

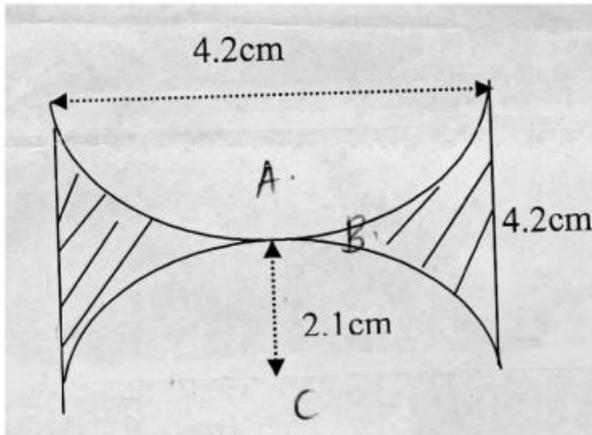
NAME..... ADM:..... CLASS .....

SCHOOL: .....

# FOCUS A365

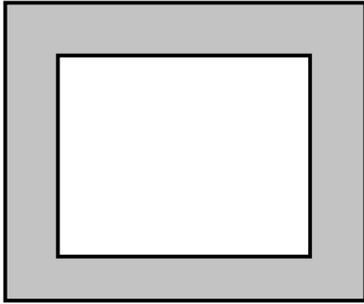
Another Manyamfranchise.Com Evaluation Test

1. Without using tables or calculators evaluate. Give your answer as a mixed number. [3marks]  
$$\frac{-8 \times 4 + 156 + 4 \text{ of } (-36 + 30)}{(-5) - (-8) \times 2 + 6}$$
2. Three consecutive odd numbers add up to 369. Determine the three numbers. [2marks]
3. In the figure below. Calculate the area of the shaded part. [3marks]



4. The interior angles of an irregular polygon are  $80^\circ$ ,  $130^\circ$  and the rest are each  $138^\circ$ . Determine the number of sides of the polygon. [3marks]
5. The ration of boys to girls in Ratanga Mixed Secondary School is 4:5. One day  $\frac{1}{3}$  of the boys and  $\frac{1}{5}$  of the girls were absent,  $\frac{3}{4}$  of the 8 less pupils had been absent. Calculate the number of pupils in Ratanga on that day. [3marks]
6. Find the L.C.M of the following;  $18$ ,  $12x^2p$ ,  $3p^3$
7. Arrange the following fractions in descending order. [3marks]  
 $\frac{7}{12}$ ,  $\frac{9}{16}$ ,  $\frac{1}{20}$ ,  $\frac{5}{18}$
8. During a certain ceremony, goats and chicken were slaughtered. The number of heads for both goats and chicken was 45. The total number of legs was 100. Determine the exact number of goats and chicken slaughtered. [4marks]

9. The diagram below shows a square flower garden surrounded by a path 2M wide. Given that the area of the plot of land is  $784\text{m}^2$ . Find the area of the flower garden. [4marks]



10. Simplify completely. [3marks]

$$\frac{2ax + 3bx - 2ay - 3by}{y - x}$$

11. In a class of 43 students there are 5 girls more than boys. Every boy pays Ksh. 2,400 for uniform and every girl pays Sh. 3,000. How much is paid for uniform in this class?

[3marks]

12. A trouser whose marked price is Kshs 800 is sold to a customer after allowing him a discount for 13%. If the trader makes a profit of 20%, find how much the trader paid for the trouser. [4marks]

13. Solve the simultaneous equations. [4marks]

$$\frac{p}{q + 1} = \frac{1}{4}, \quad \frac{p - 3}{p + q} = \frac{2}{3}$$

14. Evaluate.  $\frac{28 - (-18)}{-2} - \frac{-15 - (-2)(-6)}{3}$  [3marks]

15. A Kenyan bank buys and sells foreign currencies as shown below.

Buying in Kshs	Selling in Kshs
1 Hongkong Dollar 9.74	9.77
1 South Sfrican rand 12.03	12.11

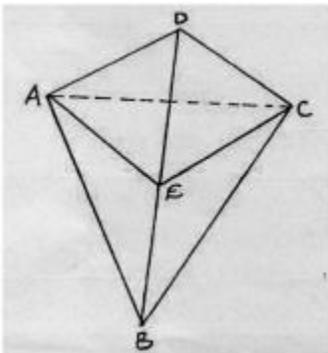
A tourist arrived in Kenya with 105,000 Hongkong Dollars and changed the whole amount of Kenya Shillings. While in Kenya he spent Kshs. 403,879 and changed the balance to South African Rand before leaving for South Africa. Calculate what he received. [3marks]

