

# EDUCATION-NEWS CONSULT

## MARKING SCHEME MATHEMATICS

### QUESTION 1a.

- i.  $7.5678 = 7.57$  three significant figures .....A1
- ii. Ratio = x:3 (Paul and Peter)  
Total ratio = x+3  
Peter =GHC 1800  
the total money = GH¢2400 .....M ½  
 $1800 = \frac{3}{x+3} \times 2400$  ..... B ½  
 $1800(x + 3) = 3(2400)$ .....B ½  
 $1800x + 5400 = 7200$ .....B ½  
 $1800x = 7200 - 5400$ ..... B ½  
 $1800x = 1800$ ..... B ½  
 $\frac{1800}{1800}x = \frac{1800}{1800}$ ..... B ½  
 $x = 1$ ..... A ½  
The value of x is 1 [4MARKS]

### QUESTION 2a.

- Adom monthly salary = GH¢2500  
Arko monthly salary =  $3(2500) = \text{GH¢}7500$ ..... B 1  
Adom's total salary for 5 years =  $5 \times 12 \times 2500 = \text{GH¢}150,000$ .....M ½ A ½  
Arko total salary for 5 years =  $3(150,000) = \text{GH¢}450,000$ ..... M ½ A ½  
Total salary =  $150,000 + 450,000 = \text{GH¢}600,000$  .....M 1 A 1 =5MARKS

### QUESTION 2b(i)

- Angle ACB is on straight line with  $120^\circ$ , let angle ACB = y  
 $y + 120^\circ = 180^\circ$ .  
 $y = 180 - 120$ . .....M ½  
 $y = 60^\circ$ .....A ½  
Also, angle ABC is with straight line with  $135^\circ$   
Let angle ABC =z  
 $135 + z = 180$ . .....M ½  
 $z = 180 - 135$ . .....M ½  
 $z = 45^\circ$ .....A 1  
But;  $\angle BAC + \angle ACB + \angle CBA = 180$   
 $x + 60 + 45 = 180$   
 $x + 105 = 180$ . .....M ½  
 $x = 180 - 105$ . .....M ½  
 $x = 75^\circ$ .....A 1 = 4MARKS

### QUESTION 2b(ii)

- Angle  $\beta = 80^\circ$  alternate angle .....A ½  
 $\gamma + 65 + 80 = 180$ .  
 $\gamma + 145 = 180$ .  
 $\gamma = 180 - 145$ .  
 $\gamma = 35^\circ$ .....A 1  
 $\alpha + \beta + \gamma = 180$ .  
 $80 + 35 + \alpha = 180$ .  
 $\alpha + 115 = 180$ .  
 $\alpha = 180 - 115$ .

$\alpha = 65^\circ$ .....A1 =2MARKS

QUESTION 2c.

$$3x^2 + 2xz - 12xy - 8yz.$$

$$(3x^2 + 2xz) - (12xy + 8yz). \dots\dots\dots\text{B1}$$

$$x(3x + 2z) - 4y(3x + 2z). \dots\dots\dots\text{M 1}$$

$$(3x + 2z)(x - 4y). \dots\dots\dots\text{A 1 =3MARKS}$$