^2/_3$ full of petrol. When 300 litres were added, it became 5/6. how many litres does the drum hold when $\frac{1}{2}$ full?

12. The exterior angle of a regular polygon is $^2/_3$ its interior angle. Work out its interior angle sum.

13. The cuboidal tank below holds some water as shown below.



a) If there are 60 litres of water in the tank,find the value of h

b) How much water is needed to fill the tank?

ANSWERS TO ISSUE 41 (4TH AUG)

1. $880 \div 4 = \frac{880}{4} = 220$

2. CMXX = CM / XX
= 900 20
= 920

3. Let the complement of 30^0 + y be y
$(y + y) + 30^0 = 90^0$
$2y + 30^0 = 90^0$
$2y + 30^0 - 30^0 = 90^0 - 30^0$
$2y = 60^0$
$\frac{2y}{2} = \frac{60^0}{2}$ $y = 30^0$

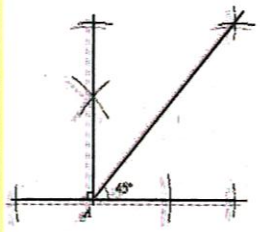
4. 1km = 1000m
7.5km = 7.5 x 1000m
$= \frac{75}{10} \times 1000m$
$= \frac{75 \times 100m}{1 \times 1}$
= 7500m

5. Before spending had 100%
100% - 20% = 80%
80% repr sh. 150,000
1% will repr sh. $\frac{150000}{80}$
100% will repr
$= \text{sh. } 150000 \times \frac{100}{80}$
$= \text{sh. } \frac{750,000}{4}$
= sh. 187,500

6. P = {1, 3, 6 , 10}
n(P) = 4

8. $2\pi d$ or $^1/_2\pi d + {}^1/_2\pi d$
$= \frac{2}{1} \times \frac{22}{7} \times \frac{35cm}{2}$
$= 1 \times \frac{22}{1} \times 5cm$
= 1 x 22 x 5cm
= 110cm
OR πd
$= \frac{22}{7} \times \frac{35cm}{1}$
= 22 x 5cm
= 110cm

9. sketch



7. Dice :
{1, 2, 3, 4, 5, 6}
Composite number are 4 and 6 or {4 , 6}
Prob - $n(D.C) = \frac{2}{n(T.C)}$ $\frac{1}{6}$ or $\frac{1}{3}$

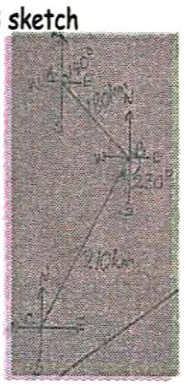
10. (-7) x (-3) = +21

11 a) $A = {}^1/_2 \times d_1 \times d_2$
$\frac{1}{2} \times 24cm \times 18cm$
= 1 x 24cm x 9cm
= $216cm^2$
AD is the hypotenuse
Let AD be m = C
$a^2 + b^2 = c^2$
$(9cm)^2 + (12cm)^2 = m^2$
$81cm^2 + 144cm^2 = m^2$
$225cm^2 = m^2$
$\sqrt{225cm^2} = \sqrt{m^2}$
$\sqrt{15cm \times 15cm} = \sqrt{m \times m}$
15cm = m
m = 15cm
Perimeter = 4 x side
= 4 x 15cm
= 60cm

12 a) Distance = S x T
= 72kph x $1^2/_3$hrs
$= \frac{72km}{1hr} \times \frac{5}{3}$
= 24km x 5
= 120km
Distance = 300km
Total distance = 120km + 300km = 420km

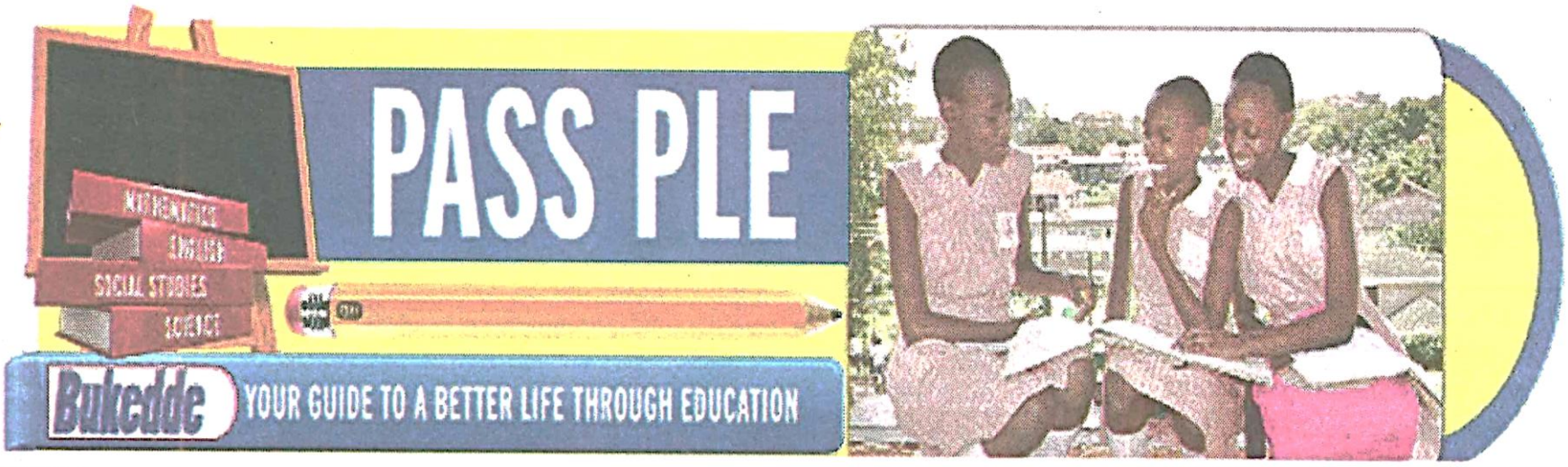
b) Time for moving from B to C
Time = D ÷ S
= 300km ÷ 100km/hr
$= 300km \div \frac{100km}{1}$
$= \frac{300km}{1} \times \frac{1\ hr}{100km}$
= 3 x 1hr
= 3 hours
Av Speed = $\frac{D_1 + D_2}{T_1 + R_1 + T_2}$
$= \frac{120km + 300km}{1^2/_3hr + {}^1/_3hr + 3hr}$
$= \frac{420km}{5\ hours}$
= 84km/hour
= 84k.p.h

