BENCHMARK
ASSESSMENT AGENCY

Adult Education and Training (AET)

Site-Based Assessment

Portfolio of Evidence

Mathematical Literacy:	**NQF Level 1**
Total:	**50 marks**
Duration:	**5 hours**
Task 3:	**Project**

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 **TWO 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: EDUCATIONAL LEVEL

Use the table below to answer questions 1.1 - 1.4.

Age	Census	No schooling	Primary education	Secondary education	Bachelor's degree or higher	Total
35 – 44 year olds	1996	789 246	2 743 702	896 344	124 748	4 554 040
	2016	292 099	6 180 422	3 451 728	331 169	10 255 418
45 – 54 year olds	1996	703 320	1 468 677	455 874	69 797	2 697 668
	2016	518 349	2 130 717	913 496	171 424	3 733 986

(Source: Community Survey, 2016: Statistics SA)

1.1 Refilwe is 47 years old. Give **in words** the number of people in the same age group as Refilwe, who had a primary education in the **2016** census.

                                                                    (1)

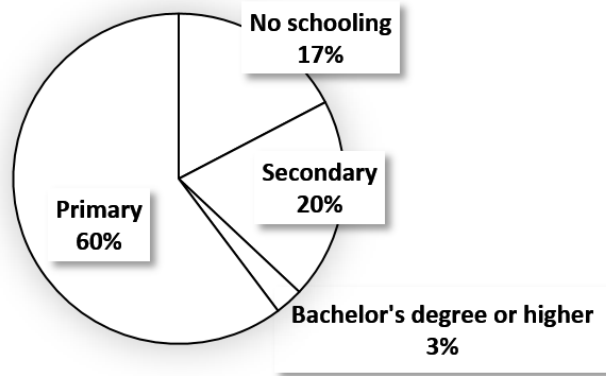1.2 Give the number of people aged 35 – 44 in the 1996 census who had a secondary education.

                                                                    (1)

1.3 Round off your answer in 1.2 to the nearest ten thousand.

                                                                    (1)

1.4   The figures from the table for 1996 for 35 – 44 year olds were used to draw the
       pie chart below.

**Education level of 35-44 year olds in
1996**

(a)   Show how the figure of 60% for primary education was obtained.

_____

_____

                                                                        (2)

(b)   Show how the correct angle for the primary education sector was obtained.

_____

_____

   (2)

(c)   Complete the following table of percentages and angles for **2016 (for** 35 – 44
      year olds) you would use to draw a pie chart similar to the one above. **Round
      off** your answers to whole number. Use the data given at the beginning of the
      activity.

2016 35 – 44 year olds	No schooling	Primary education	Secondary education	Bachelor's degree or higher	Total
Percentage of total	3%				**100%**
Angle of sector	11º				**360º**

(6)

(d) Draw a pie chart similar to the one on the previous page, for **2016** for 35 – 44 year olds. Use the table you prepared in question (c). Measure the angles carefully and label the sectors correctly.

Education level of 35-44 year olds in 2016
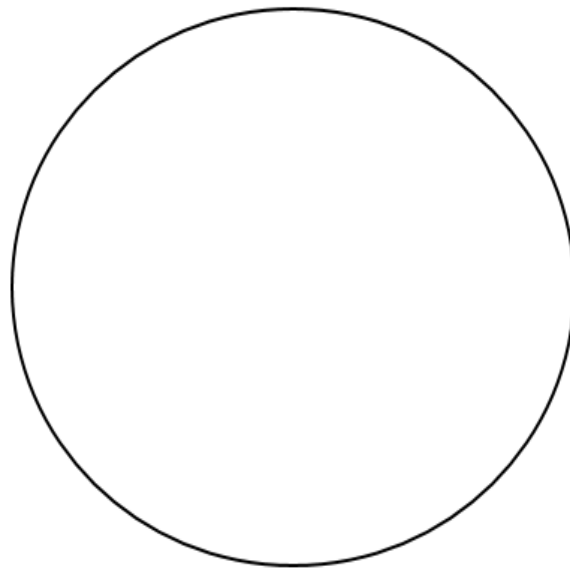
(4)

TOTAL MARKS FOR ACTIVITY 1   **(17)**

ACTIVITY 2: IMPROVEMENT OF SCHOOL PROPERTY

The members of a community wish to make some improvements to the local school property.

2.1   Marking out of a basketball court

2.1   Some members of the community mark out a rectangular basketball court to be used by the community. They use the plan of the court in the diagram below.

