



**Adult Education and Training (AET)
Site-Based Assessment
Portfolio of Evidence**

Mathematical Literacy: NQF Level 1
Total: 50 marks
Duration: 7 hours
Task 1: Assignment

Learner Information

Name : _____
Surname : _____
**Identity/
Passport Number** : _____
Employee Number : _____
Company : _____
Centre : _____
Date : _____

Declaration

I declare that this portfolio of evidence is my own work: _____

Signature



INSTRUCTIONS

1. This task consists of **THREE ACTIVITIES**.
2. Complete **ALL** questions in each **ACTIVITY**.
3. Learners should work on **ALL** activities individually.
4. You may use a calculator but show **ALL** your working.
5. Round off your answers to **TWO** decimal places (where necessary).
6. Write your answer in the simplest form.
7. Adhere to the numbering system used in this question paper.



ACTIVITY 1: DISABILITY IN SOUTH AFRICA

As part of Census 2016, surveys were done on various disabilities in South Africa. The table shows the degree of difficulty people had with the activities of seeing, hearing, and walking or climbing stairs.

Use Table 1 below to answer questions 1.1 - 1.5.

Table 1: Disability type and degree of difficulty in functioning, Census 2016

Disability type	Degree of difficulty	Number	%
Seeing	No difficulty	44 515 133	89,67
	A lot of difficulty	827 550	1,67
	Cannot do at all	69 603	0,14
	Other	4 231 647	8,52
	Total	49 643 933	100,0
Hearing	No difficulty	47 740 157	96,17
	A lot of difficulty	307 786	P
	Cannot do at all	62 653	0,13
	Other	1 532 994	3,09
	Total	49 643 590	100,0
Walking or climbing stairs	No difficulty	46 949 307	94,57
	A lot of difficulty	Q	1,46
	Cannot do at all	172 647	0,35
	Other	1 793 118	3,61
	Total	49 642 600	100,0

(Source: Stats SA Community Survey 2016, Table 4.1)

Answer the following questions and show ALL calculations.



1.1 Write the following number in words:

The number of people who have no difficulty with hearing.

(1)

1.2 The total population of South Africa was 55,6 million in 2016.

(a) Write the given population of South Africa in numbers.

(1)

(b) What percentage of the South African population participated in the survey focused on the seeing activity?

(2)

1.3 Which of the three types of disability affects the most people? Circle the letter for the correct answer.

- A Seeing
- B Hearing
- C Walking or climbing stairs

(1)



1.4 Two of the values in Table 1 have been left out. Calculate the missing values. Show **all** calculations.

(a) Calculate the value of P.

(3)

(b) Calculate the value of Q.

(3)

1.5 How many **more** people have a lot of difficulty seeing than a lot of difficulty hearing? Show working.

(2)

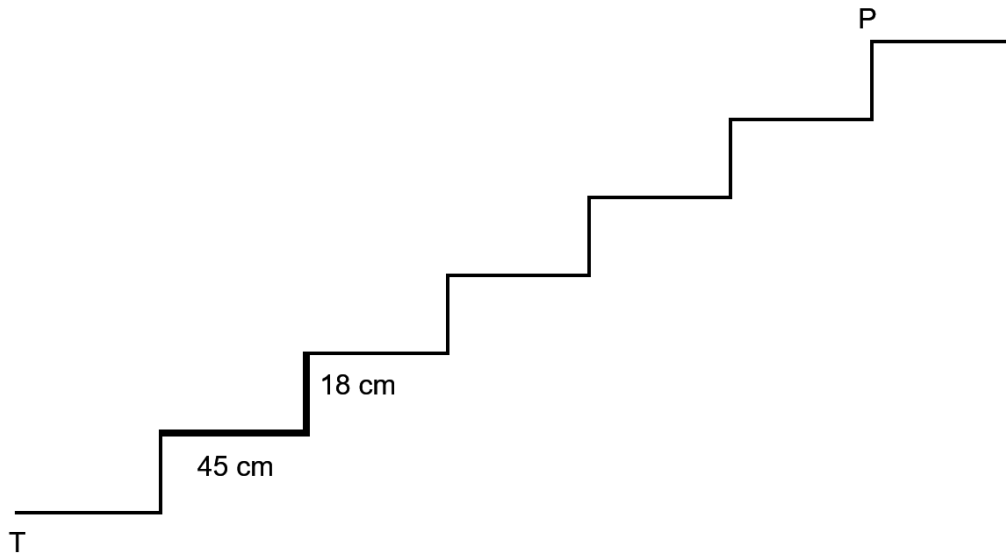
1.6 **Example:** In the 'seeing' category, the ratio of people who cannot see at all to those who are in the 'other' category, is approximately 70 000 to 420 000, which is 1 : 6.