13 sketch



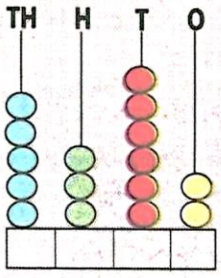
ISSUE 43

P6 & P7



1. Work out: 231 X 3

2. Write the number shown on the abacus in words.

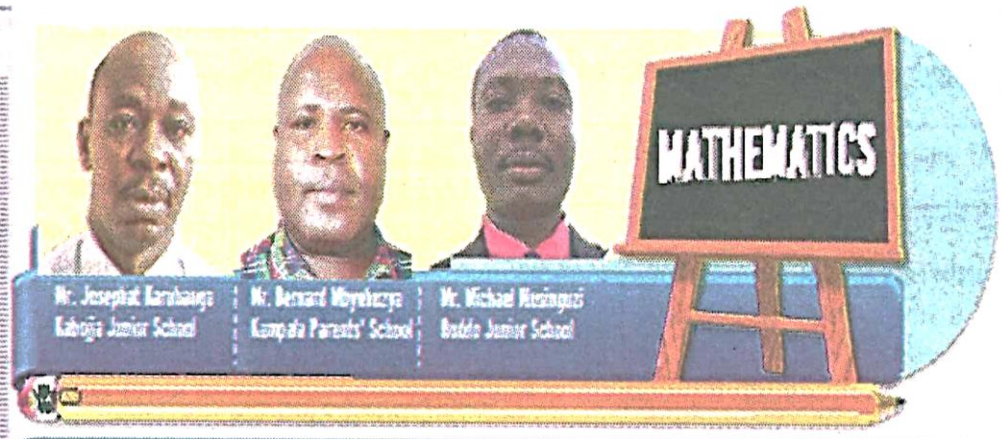


3. Simplify: 5(x - 1) - 3(x - 2) = 19

4. Solve: 2y + 3 = 1 (finite 12)

6. During a Mathematics quize,Muna got 88,Sanyu got 77 and Mary got 90.Find the mean of these marks.

5. Change 550ml to litres.

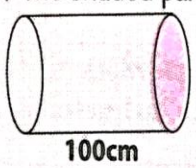


SECTION A

7.There were y students in S1 at Sir Luther Academy last year.Today there are 1800 students in the school.This is 20% reduction. Find the value of y.

8. Round off to the nearest hundredth: 734.896

9. Find the volume of the figure below if the area of the shaded part is $154cm^2$.



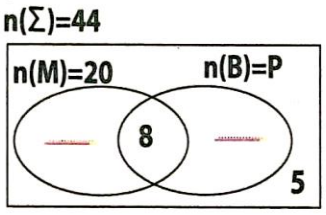
10. A Maths lesson started at 7:28am and took 58 minutes.At what time did it end?

SECTION B

11.In a group of 44 farmers,20 grow beans(B),p grow maize(M),8 grow both beans and maize and 5 grow neither of the two crops.

(a) Complete the Venn diagram below using the above information.

n(Σ)=44



(b) Find the value of p

(c) If a farmer is chosen at random,what is the chance the he grows beans only?

12 A trader got a loan of sh. 720,000 and paid back sh. 840,000 after 6 months. Calculate the percentage interest rate per year the trader was charged.

13. In a shop, the ruler costs sh.600 more than a book and a set costs twice a ruler. If the total cost of all the three items is sh.37,800. Find the cost of a ruler.

ANSWERS TO ISSUE 42 (7TH AUG)

1. $N^1 \times N^2 = LCM \times GCF$
Product = LCM x GCF
720 = 120 x GCF
Let GCF be m
720 = 120 x m
$\frac{720}{120} = \frac{120m}{120}$
6 = m // m = 6
GCF = 6

2. T O Tth Hdth
3 5 . 9 8
\+ 1
3 6 . 0
35.98 Ω 36.0

3. 1 litre = 1000ml
2.5l = 2.5 x 1000ml
= 2500m
No of visitors
$= \frac{2500ml}{25ml}$ = 100 visitors

4. $\frac{3}{4}\pi d + r + r$
$D = (\frac{3}{4} \times \frac{22}{7} \times \frac{14cm}{1}) + 7cm + 7cm$
=3x11x 1cm+7cm +7cm
= 33cm + 14cm
= 47cm

5.

y^1	y^0	=	3^1	3^1	3^0
3	2		1	1	2

3xy+2x1=1x3+1x3+2x1
= 3y + 2 = 3 + 3 + 2
3y + 2 = 8
3y + 2 - 2 = 8 - 2
$\frac{3y}{3} = \frac{6}{3}$ y = 2
y = base two

6. $2^y \times 3^2 = 1$
$2^y \times 2^5 = 1$
$2^y \times 2^5 = 2^0$
y + 5 = 0
y + 5 - 5=0 - 5
y + 0 = -5
y = -5

2	32
2	16
2	8
2	4
2	2
	1

7. $90^0 - 30^0 = 0^0 = 060^0$
$060^0 + 180^0 = 240^0$

8. Let the fraction of adult be n

Adult	Children	Total
n	$n + \frac{1}{4}$	1

$(n) + (n + \frac{1}{4}) = 1$
$2n + \frac{1}{4} = 1$
$4 \times 2n + \frac{1}{4} \times 4 = 1 \times 4$
8n + 1 = 4
8n + 1 - 1 = 4 - 1
$\frac{8n}{8} = \frac{3}{8}$ $n = \frac{3}{8}$

9. $\frac{3}{4} - \frac{2}{3} = \frac{3x3 - 4x2}{12}$
$= \frac{9 - 8}{12} = \frac{1}{12}$
$\frac{1}{12}$ of the cake remained

10. Rev = $\frac{D}{C}$
$50rev = \frac{110}{C} m$
$C = \frac{100m}{50rev}$
$\pi d = \frac{110m}{50\ rev}$
1m = 100cm
$22d = \frac{110 \times 100cm}{50}$
$\frac{22d}{7} \times 7 = \frac{110 \times 100cm \times 7}{50}$
$22d = \frac{110 \times 100cm \times 7}{50 \times 22}$
$d = \frac{5 \times 10cm \times 7}{5}$
d = 10cm x 7 = 70cm

11. $\frac{5}{6} - \frac{2}{3} = \frac{(1x5)-(2x2)}{6}$
$= \frac{5 - 4}{6} = \frac{1}{6}$
300 litres repr $\frac{1}{6}$
If $\frac{1}{6}$ repr 300 litres
Then $\frac{6}{1}$ will repr
6 x 300L = 1800L
$\frac{1}{2}$ will hold
$\frac{1 \times 1800\ l}{2}$ = 900 litres