A and E are rectangles. The length of each rectangle is 5,8 m and the width is 4,9 m. The central circle, C, has diameter 3,6 m. The radius of semi-circles B and D is 1,25 m.
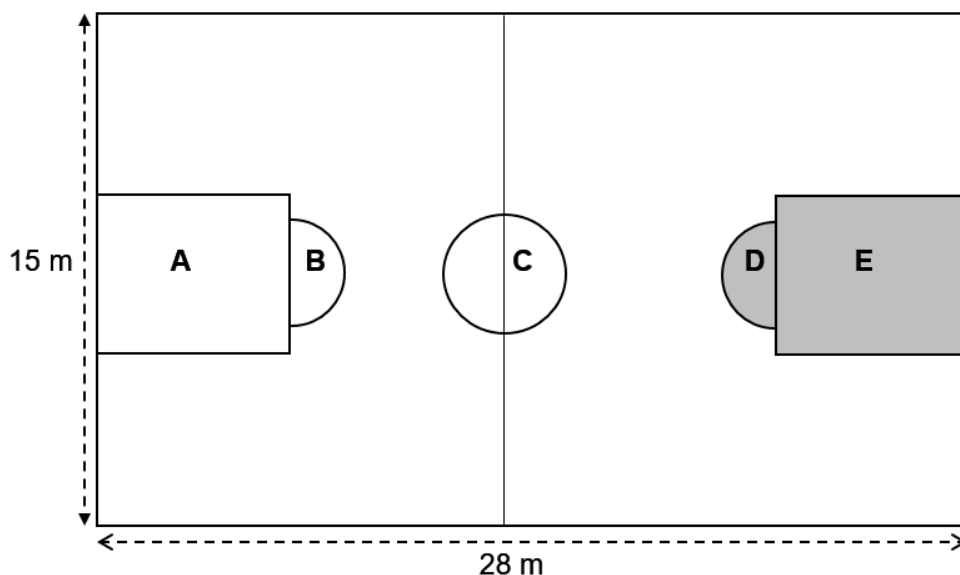
(a) Determine the perimeter of the whole basketball court.

_____

_____

_____

(2)

(b) Determine the circumference of circle C, correct to 1 decimal place. Use the formula:

Circumference of circle = $2\pi r$ where $\pi = 3,14$

_____

_____

_____

_____

(3)

(c) Determine the total area of the shaded section, correct to 2 decimal places. Use the formula:

Area of circle = πr^2 where $\pi = 3,14$

_____

_____

_____

_____

_____

(6)

2.2   Painting of classrooms

2.2   The community group arranges to paint the interior of three classrooms. The dimensions of each classroom are: height 3 m, width 8 m, and length 10,5 m.

(a) Determine the total area of the walls of one classroom.

_____

_____

_____

(3)

(b) Determine the total area of the walls that must be painted in one classroom, excluding windows and doors. Each classroom has one door of 2,05 m by 0,9 m and three windows of 1,25 m by 2,14 m.

_____

_____

_____

_____

_____
                  (5)

(c) Determine the total area to be painted in all three classrooms.

_____

_____

_____
                  (3)

(d) Two coats of paint will be applied. The spread rate of the paint is 9 m^2/ litre. How many full litres of paint will be needed to complete the painting of the three classrooms?

_____

_____

_____
                  (2)

(e) The table below shows current paint prices.

Paint can size	Cost
5 litre	R469,00
20 litre	R1 699,00

Which can of paint has the cheaper cost per litre?

_____

_____

(2)

(f)   Determine the cheapest option for painting the classrooms. Use your answer to question (e) above.

The cheapest option is:

_____ cans of size 20 litre and _____ cans of size 5 litre.

(2)

2.3   Installation of water tank

2.3.1   The community group plans to install a cylindrical water tank of capacity 750 litres of water. The diameter of the tank is 76 cm. Determine $h,$ the height of the tank, correct to 2 decimal places. 1 litre = 1 000 cm^3

Use the formula $V = \pi r^2 h$ **where** $\pi = 3,14$

_____

_____

_____

_____

_____

_____

(5)

TOTAL MARKS FOR ACTIVITY 2   **(33)**

TOTAL FOR TASK 3: 50 MARKS

	Activity	Maximum Mark	Learner's Mark	Moderated Mark
Task 1	**Activity 1**	**17**		
	Activity 2	**33**		
	Total: Task 3	**50**		