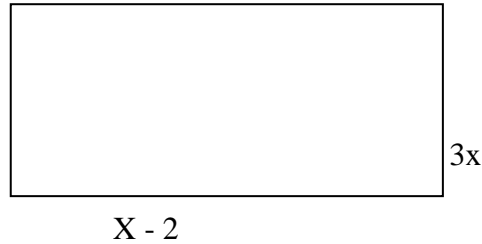


MUCHINGA JETS FAIR, 2014

PRIMARY OLYMPIADS MATHEMATICS

ANSWER ALL QUESTIONS

1. The diagram below shows the rectangular polygon measuring $x - 2$ and $3x$



(a) Calculate

(i) The area 2 marks

(ii) The perimeter 2 marks

(iii) if the perimeter of the rectangle is 20. Find the value of x

(b) Anne is x years old and Benny is 3 years younger than Anne. Write the expression in terms of x in its simplest form for the sum of ages

(i) at present 2 marks

(ii) after 5 years 2 marks

2.(a) simplify $2x - 3y(x - 2) - 6y$ 2 marks

(b) factorize $2y^2 - 2$ 2 marks

(c) Find the volume of a box measuring 0.2m by 1.2m by 0.5m expressing your answer in centimeters. 2 marks

(d) Chanda bought a shirt at K50, 000 and later sold it at K75, 000.

(i) calculate the percentage profit 1 mark

(ii) if he was paid in dollars at an exchange rate of K3, 550 per dollar. How much did he get? 1 mark

(e) Solve $-12 - (-30) + (-25)$ 2 mark

MUCHINGA JETS FAIR, 2014

PRIMARY SCIENCE OLYMPIAD

ANSWER ALL QUESTIONS

1. (i) Draw a plant cell and label all the parts. 4 marks
- ii) Which part of the plant cell controls all the cell activities? 1 mark
- iii. Name the solution found in the vacuole 1 mark
- iv. What is protoplasm made of? 2 marks
- v. what is a cell? 2 marks
- vi. list the three main sources of water vapour in the atmosphere. 3 marks
- vii. mention the processes in the water cycle. 3 marks
2. i. A block of ice has a mass of 40.5g. the density of ice is 0.9g/cm^3 . find the volume of the block.(show your working) 3 marks
- ii. a boy fills a tin which measures 8cm x 3cm x 2cm with water. Taking the density of water as 1g/cm^3 , find the mass of the water in the tin. (show your working). 3 marks
- iii. what is the power of a heater connected to 240V mains if a current of 8A flows through it. (show your working) 3 marks
- iv. the rating on an electrical appliance is 8W. what the voltage across the appliance when a current of 2A flows through it. (show your working). 3 marks