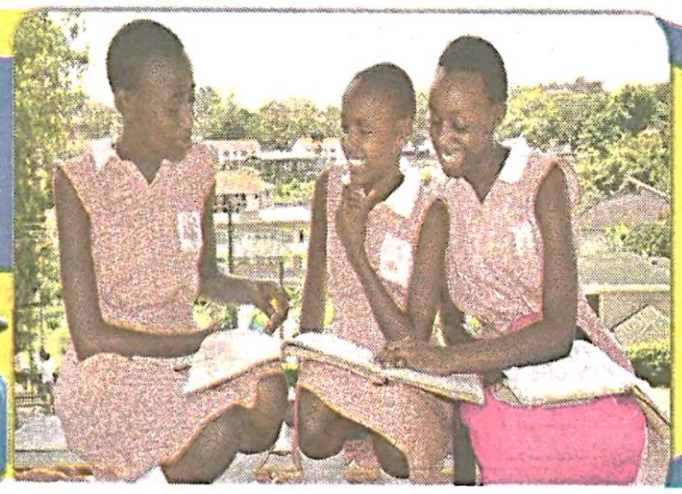
12. Let the interior angle be k
ext< + int< = 180^0
$\frac{2}{3}k + k = 180^0$
$\frac{2k \times 3}{3} + k \times 3 = 180^0 \times 3$
$2k + 3k = 540^0$
$\frac{5k}{5} = \frac{540^0}{5}$ $k = 108^0$
ext< = $\frac{2 \times 108^0}{3} = 72^0$
No of sides = $\frac{360^0}{72}$
= 5 sides
int<Sum = $180^0 (n - 2)$
= $180^0 (5 - 2)$
= $180^0 (3)$
= $180^0 \times 3 = 540^0$

13. $C = V \div 1000cm^3$
$60L = \frac{50cm \times 30cm \times h}{1000cm^3}$
$60x1000cm^3 = 50cm \times 30cm \times h$
$\frac{60x1000cm^3}{50cm \times 30cm} = \frac{50cm \times 30cm \times h}{50cm \times 30cm}$
20 x 2cm = h
h = 40cm
b) The height of 60cm will repr 90 litres

ISSUE 47

P6 & P7

PASS PLE



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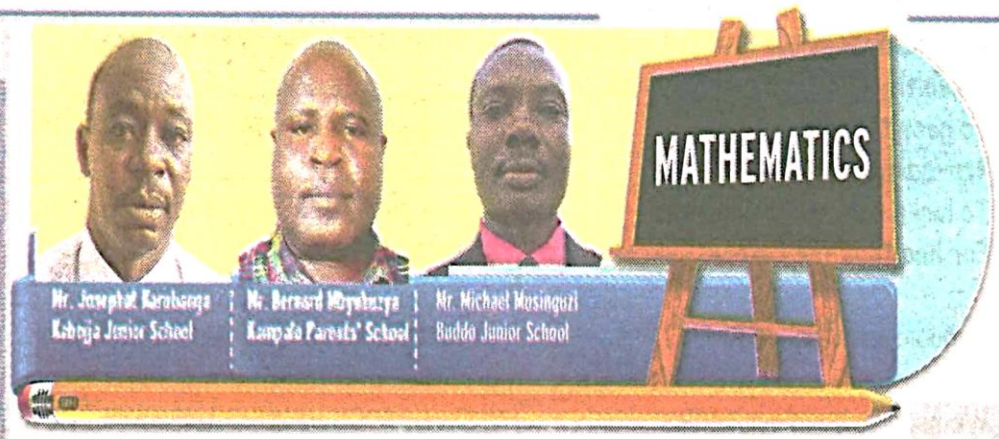
1. Add: 5 5 5
+ 5 0 3

2. Solve: 9 + y = 12.

3. Simplify: +9 + $^{-}5$

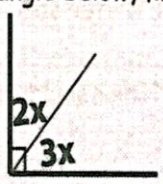
5. Using a pair of compasses, a ruler and a pencil, construct an angle of 105^0.

6. Round off 7.95 to the nearest tenth



SECTION A

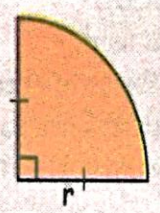
7. In the angle below, find the value of X.



8. What is $12\frac{1}{2}$ % of sh. 24,000 ?

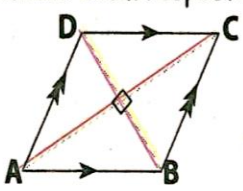
9. Find the mean of 4, $^{-}6$, 8 and 10.

10. The perimeter of the figure below is 50cm.Find the value of r. (pi=$^{22}/_{7}$)



SECTION B

11. The diagonals of a rhombus ABCD are 24cm and 10cm respectively.



(a)Calculate the area of the rhombus.

(b) Find the length AB.

(c) Calculate the total distance around the figure.

12(a) Solve for x: $44_x = 103_{five}$

(b) If today is Monday, what day of the week will it be after 35 days?

13. A school spends its school fee collection as follows: $\frac{1}{4}$ on food, $^1/_3$ on electricity, $^1/_6$ on books and the rest on salaries.

(a) Find the fraction spent on salaries.

(b) If the schools spends 40,000 shillings on books, what is the total collection?.

ANSWERS TO ISSUE 46 (21ST AUG)

1. 496 = 400 + 90 + 6
CD XC VI
= CDXCVI

2. 3y = 24
$\frac{3y}{3} = \frac{24}{3}$ y = 8

3. 1 tonne = 1000kg
1000kg = 1 tonne
1 kg = $^1/_{1000}$ tonnes
23450kg = $\frac{23450kg}{1000kg}$
= 23.45 tonnes

4. $\frac{3}{4} \times \frac{604}{1} = 3 \times 151$
= 453

5. 12pq + 18p
$\frac{12pq}{6p} + \frac{18p}{6p}$ = 2q + 3
6p(2q + 3)

6. Let the %age of girls be m
girls = m
boys = m + 40%
m + m + 40% = 100%
2m + 40% = 100%
2m + 40 - 40 =100- 40
$\frac{2m}{2} = \frac{60}{2}$ m = 30%

7. $2y + 50^0 + 0^0 = 180^0$
$2y + 1400 = 180^0$
$2y + 140 - 140 = 180^0$
$2y = \frac{-140^0}{40^0}$
$\frac{2y}{2} = \frac{40^0}{2}$ $y = 20^0$

8. 1kg = 1000g
13.5kg = 13.5 x 1000g
= 13500g
$= \frac{13500g}{250g}$ = 54 sackets

