



**higher education  
& training**

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**GENERAL EDUCATION AND TRAINING CERTIFICATE  
NQF LEVEL 1**

**AET LEVEL 4 SITE-BASED ASSESSMENT**

**LEARNING AREA : MATHEMATICS AND  
MATHEMATICAL SCIENCES**

**CODE : MMSC4**

**TOOL : WORKSHEET**

**DURATION : 2 HOURS**

**MARKS : 50**

**This assessment tool consists of 5 pages.**

**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions on this WORKSHEET and hand in the completed task.
2. Write the CENTRE and your NAME in the space provided.
3. Calculators may be used unless otherwise stated.
4. Show ALL calculations.
5. Write legible and present your work clearly.
6. This worksheet is covering US 7453

1.1.1 Copy and complete the table below

Number of seats( $n$ )	1	2	3	4	5
Number of cubes( $c$ )	11✓	14✓	17	20✓	23✓

(4)

1.1.2 Number of seats, multiply by 3 (common difference), we add 8.✓✓

(2)

1.1.3 In an equation  $T_n = a + (n - 1)d$ ,  $d$  is the common difference,  
Calculate:

$$d = T_2 - T_1$$

$$d = 14 - 11$$

$$d = 3✓$$

$$d = T_4 - T_3$$

$$d = 20 - 17$$

$$d = 3✓$$

(2)

1.1.4  $a = 11✓$  CA

(1)

1.1.5  $T_n = a + (n - 1)d$   
 $T_n = 11 + (n - 1)3 ✓$   
 $T_n = 11 + 3n - 3 ✓$   
 $T_n = 3n + 8$  or  $C = 3n + 8✓$

(3)

1.1.6  $T_n = 3n + 8$   
 $T_{13} = 3(13) + 8✓$   
 $T_{13} = 39 + 8✓$   
 $T_{13} = 47✓$   
 $\therefore$  Seat number 13 will have 47 cubes.

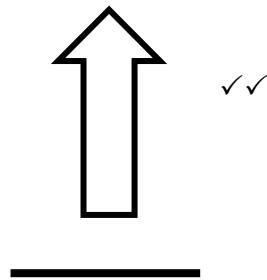
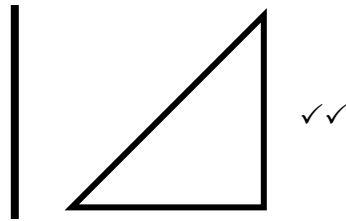
(3)

1.1.7  $T_n = 3n + 8$   
 $3n + 8 = 128✓$   
 $3n = 120✓$   
 $n = 40✓$   
 128 rectangular prisms can be used to make 40 seater couch.

(3)