16. Three businessmen Njoroge, Mwaura and Kimani contributed a total of Sh. 82,250 to start a business. The ratio of the contribution of Njoroge to Mwaura was 2:3 and that of Mwaura to Kimani was 4:5. How much did Kimani contribute? [3marks]

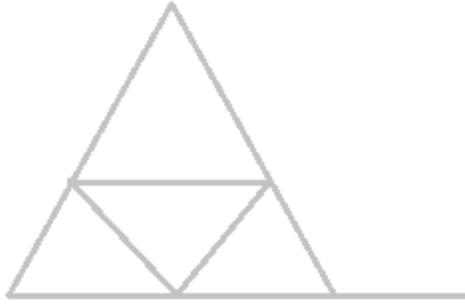
17.

- a. Write the odd numbers in descending order between 1 and 10 inclusive. [1mark]
- b. Round off the number formed to 3-significant figures. [1mark]

- c. Find the total value of digit 7 in the new number in 17(b) above. [2marks]
18. The L.C.M. of three numbers is 360 and G.C.D of the same number is 2. If one of the numbers is 40, find the other 2 numbers. [3marks]
19. Divide  $10\frac{10}{27}$  by  $2\frac{7}{9}$ , then add the result to the product of  $6\frac{2}{3}$  by  $\frac{4}{25}$ , Find three quarters of the result and leave your answer as a fraction. [3marks]
20. Express the following recurring decimal as a fraction in its simplest form. [3marks]  
 $0.\dot{1}5\dot{3}$
21. Given that 0.05 litres of water is poured into an empty measuring cylinder. A piece of metal with mass 135g is put into the cylinder. If the density of the metal is  $9600\text{kg/m}^3$ , find the new reading of the cylinder. [3marks]
22. The length of a rectangle was increased by 30% while its width decreased by 15%. Determine the % change in the area of the rectangle. [3marks]
23. Using a ruler and a pair of compasses only, draw a parallelogram ABCD in which  $AB=8\text{cm}$ ,  $BC=6\text{cm}$  and  $\angle BAD=75^\circ$ . Drop a perpendicular from D to meet AB at N. Determine the length DN. [3marks]
24. Evaluate without using mathematical tables or calculators, the square root of;  
 $\frac{0.0273 \times 1.152}{1.3 \times 1.68}$  [3marks]
25. Express the number 1470 and 7056 each as a product of its prime factors. Hence evaluate  $\frac{1470^2}{\sqrt{7056}}$ , leaving the answer in prime factor form. [3marks]
26. The figure below shows a solid made by pasting two equal regular tetrahedron [2marks]



Draw a net of the solid

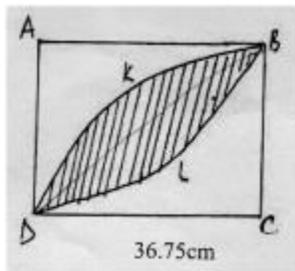


27. Three mountains Mikai, Kembo and Chaka in a village are situated in such a way that Kembo is 900m on a bearing of 1200 from Mikai. T. Chaka is 1200m on a bearing of 0300 from Kembo.

- a. Draw a sketch showing the position of the three mountains [3marks]
- b. Calculate the distance of Mt. Chaka from Mt. Mikai. [2marks]

28. A salesman gets a commission of 2% on sales up to Sh. 100,000. He gets additional commission of 1.5% on sales above this. If he sells good worth Sh. 360,000 and allows a discount of 2%, calculate the amount of commission he received. [3marks]

29. The figure drawn below is a square ABCD of sides 36.75 cm. the shaded area is formed out of two segments. DCB and DKB. Find the area of the shaded region. [3marks]



30. Evaluate without using tables or calculators [3marks]

$$\frac{\sqrt{45} \times (2.04)^2}{2.89 \times \sqrt{0.05}}$$

31. Momanyi spent one eighth of his February salary on farming, half on school and two thirds of the remainder on food. Calculate his February salary and the amount he spent on school fees if he spent Sh. 3200 on food. [3marks]

32. Makau, Wanjiru and Kemboi start a race at 9.03 a.m in the same direction to run round a circular course. Makau makes the circuit in 252 seconds, Wanjiru in 308 seconds and Kemboi in 198 seconds. If they start from the same point, at what time will they next be all at the starting point together? [3marks]