9. 96
+94
190 ten

B	No	Rem
8	190	
8	23	6
	2	7

$190_{ten} = 276_{eight}$

10. D = No of trees x space
= 44 x 20m = 880m

11. Number of circular card
$\frac{L}{D} \times \frac{W}{D} = \frac{0.5m}{5cm} \times \frac{0.4m}{5cm}$
1m = 100cm
0.5m = 0.5 x 100cm
= 50cm
0.4m = 0.4 x 100cm
= 40cm
$\frac{40cm}{5cm} \times \frac{50cm}{5cm}$
= 8 x 10
= 80 circular cards
Area of 1 circular card
$A = \pi r^2$
$= 3.14 \times {}^5/_2 cm \times {}^5/_2 cm$
$= \frac{314}{100} \times \frac{5cm}{2} \times \frac{5cm}{2}$
$= \frac{157}{20} \times \frac{1cm}{1} \times \frac{5cm}{2}$
$= \frac{157 \times 1cm \times 1cm}{8}$
$= \frac{157}{8}$ cm
Area of 80 circular cards
$\frac{157cm^2}{8} \times \frac{80}{1}$
$= 157cm^2 \times 10$
$= 1570cm^2$
Area of the rectangular manila
A = L x W
= 50cm x 40cm
$= 2000cm^2$
$2000cm^2 - 1570cm^2$
$= 430cm^2$

12. 4 + 3 = 7
7 - 5 = 2
2 parts repr 8 sweets
1 part will repr $^8/_2$
= 4 sweets
Wanji got; 4 x 4
= 16 sweets
Deborah got; 3 x 4
= 12 sweets
Shasha got; 5 x 4
= 20 sweets

13. $T_1 = {}^D/_S$ and $T_2 = {}^D/_S$
but $T_1 + T_2 = T.T$
$\frac{D}{S} + \frac{D}{S} = T.T$

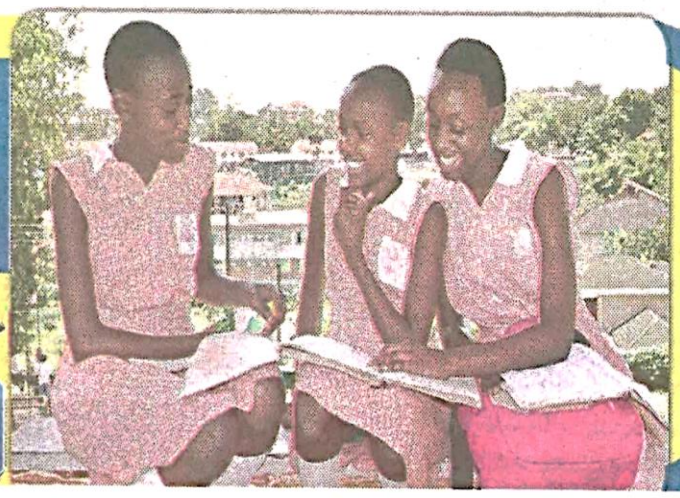
PF	No	No
2	30	50km/h
3	15	25
5	5	25
5	1	5
	1	1

LCD = 150
$^D/_{30} + {}^D/_{15} = 8$
$\frac{D}{30} \times 150 + \frac{D}{150} \times 150 = 8 \times 150$
D x 5 + D x 3 = 1200
5D + 3D = 1200
$\frac{8D}{8} = \frac{1200}{8}$
D = 150km

ISSUE 49

P6 & P7

PASS PLE



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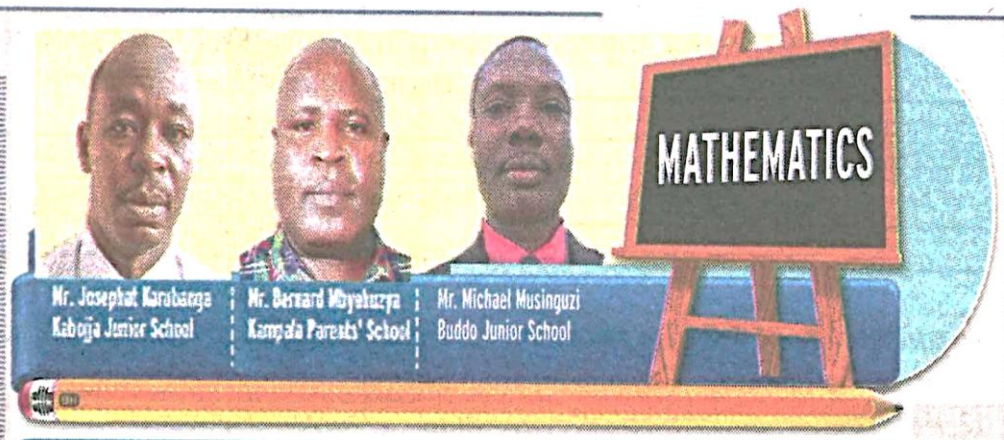


SECTION A

1. Work out: 321 x 4

2. Solve: 0.25y = 6

3. Using a ruler and a pair of compasses only,construct an angle of 105^0

4. In a class,there are 35 boys and 25girls.Find the ratio of girls to the whole class.

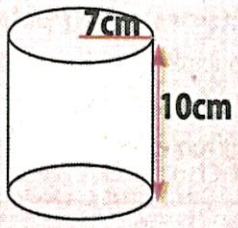
5. Write a Mathematical statement shown on the number line.

6. Find the next number in the sequence:
11, 15, 21, 29, 38, ...

7. A tank leaks at a rate of 200ml per minute.If it holds 240litres of water when full,how long will it take to empty the tank?

8. Solve: $3^k \times 3^k = 81$

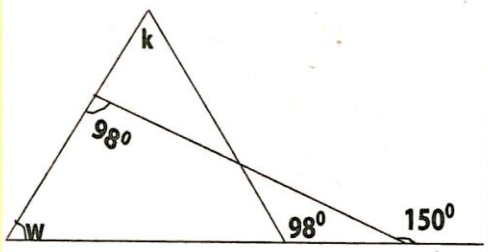
9. Calculate the total surface area of the cylinder below: (Use pi as $^{22}/_7$)



10. A meeting started at 11:15am.If it lasted for 2 $\frac{1}{4}$ hours,at what time did it start?

SECTION B

11. Study the diagram below



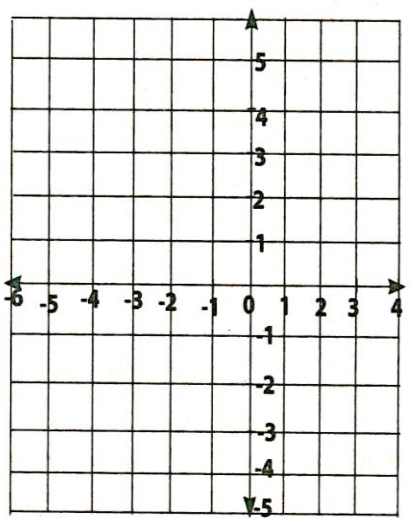
Find the angles marked:
a) k

b) w

12. A school spends its school fee collection as follows: $\frac{1}{4}$ on food, 1/3 on electricity, $^1/_6$ on books and the rest on salaries.
(a) Find the fraction spent on salaries.

(b) If the schools spends 40,000 shillings on books, what is the total collection?.