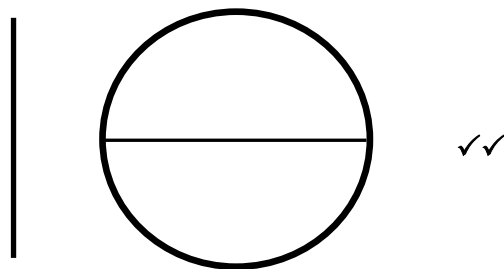
**ACTIVITY 2**

2.1.1



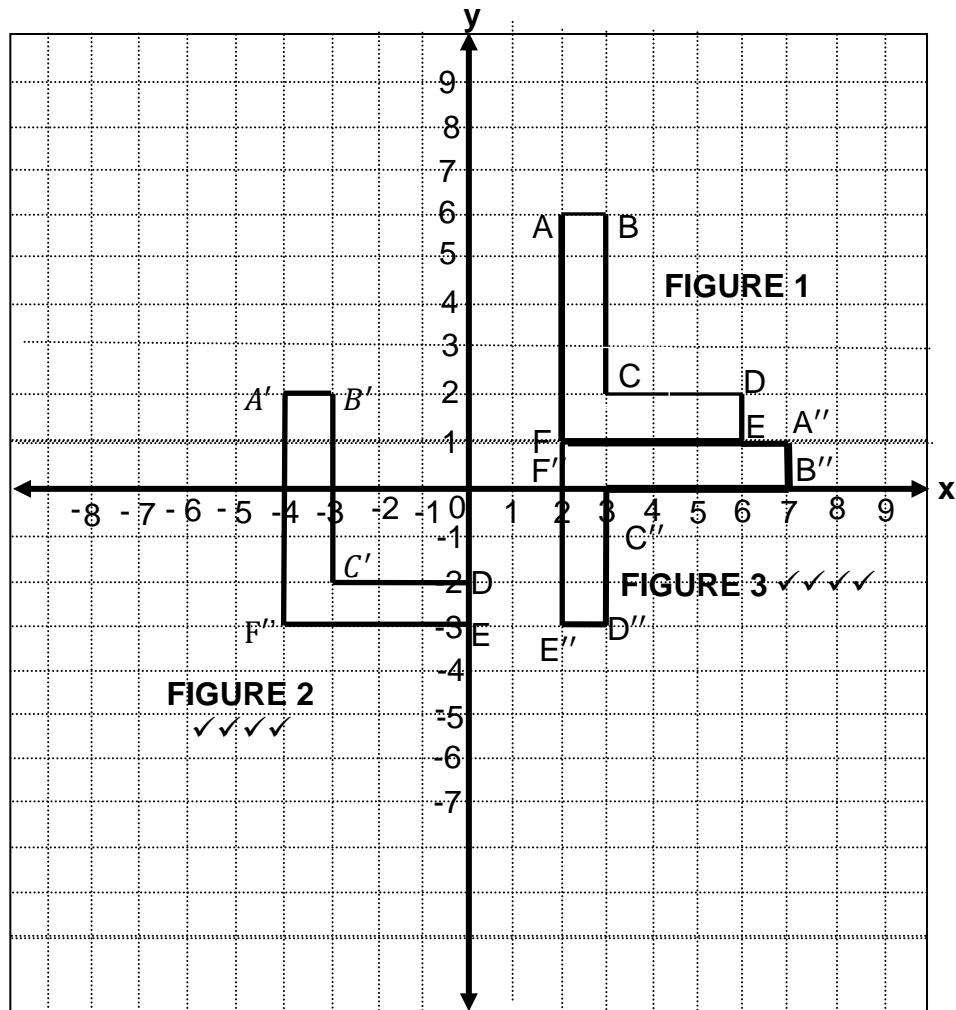
(4)

2.1.2



(2)

2.2.1-  
2.2.3



(8)

4 Marks for translation

4 Marks for rotation

2.3.4 Write down the coordinates of the image of this figure.

$$A' = (-4; 2) \checkmark$$

$$B' = (-3; 2) \checkmark$$

$$C' = (-3; -2) \checkmark$$

$$D' = (0; -2) \checkmark$$

$$E' = (0; -3) \checkmark$$

$$F' = (-4; -3) \checkmark$$

(6)  
[20]

**ACTIVITY 3**

3.1.1  $40 \text{ minutes} = \frac{40}{60}h \checkmark$

$40 \text{ minutes} = \frac{2}{3}h \text{ or } 0,6h \checkmark$

$\therefore S = \frac{D}{T}$

$S = \frac{450km}{3,6h} \checkmark$

$S = 125km/h \checkmark \checkmark$  (5)

3.1.2

$T = \frac{D}{S} \checkmark$

$T = \frac{150km}{90km/h} \checkmark$

$T = 1,66h \checkmark$

$\therefore 0,66h = 0,66 \times 60$

$0,66h = 40 \text{ minutes}$

$T = 1 \text{ hours } 40 \text{ minutes} \checkmark \checkmark$  (5)

3.1.3 Time travelled will be shorter  $\checkmark \checkmark$

(2)

**[12]**

**TOTAL 50**