

HOLY GHOST ACADEMY AMAOKPALA
TAKE HOME ASSIGNMENT FOR SS 3 STUDENTS

MATHEMATICS

1. Simplify the following

- a. $\sqrt{99} - \sqrt{44} - \sqrt{11}$
- b. $2\sqrt{54} + \sqrt{24} - \sqrt{216}$
- c. $2\sqrt{135} - 2\sqrt{60} + \sqrt{15} - \sqrt{240}$
- d. $2\sqrt{8} - 3\sqrt{32} + 4\sqrt{50}$
- e. $\sqrt{10} \times 3\sqrt{2} \times \sqrt{20}$
- f. $(4\sqrt{3})^2$

2. Simplify the following by rationalizing the denominator

- a. $\sqrt{18} \times \sqrt{20} \times \sqrt{24} / \sqrt{8} \times \sqrt{30}$
- b. $\sqrt{3} + 1/\sqrt{3} - 1/\sqrt{27}$
- c. $\sqrt{3} \times \sqrt{18} \times \sqrt{39} / \sqrt{24} \times \sqrt{26}$
- d. $(\sqrt{6} - \sqrt{5})(\sqrt{8} + \sqrt{15})$
- e. $(4\sqrt{3} + 2\sqrt{5})(4\sqrt{3} - 2\sqrt{5})$

3. Simplify the following by rationalizing the denominator

- a. $\sqrt{5} / \sqrt{15} - \sqrt{10}$
- b. $\sqrt{3} + \sqrt{5} / \sqrt{5} - 2$
- c. $2\sqrt{5} + \sqrt{3} / 5\sqrt{3} - 3\sqrt{5}$
- d. If $\sqrt{5} = 2.236$, evaluate $\sqrt{7} \times \sqrt{23} - \sqrt{1} / 8$ correct to 2 d.p
- e. $\sqrt{1.225} = 1.107$, $\sqrt{12.25} = 3.5$ and $\sqrt{100} = 10$, evaluate $\sqrt{1225}$

4. Draw a sketch in each question. Leave the answers in surd form with rational denominators

- a. ABC is an isosceles triangle with $|AB| = |AC| = 6\text{cm}$ and angle $BAC = 120^\circ$. Calculate the length of BC
- b. X and Y are two points on level ground, both due south of a flagpole. The angle of elevation of the top of the flagpole is 60° from X and 45° from Y. If X is 20m from the foot of the flagpole, find $|XY|$.

FINANCIAL ACCOUNTING

1. Explain the advantages of departmental Account
2. Outline the format of departmental account

ASUSU IGBO

Guo ma chikota akwukwo 'AchowaisiOchu' nke Chinedum Ofomata

ECONOMICS

1. Define and explain the following terms
 - (i) Human capital
 - (ii) Physical capital
2. List and explain five characteristics of human capital

CIVIC EDUCATION

1. In details, discuss public service
2. Political Apathy
3. Popular participation

AGRICULTURAL SCIENCE

1. Discuss two methods of animal improvement
2. Enumerate five advantages of artificial insemination

LITERATURE IN ENGLISH

Trace the historical relevance of the Greek gods and goddesses to Shakespeare

PHYSICS

1. Explain the working principle of oscilloscope
2. Define the capacitance of a capacitor
3. The electric field intensity in a place where a charge 10^{-10}C experience a force of 0.4 N is?
Calculate the force acting on an electron of charge $1.5 \times 10^{-19}\text{C}$ placed in an electric field of intensity 10^5Vm^{-1}

CHEMISTRY

1. Briefly discuss crude oil exploration and drilling
2. List all the fraction of crude oil stating the temperature ranges of each fraction

ANIMAL HUSBANDRY

1. Make a calendar of farm animal diseases under the following headings
 - (i) Disease
 - (ii) Causal organism
 - (iii) Symptoms
 - (iv) Animals affected
 - (v) Mode of transmission
 - (vi) Control

GEOGRAPHY

- 1(a). What is Volcanicity?
- (b). Describe with the aid of diagrams four intrusive landforms of volcanicity
- (c). Highlight any 3 Extrusive Landforms
- 2(a). Write short note on Caldera
- (b). What is Limestone Region?
- (c). Discuss any four characteristics of Karst Region

CHRISTIAN RELIGIOUS STUDIES

Read the biblical passage below and relate its synoptic account

Matthew 28:1-10

Mark 16:1-14

Luke 24:1-35

ENGLISH LANGUAGE

1. Write down all the vowel sounds, their spelling symbols with at least ten examples of words where the sounds are found.
2. Write down all the consonant sounds, their spelling symbols with at least ten examples of words where the sounds are found.
3. In not more than 500 words, pick any 3 topics of your choice from the listed topics below and write on:
 - ✓ Education Today: Any significance?
 - ✓ Technological Advancements: Its Pros and Cons
 - ✓ Technology: A Tool for Educational Advancement
 - ✓ Quick Money Syndrome: What Technology has caused; what Education can solve.
 - ✓ A Working Education: My Role as a Teacher
 - ✓ Educational Technology: A Mission for all