13 (a) Plot the following coordinates on the grid below: A(0, 5), B(-4, 0) , C(0, -3) and (4 , 0)



(b) Join A to D, D to C, Cto B and B to A and name the figure formed.

c) Find the area of the figure obtained.

ANSWERS TO ISSUE 48 (4TH SEPT)

1. 3.6 x 0.01
$= \frac{36}{10} \times \frac{1}{100} = \frac{36}{1000}$
= 0.036

2. 5 - 3t = 13
5 - 5 - 3t = 15 - 5
-3t = 8
$\frac{-3t}{-3} = \frac{8}{-3}$
$t = -2^2/_3$

3. $^1/_2\pi d + d = 36dm$
$\frac{1}{2} \times \frac{22}{7} \times d + d = 36dm$
$\frac{11d}{7} + \frac{d}{1} = 36dm$
$\frac{1 \times 11d + 7 \times d}{7} = 36dm$
$7 \times \frac{11d + 7d}{7} = 36dm \times 7$
11d + 7d = 36dm x 7
18d = 36dm x 7
$\frac{18d}{18} = \frac{36dm \times 7}{18}$
d = 2dm x 7
d = 14dm

4. 2n - 4 = 14
2n - 4 + 4 = 14 + 4
2n = 18
$\frac{2n}{2} = \frac{18}{2}$ n = 9
No of sides = $\frac{360^0}{9}$
$= 40^0$

5. 100% + 20% = 120%
120 repr sh. 840,000
1% will repr sh$\frac{840000}{120}$
= sh. 7000 x 100
= sh. 700,000

6. 12 : 40am
+00 00
12 : 40hours

7. $3\sqrt{216cm^3}$

6	216
6	36
6	6
	1

$3\sqrt{216cm^3} = 6cm$
$6 \times 6 \times 6 = 216cm^3$
S = 6cm
Sum of edges
= 12 x 6cm = 72cm

8. 1km = 1000m
1 hour = 3600sec
$\frac{54km}{1\ hour} = \frac{54 \times 1000m}{3600sec}$
$= \frac{3 \times 10m}{2\ sec} = \frac{3 \times 5m}{1\ sec}$
= 15m/sec

9.

8^2	8^1	8^0
5	1	2_{eight}

$= (5x8^2)+(1 \times 8^1) + (2x8^0)$

10. p = 4m + 3m + 5m
= 12m

1m = 100cm
12m = 12 x 100cm
= 1200cm
No of poles = $\frac{P}{S}$
$= \frac{1200cm}{50cm}$ = 24 poles

11.a) 1m = 100cm
L = 12m = 1200cm
W = 4m = 400cm
$\frac{L}{b} \times \frac{W}{h}$
$= 2\left[\frac{12 \times 100cm}{6cm}\right] \times \left[\frac{4 \times 100cm}{8cm}\right]$
$= \frac{2(1200cm \times 400}{6 \qquad 8cm}$
= 2(200) x 50
= 20,000 pavers

b) 1 paver costs sh. 5,000
20000 pavers will cost
= sh. 5000 x 20000
= 100,000,000

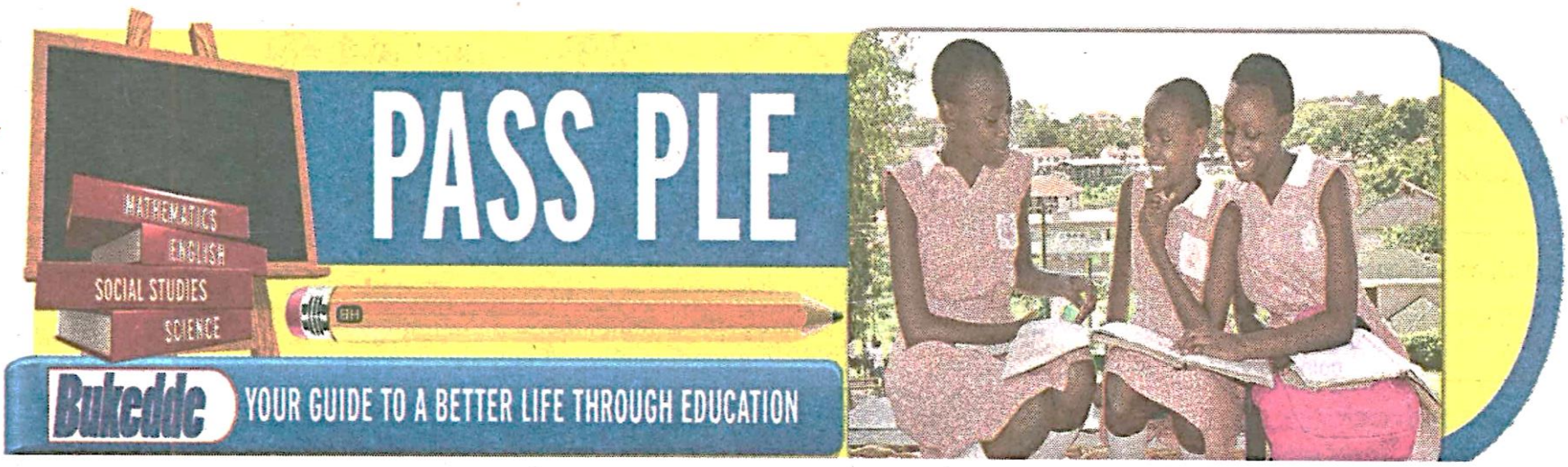
12. 24 - 2 = 22
22 x 5 = 110
= 110 - (2 x 2)
= 110 - 4
= 106
she will score 106 marks

b) Let the correct ones be m
Then the wrong ones will be (24 - m)
5 x m = 5m (corrects marks
2(24 - m)(wrong mark)
5m - 2(24 - m) = 92
5m-2x24 - 2x m = 92
5m - 48 + 2m = 92
5m + 2m - 48 = 92
7m - 48 = 92
7m- 48+48=92 + 48
$\frac{7m}{7} = \frac{140}{7}$ m = 20
wrong ones
= 24 - 20 = 4

13. If 3rd number is (y+2)
The the 2nd number is y
And the smallest number is (y - 2)
(y-2) + (y) + (y+2) = 39
(y+y+y) + 2 - 2 = 39
3y + 0 = 39
$\frac{3y}{3} = \frac{39}{3}$ y = 13
y - 2 = 13 + 2 = 11
y = 13
y+2 = 13 + 2 = 15
The numbers are 11, 13 and 15