Estimate the ratio of people who have a lot of difficulty hearing to those who cannot hear at all. Show your working.

(2)



- 1.7 The diagram shows stairs up to a shop. The tread or width of each stair is 45 cm and the height 18 cm.



- (a) Determine the displacement (or actual distance) from point T to point P, correct to the nearest whole number. Use the Theorem of Pythagoras.

(4)

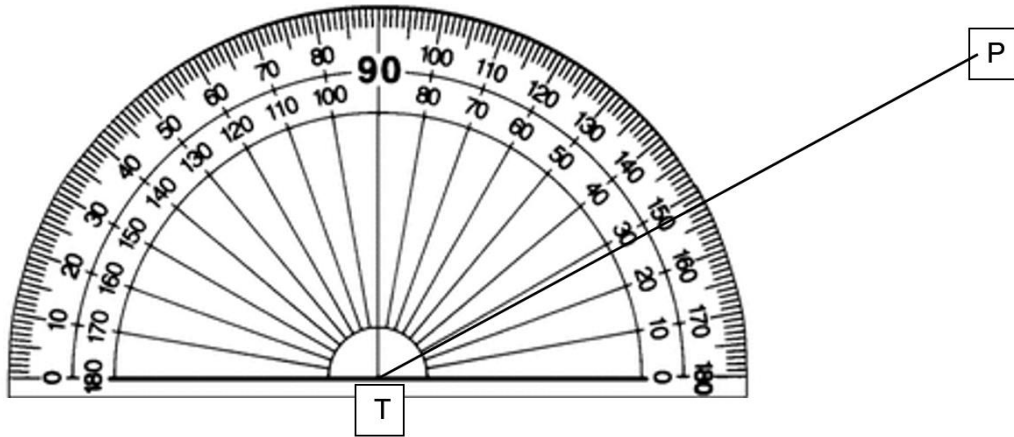
- (b) The recommended ratio of height to width for stairs is 7:11.

Circle the correct statement. **Show working to justify your answer.**

- A. The stairway shown is steeper than recommended, so it is not safe.
B. The stairway shown is less steep than recommended, so it is safe.

(3)

- c) Measure the angle of the stairway on the protractor shown below, by finding the angle of line TP with the horizontal. .



