



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**Qualification Code** :  
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**Unit Code** :  
**Unit of Competency** : Demonstrate Numeracy skills

**WRITTEN ASSESSMENT**

**ASSESSOR'S GUIDE**

**SECTION A: (40 Marks)**

*Attempt all the questions in this section*

1. The ratio of John's earnings to Mary's earnings is 5: 3. If John's earnings increase by 12%, his new figure becomes sh.5600. Find the corresponding percentage change in Mary's earnings if the sum of their new earnings is sh.9600. (4mks)

**John's earnings before the increase is  $100/112 \times 5600 = \text{shs.5000}$  John's earnings/Mary's earnings = 5/3**

**Mary's earnings before the increase =  $3/5 \times 5000 = \text{sh.3000}$**

**Mary's new earnings =  $9600 - 5600 = \text{sh.4000}$**

**Mary's change in earnings =  $4000 - 3000 = 1000$**

**Percentage change in Mary's earnings  $1000/3000 \times 100 = 33\%$**

2. Evaluate  $\frac{-12 \div (-3) \times 4 - (-20)}{-6 \times 6 + (-6)}$

(4mks)

$$\frac{16 + 20}{-12 - 6}$$

$$\frac{36}{-18}$$

$$=-2$$

3. The area of a rectangular garden is  $1384.74 \text{ m}^2$ . If its length is  $44.1\text{m}$ , find its width (4mks)

Area of a rectangle =  $L \times W$

**Length =  $44.1\text{m}$**

**Area =  $1384.74\text{m}^2$**

**Width =  $1384.74\text{m}^2 / 44.1\text{m} = 31.4\text{m}$**

4. Solve for the unknown in the equation:  $2 \times \frac{3y}{5} - \frac{14y-3}{4} = y-1$  (4mks)

**Solution:**

**L.C.M = 20**

$$2 \times \frac{3y}{5} \times 20 - \frac{(14y-3)}{4} \times 20 = (y-1) \times 20$$

$$30y - 4(14y - 3) = 5(y - 1)$$

$$30y - 56y + 12 = 5y - 5$$

$$30y - 56y - 5y = -5 - 12$$

$$-31y = -17$$

$$y = \frac{17}{31}$$

5. A ship P is due south of the lighthouse L. A ship Q is  $4.8\text{km}$  due East of L. The bearing of Q from P is  $030^\circ$ . P sails directly towards Q. Find the distance of P from L when its bearing from L is  $110^\circ$  (4mks)