ISSUE 50

P6 & P7



PASS PLE

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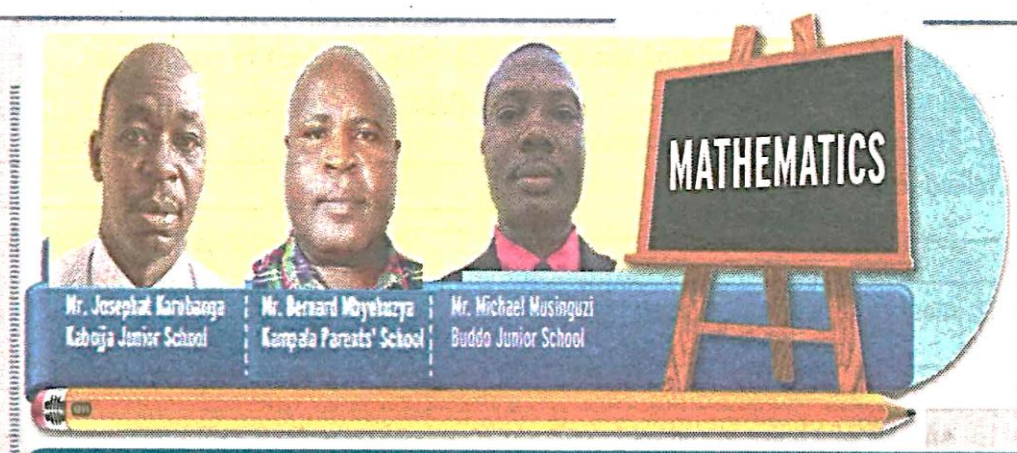


SECTION A

1. Add 9.9 + 1.1

2. Find the 12th triangular number

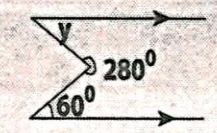
3. A baby slept at 17 00 hours and woke up at 2.30 am. For how long did the baby sleep?

4. What angle is an $^1/_8$ of its supplement?

5. The bearing of A from B is 120^0. What is the bearing of B from A?

6. A tyre of a bus made 2000 revolutions cover a distance 4.4 km. find the diameter of the tyre

7. Find the size of angle y



8. Change 54km/h to m/sec

9. Work out 1- 4=-----mode 5

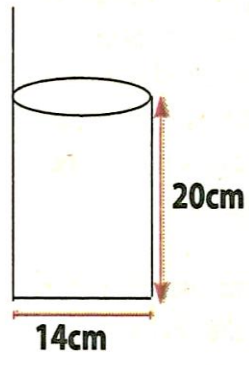
10. Use a protractor to draw an angle 75^0 in the space below.

SECTION B

11. Square tiles of side 10 cm are to be laid on a rectangular floor measuring 8m by 5m. a box of 20 tiles costs sh.40,000. Find the cost of all the tiles needed to cover the floor.

12. In a market, a pawpaw costs sh 800 more than a mango and a mango costs $^2/_3$ the cost of a tangerine. Find the cost of a tangerine if the total cost is sh 4300

13. One weekend , Kato sold 61.6 litres of milk using the container below. How many such containers of milk did he sell



ANSWERS TO ISSUE 49 (8TH SEPT)

1. 3 2 1
x 4
1 2 8 4

2. $0.25y = 6$

$\frac{25y}{100} = 6$

$\frac{100 \times 25y}{100} = 6 \times 100$

$25y = 6 \times 100$

$\frac{25y}{25} = \frac{6 \times 100^4}{25_1}$

$y = 24$

3. sketch

4. Girls are 25
Total
= 36 boys+25girls
= 60 pupils
$= \frac{25}{60} \div \frac{5}{5} = \frac{5}{12}$
= 5 : 12

6. 11,15, 21,29,38,48
+4 +6 +8 +9 +10
Add consecutive composite number

7. 1 litre = 1000ml
240liters
= 240 x 1000
= 240,000ml
200ml leak in 1 minute.
1ml will leak in $^1/_{200}$ minutes
240,000ml will leak in
$\frac{1}{200} \times \frac{240000^{1200}}{1}$
$= \frac{2400}{2_1}$ minutes
= 1,200 minutes
Or $\frac{1200^{20}}{160_1}$ = 20 hours

8. $3^k \times 3^k = 81$
$3^k \times 3^k = 34$
$3^k \div 3 \times 3^k \div 3 = 3^4 \div 3$
$k + k = 4$
$\frac{2k}{2_1} = \frac{4^2}{2_1}$ $k = 2$

9. $S.A = 2\pi r^2 + 2\pi rh$
$= (2 \times \frac{22}{7_1} \times 7 \times 7cm) +$
$(2 \times \frac{22}{7} \times 7 \times 10cm)$
$= 2 \times 22 \times 1cm \times 7cm +$
$(2 \times \frac{22}{7} \times 7cm \times 10cm$
$(2 \times 22 \times 7cm^2) + (2 \times 22 \times 10cm^2)$
$= 308cm^2 + 449cm^2$
$= 748cm^2$

10. HR Min
11 : 15am
+ 2 : 15
13 : 30hour
The meeting ended at 13 30 hours or 1:30pm
1 3 3 0hour
- 1 2 0 0 hours
1 : 39pm

11. $150^0 - 98^0 = 42^0$
$180^0 - 980 = 820$
$k + 42^0 + 82^0 = 180^0$
$k + 124^0 = 180^0$
$k + 124^0 - 124^0 = 180^0$
$- 124^0$
$k = 56^0$

ii) $w + k + 82^0 = 180^0$
$w + 56^0 + 82^0 = 180^0$
$w + 138^0 = 180^0$
$w + 138^0 - 138^0 = 180^0$
$- 138^0$
$w = 42^0$

OR $w + k = 98^0$
$w + 56^0 = 98^0$
$w + 56^0 - 56^0 = 98^0$
$- 56^0$
$w = 42^0$

12. $\frac{1}{4} + \frac{1}{3} + \frac{1}{6}$
$= \frac{(3x1) + (4x1) + (2x1)}{12}$
$= \frac{3 + 4 + 2}{12} = \frac{9}{12} = \frac{3}{4}$
$1 - \frac{3}{4} = \frac{4}{4} - \frac{3}{4}$
$= \frac{1 \times 4 - 1 \times 3}{4}$
$= \frac{4 - 3}{4} = \frac{1}{4}$

