

NYABURURU GIRLS FORM 4 LUNCH HOUR 26/02/2020

The following table shows the distribution of marks obtained by 50 students in a test.

Marks	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79
No. of students	3	9	13	15	5	4	1

By using an assumed mean of 62, calculate:

- a) The mean (5 marks)
- b) the variance (3 marks)
- c) the standard deviation (2 marks)

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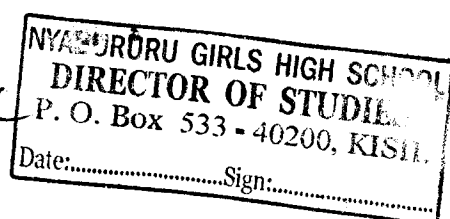
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NYABURURU GIRLS FORM 4 LUNCH HOUR 2/03/2020

1. A number of people working at a factory decided to raise 72000 to buy a plot of land. Each person was to contribute the same amount. Before contributions five people retired from working at the factory and thus did not contribute. The same target of 72000 was still to be met by the remaining.

a) If n stands for the number of people working in the factory originally, show that the increase

in the contribution per person was shs. $\frac{360000}{n(n-5)}$ (3 marks)

b) If the increase in contribution per person was sh.1200, find the number of people originally working at the factory. (4 marks)

Calculate the percentage increase in the contributions per person caused by retirement, giving your answer to one decimal place. (3 marks)

NYABURURU GIRLS FORM 4 LUNCH HOUR 3/03/2020

The table below shows the income tax rates for a certain year.

Taxable pay per month Ksh	Tax rate
1 - 9680	10%
9681 - 18800	15%
18801 - 27920	20%
27921 - 37040	25%
37040 - and above	30%

*by copy
5/3/2020
2/3/2020*

NYABURURU GIRLS HIGH SCHOOL
DIRECTOR OF STUDIES
P. O. Box 533 - 40200, KISUMU
Date:..... Sign:.....

That year Mary paid net tax of Ksh.5,512 p.m. Her total monthly taxable allowances amounted to Ksh.15220 and he was entitled to a monthly relief of Ksh. 162. Every month the following deductions were made.

- NHIF – Ksh.320
- Union dues – Ksh.200
- Co-operative shares – Ksh.7500

a) Calculate Mary’s monthly basic salary in Ksh. (7 marks)

b) Calculate her monthly net salary. (3 marks)

NYABURURU SCHOOL FORM FOUR MAT LUNCH HOUR FRI 24TH JAN 2020

ABCD is quadrilateral with vertices $A(-7, 2)B(-2, 1)C(2, 8)D(-7, 7)$. $A'B'C'D'$ is the image of ABCD under a transformation matrix $\begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix}$

- a) (i) Find the coordinates of $A'B'C'D'$. (2marks)
(ii) On the grid provided draw ABCD and $A'B'C'D'$ (2marks)
- b) (i) Find $A''B''C''D''$ the image of the of $A'B'C'D'$ under the transformation matrix $\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$ (2mks)
(ii) On the same grid draw $A''B''C''D''$ (1mark)
- c) (i) Find the single matrix that maps $A''B''C''D''$ onto ABCD. (2marks)
(ii) Describe the transformation fully. (1mark)

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NYABURURU GIRLS HIGH SCHOOL

FORM FOUR LUNCH HOUR MATHS 27/1/2020

1. Use square roots, reciprocal and square tables to evaluate to 4 significant figure.

$$(0.06458)^{\frac{1}{2}} + \left(\frac{2}{0.4327}\right)^2 \quad (4 \text{ marks})$$

2. A train moving at 20m/s take 15 seconds to completely cross a bridge which is 30m long. What is the length of train in metres (3 marks)

3. The width of a room is 8m less than length. Find the measurement of the room if the area is 48m^2 . (3 marks)

NYABURURU GIRLS HIGH SCHOOL

FORM FOUR LUNCH HOUR MATHS 28/1/2020

1. Three angles of a polygon are 125,140and 160. The remaining angles are 145° each. Calculate the sum of the interior angles of the polygon (3 mks)
2. A bank charges compound interest on money borrowed. A business man borrowed Ksh.16000 from the bank. He paid back Ksh.25000 after 2 years. Find the interest rate per annum. (3 marks)
3. Wanjiku pays for a car on hire purchase in 15 monthly instalments. The cash price of the car is Ksh.300, 000 and the interest rate is 15%p.a. A deposit of Ksh.75, 000 is made. Calculate her monthly repayments.(3 marks)

NYABURURU GIRLS HIGH SCHOOL

FORM FOUR LUNCH HOUR MATHS 29/1/2020

1. Points A and B have coordinates as (1, 5) and (-3, 7) respectively. If AB is the diameter of the circle, find the equation of this circle. (3 marks)
2. Waweru had walked two thirds away across a bridge when he saw an approaching train 60 m away. He ran back only to reach the bridge at the same time as the train was moving at 25 m/s and Waweru ran at 10 m/s, find the length of the bridge. (3 marks)
3. Given that $A = \begin{pmatrix} 2 & 3 \\ 4 & 4 \end{pmatrix}$, $B = \begin{pmatrix} x & 1 \\ 2 & 3 \end{pmatrix}$ and that AB is a singular matrix, solve for x.(4 marks)

NYABURURU GIRLS FORM 4 LUNCH HOUR 10/03/2020

- a) Construct a triangle PQR such that $PQ = 10\text{cm}$, $QR = 9\text{cm}$ and $RP = 8\text{cm}$. (2marks)
b) Construct the locus of the point X such that it is equidistant from Q and R. (2 marks)
c) Construct the locus of the point Y such that $PY = 6\text{cm}$ and mark with the letter Y, the point where the locus meets PR. (2marks)
d) By shading the wanted regions show the region bounded by the three loci by the letter T such that,
 $QT \geq TR$
 $PT \leq 6\text{cm}$
 $\angle PRT \geq \angle QRT$
Label the region required by the letter T. (4marks)

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