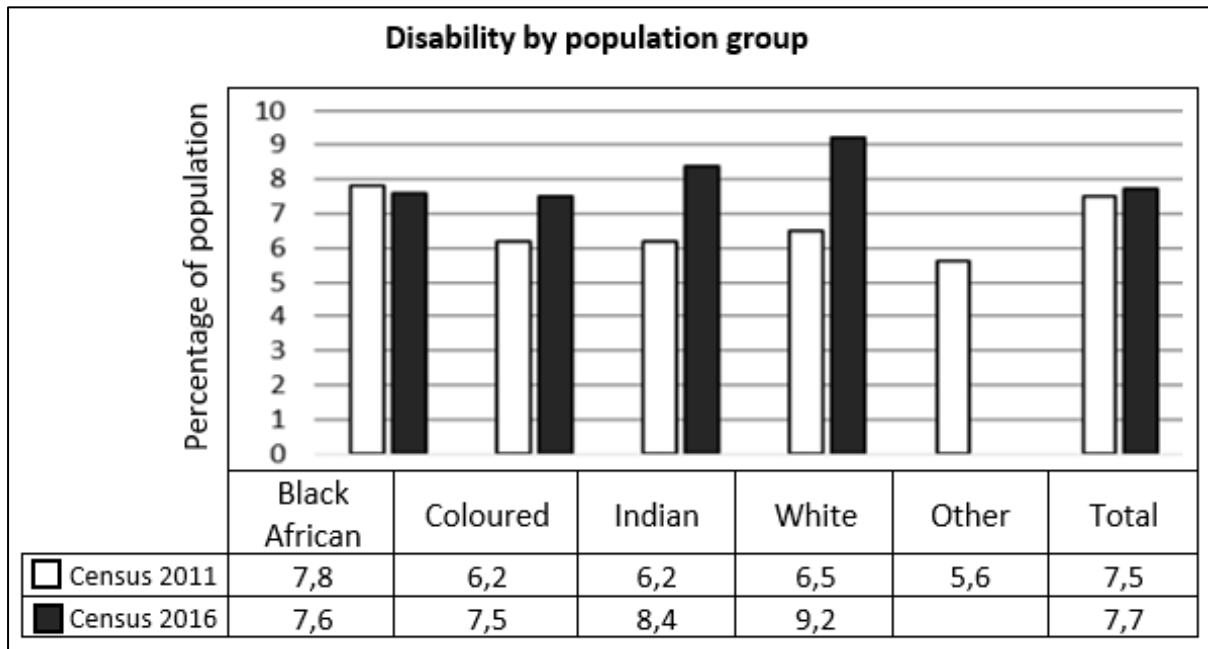
(1)

Total Marks for Activity 1

[23]

ACTIVITY 2: DISABILITY BY POPULATION GROUP

Look at the double bar graph showing percentages of disability by population group for Census 2011 and Census 2016.



(Source: Stats SA Community Survey 2016, Figure 4.4: Disability by population group)

2.1 What percentage of the Coloured population was disabled in 2011?

(1)

2.2 What percentage of the total population was disabled in 2016?

(1)

2.3 The change in disability among White people from 2011 to 2016 is

- A increasing.
- B unchanged.
- C decreasing.

(1)

- 2.4 **TRUE or FALSE:** There were more White people with disabilities than Black Africans with disabilities in 2016. Justify your answer.

(2)

- 2.5 If the disability level among the Black African population continues to change in the same way as shown in the table, predict the percentage of Black Africans with disabilities in 2021.

(1)

Total Marks for Activity 2

[6]



ACTIVITY 3: HELPING THE COMMUNITY

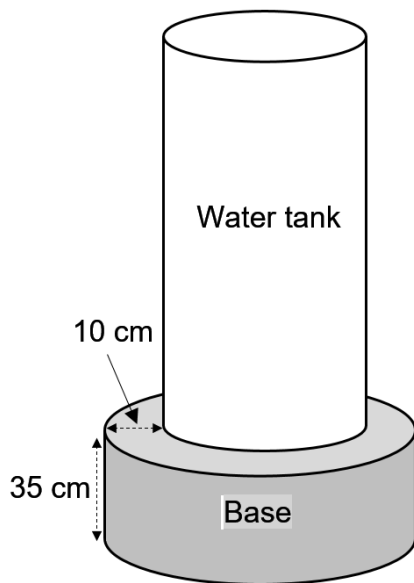
- 3.1 A community group is painting classrooms. One 20 litre can of costs R1 699,00. It is then reduced by 6%. Determine the new cost of a 20 litre can.

(2)

- 3.2 A community group builds a concrete cylindrical base for a water tank, as shown in the diagram below. The radius of the tank is 38 cm. The base is 35 cm high and 10 cm wider than the tank all round.

- 3.2.1 Determine the volume of the concrete base in cubic metres, correct to 1 decimal place.

$1 \text{ m}^3 = 10^6 \text{ cm}^3$. Use the formula $V = \pi r^2 h$ where $\pi = 3,14$



(6)

3.2.2 The concrete mixture to be used has cement : sand : stone in the ratio
1 : 3 : 3. Determine the following:

- (a) The amount of cement required to mix with 6 wheelbarrows of sand and 6 wheelbarrows of stone.