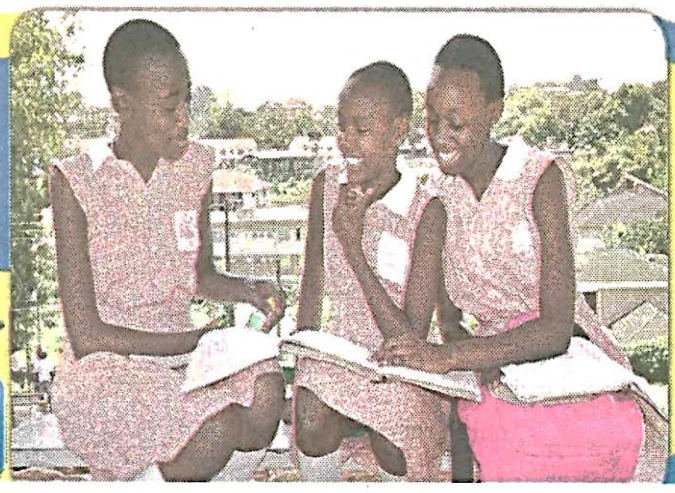
b) If $^1/_6$ repr sh. 40,000
Then $^6/_1$ will repr
$\frac{6}{1} \times$ sh. $\frac{40,000}{1}$
= sh. 240,000
The total collection is sh. 240,000

13.
b)
c) $A = \frac{1}{2} \times d_1 \times d_2$
$\frac{1}{2_1} \times 8cm \times 8cm$
$= 1 \times 4cm \times 8cm$
$= 32cm^2$

ISSUE 51

P6 & P7

PASS PLE



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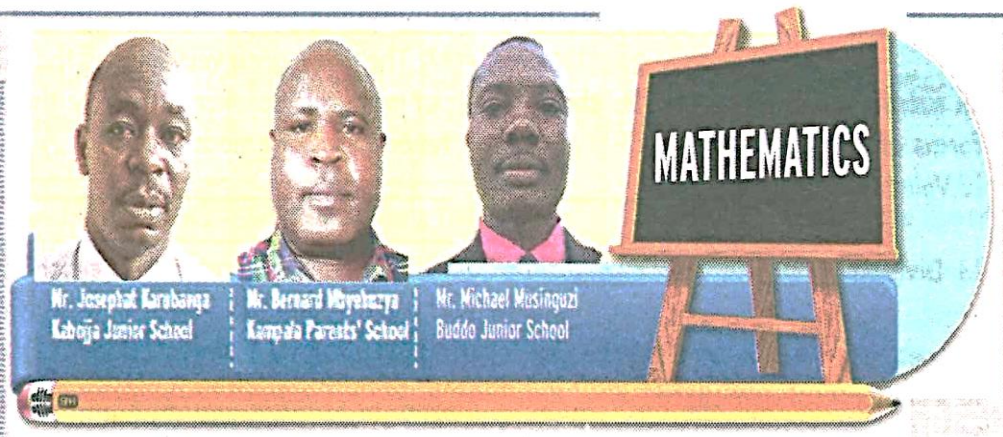


1. Work out: 35 ÷ 7

2. Solve: 2y - 3 = 21

3. Write "One hundred six thousand, fourteen" in figures.

4. Simplify: $\frac{4 - 9}{20}$

5. If Z = {all triangular numbers less than 10}, how many subsets can you obtain from set Z ?

SECTION A

6. Simplify: $\bar{}10 - \bar{}7$

7. If 1USD costs UG Sh.3600
1KSh.costs UG Sh.36
Find the cost of radio in US dollar if it costs KSh.14,000.

8. Work out: $111_{two} \times 11_{two}$

9. An exam started at 11:25 a.m. and ended at 2:45 p.m. How long did the examination take?

10. The interior angle of a regular polygon is 20% greater than the exterior angle. How many sides does the polygon have ?

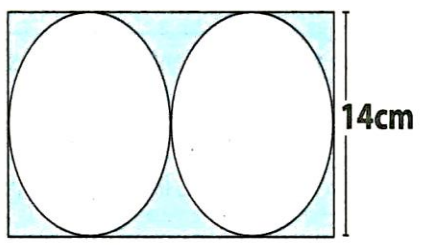
SECTION B

11. Using a pair of compasses, a ruler and a pencil only, construct a parallelogram ABCD where AB= 6cm and angle ABC= 120^0 and AD= 4cm

12.a) Find the number whose expanded form is
$(8 \times 10^3) + (6 \times 10^1) + (5 \times 10^0)$

b) How many fives are in the sum of the value of 7and the value of 1 in 87,103?

13. Study the figure below and find the area of the shaded part.



ANSWERS TO ISSUE 50 (11TH SEPT)

1. 9 9
+1 1
1 1 0

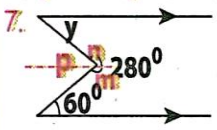
2. $\frac{n(n+1)}{2} = \frac{12(12+1)}{2}$
$= \frac{12(13)}{2} = \frac{12 \times 13}{2}$
$= 78$

3. Hours left to midnight
2 4 0 0
- 1 7 0 0
0 7 0 0 = 7 hours
7: 0 0hours
+ 2 : 3 0am
9 : 3 0 = 9 hours and 30 minutes OR $9\frac{1}{2}$hour

4. Let that angle be m
1/8 of m+m = 180^0
$(1/8 \times m) + m = 180^0$
$\frac{m}{8} + m = 180^0$
$8x\ m + 8x\ m = 180^0 \times 8$
$m + 8m = 180^0 \times 8$
$\frac{9m}{9} = \frac{180^0 \times 8}{9}$
$m = 20 \times 8$
$m = 160^0$
That angle is 160^0

5. 120^0
$+ 180^0$
300^0
The bearing of A from B is 300^0

6. Rev = $\frac{D}{C}$ $C_1 = \frac{D}{Rev}$
1km =
2000 = $\frac{4.4km}{C}$
$2000 = \frac{4.4 \times 100000cm}{C}$
$C = \pi d$
$\frac{22d}{1} = \frac{4.4 \times 100000cm}{2000}$
$7x \frac{22d}{7} = 4.4x\ 100 \times 7$
$22d = 4.4 \times 100 \times 7$
$\frac{22d}{22} = \frac{440 \times 7}{22}$ d = 140

7.


$p + 280^0 = 360^0$
$p + 280^0 - 280^0 = 360^0 - 280^0$
$p = 80^0$
$y + 60^0 = p$
$y + 60^0 = 80^0$
$y + 60^0 - 60^0 = 80^0 - 60^0$
$y = 20^0$
OR $60^0 + M = 180^0$
$60^0 - 60^0 + M = 180^0$
$- 60^0$
$m = 120^0$

$n + 120^0 = 280^0$
$n + 120^0 - 120^0 = 280^0$
$- 120^0$
$n = 160^0$
$y + 160^0 = 180^0$
$y + 160^0 - 160^0 = 180^0$
$- 160^0$
$y = 20^0$

8. 1km = 1000m
1 hour = 3600Sec
S = $\frac{54km}{1\ hour}$
$= \frac{54 \times 1000m}{3600Sec} = \frac{3 \times 5m}{1\ sec}$
= 15m/Sec

9. 1 - 4 = ... mod 5
(5 + 1) - 4 = ... mod 5
6 - 4 = 2 mod 5

10. sketch

11. Area of the rectangular floor
A = L x W
= 8m x 5m = $40m^2$
Area of the square tile
A = S x S
10cm x 10cm = $100cm^2$
1m = 100cm
$1m^2 = 10000cm^2$
$40m^2 = 40 \times 10000cm^2$
$= 400,000cm^2$
No of tiles = $\frac{400000cm^2}{100cm^2}$ = 4000 tiles
No of boxes of tiles = $\frac{4000}{20}$ tiles = 200 boxes
Cost of tiles
= sh.40,000 x 200
= sh. 800,000

12. Let the cost of tangerines be m

Tangerine	m
mango	2/3m
Pawpaw	2/3m + 800
Total	sh. 4,300

m+ 2/3m +2/3m+ sh.800 = sh. 4,300
m+2m+2m+800 = sh.4300
$\frac{3xm+2m+2m+sh2400}{3}$
= sh.4300
3m+4m+sh.2400 = sh.4300 x 3
7m + sh.2400 = sh.12900
7m = sh.12900-sh.2400
$\frac{7m}{7} = \frac{sh.10500}{7}$
m = sh.1500

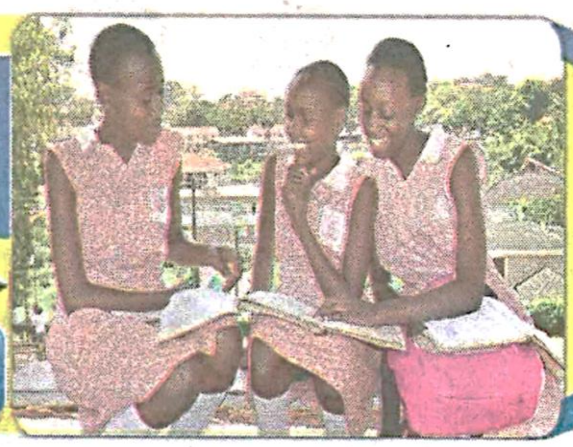
13. He sold 20 such containers of milk that weekend

ISSUE 52

PASS PLE

P6 & P7

Bukedde YOUR GUIDE TO A BETTER LIFE THROUGH EDUCATION



Register your school to participate in the PASS PLE QUIZ at Kitante Primary School on 3rd October 2025

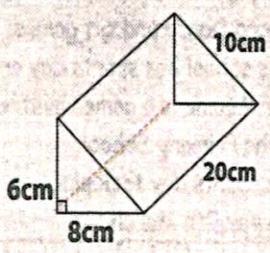
SECTION A

1. Evaluate 3 + 5 x 3

2. Solve 4y - y(4- 2) = 10

3. The L C M of two numbers is 72, their G C F is 12, if one of the numbers is 36, find the second number.

4. Calculate the volume of the solid figure below.



5. Find the complement of y -20^0

6. Express 25 m/s as Km/h

7. The area of a semi circle is 77 dm2. Work out its diameter.

8. Without extending the line, construct a right angle at point R

R ——— T

9. After eating 20% of his sugar cane, Peter was left with 320 gm. How heavy was the whole sugar cane?

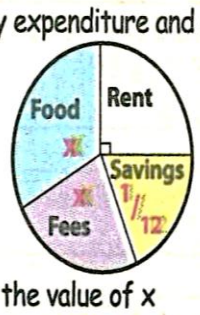
10. Round off 349.67 to the nearest whole number

SECTION B

11. A tin was $^2/_3$ full of sugar. When $\frac{1}{4}$ of the sugar in the tin was used, 240 gms remained. How much sugar was used?

12. Without using a protractor, produce a quadrilateral ABCD where AB=BC=CD=AD, AC=6 cm and BD =8 cm

13. The pie chart below shows Petero's monthly expenditure and savings.



a) Find the value of x

b) If he spends sh.100, 000 more on food than rent, how much money does he save?

ANSWERS TO ISSUE 51 (15H SEPT)

1. 35 ÷ 7 =

```
  05
7 | 35
  -0
  ---
  35
  -35
  ---
   --
```

35 ÷ 7 = 5

2. 2Y - 3 = 21

2y - 3 + 3 = 21 + 3

$\frac{2y}{2} = \frac{24}{2}$

y = 12

3. 106000 + 14 = 106014

5. Z = {1 , 3 , 6}

$nC = 2^n$

$= 2^3$

= 2 x 2 x 2

= 8

6. -10 - -7

= -10 + 7

= -3

7. Ug sh. 36 buy 1 K sh

1 K sh cost Ug sh. 36

Ksh. 14000 will cost

Ug sh. 36 x 14000

= Ug sh. 504,000

Ugsh. 3600 buys 1 USD

Ug sh.1 will buy

1 USD / 3600

Ug sh. 504,000 will buy

1 / 3600 x 504,000)USD

= USD 140 / 140 USD

8. 111_{two} x 11_{two}

111

+111

10101_{two}

9. Hours left to midday

12:00

-11:25

35 minutes

HR	MIN	80min
2	45	- 60min
+	35	20min
3	20	

3 hours and 20 mins OR $3^1/_3$ hours

10. Let the exterior angle be m

Ext<	Int<	100%
m	m+20%	100%

m + m + 20% = 100%

2m+20% - 20% =100% - 20%

2m = 80%

$\frac{2m}{2} = \frac{80\%}{2}$

m = 40%

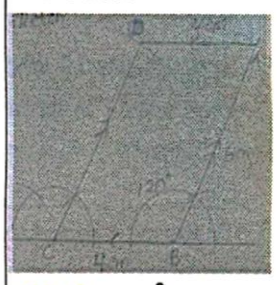
No of sides = $\frac{360^0}{40\% \text{ of } 180^0}$

$= \frac{360^0}{\frac{40}{100} \times \frac{180^0}{1}}$

$= \frac{3600}{720}$ = 5 sides

The polygon has 5 sides

11. Sketch



12. a) $8 \times 10^3 = 8000$

$6 \times 10^1 = 60$

$5 \times 10^0 = + 5$

8065

b) TH TH H T O

8 7 1 0 3

1 x 100=100

7 x 1000=7000

7000 + 100 = 7100

= 7100

÷5 = 1420

There are 1420 fives in sum of the value of 7 and the value of 1 in the numeral 87103

13. Area of the rectangle

A = L x W

= 2(14cm) x 14cm

=28cm x 14cm

= $392cm^2$

Area of the 2 circles

$A = 2(\pi r^2)$

$=2x \frac{22}{7} \times \frac{14}{2}cm \times \frac{14}{2}cm$

$= 2 \times \frac{22}{7} \times 7cm \times 7cm$

= 2 x 22 x 1cm x 7cm

$= 308cm^2$

Area of the shaded part

$392cm^2$

$-308cm^2$

$84cm^2$