(1)

- (b) How much stone will be required to produce 2 m³ of concrete? Give the answer correct to 2 decimal places.

(2)

3.3

3.3.1 The community clinic keeps a record of the number of people who visit the clinic each week.

- (a) Complete the tally and frequency table.

	Tally	Frequency
Week 1	HHH	
Week 2	HHH HHH	
Week 3		45
Week 4		14

(4)

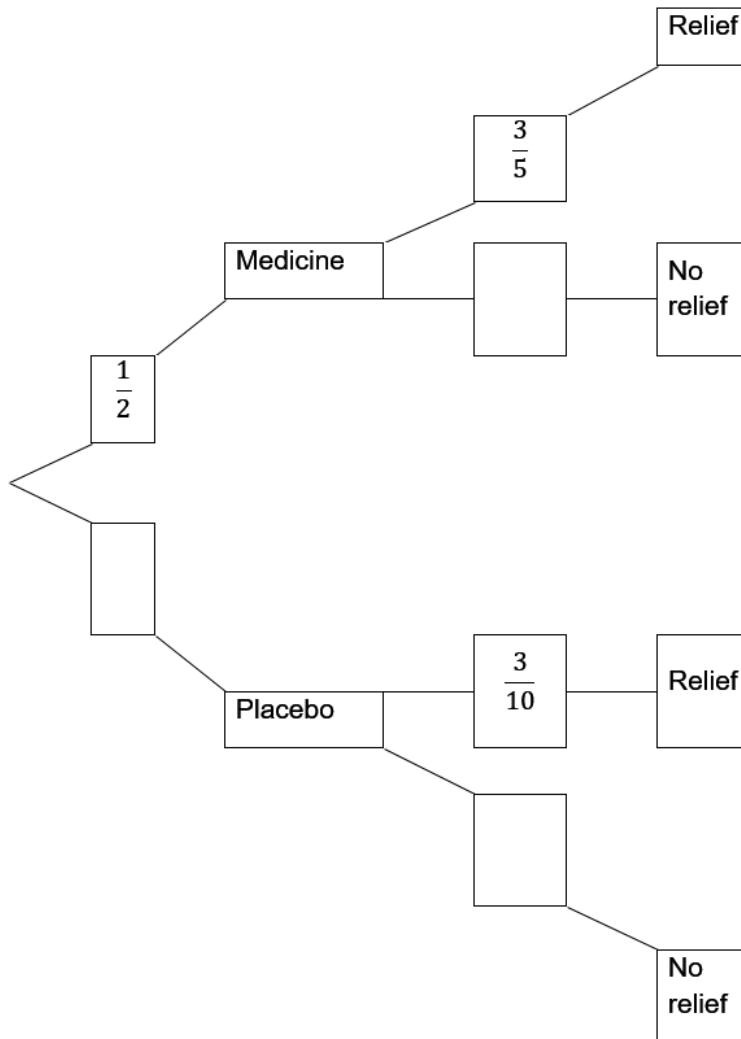


- (b) Give a possible reason for the unusual figures for week 3.

(1)

3.3.2 Researchers test a new medicine for the relief of flu symptoms. They give the medicine to 100 people and record its effectiveness. They also give a placebo, which is a similar looking tablet that has no effect, to 100 people. 60% of the people who take the new medicine report relief from symptoms. 30% of the people who take the placebo report relief from symptoms.

- (a) Complete the tree diagram with the correct relative frequencies.



(3)



- (b) What is the probability that someone takes the placebo and experiences relief? Show working.

(2)

TOTAL MARKS FOR ACTIVITY 3 **(21)**

TOTAL MARKS FOR TASK 1 **[50]**



Total for Task 1: 50 Marks

	Activity	Maximum Mark	Learner's Mark	Moderated Mark
Task 1	Activity 1	23		
	Activity 2	6		
	Activity 3	21		
	Total: Task 1	50		

