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education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

BOJANALA DISTRICT
ASSESSMENT TASK

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GRADE 10

MATHEMATICS

END OF TERM TEST

Stanmorephysics.com

17 MARCH 2026

MARKS: 75

DURATION: 1H30Minutes

This Question paper consists of 5 pages.

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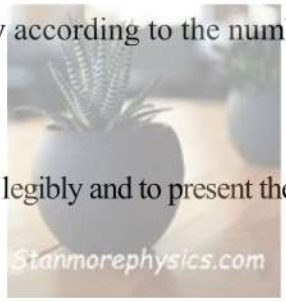
INSTRUCTIONS AND INFORMATION

1. This question paper consists of **4 QUESTIONS,** answer **ALL** the questions.
2. Clearly show ALL calculations, diagrams, graphs, et cetera that you have used in determining the answers.
3. An approved scientific calculator (non-programmable and non-graphical) may be used, unless stated otherwise.
4. If necessary, answers should be rounded off to TWO decimal places, unless stated otherwise.
5. Number the answers correctly according to the numbering system used in this question paper.\
6. It is in your own interest to write legibly and to present the work neatly.



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QUESTION 1

1.1 Given: $k \in (0;1;2;-4)$ for which values of k will $\sqrt{\frac{16}{1-k}}$ be:

1.1.1 Rational (1)

1.1.2 Irrational (1)

1.1.3 Undefined (1)

1.2 Write $0,\dot{6}\dot{8}$ recurring decimal as a common fraction. (4)

1.3 Between which two integers does $\sqrt[3]{50}$ lie? (2)

[9]

QUESTION 2

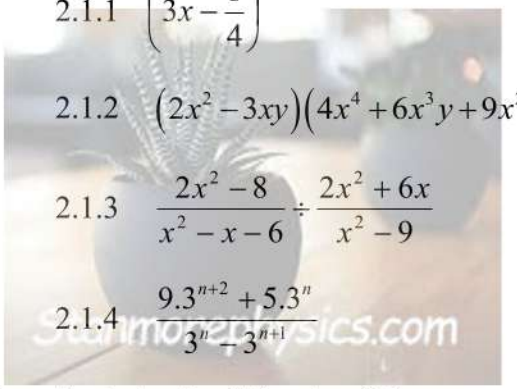
2.1 Simplify the following:

2.1.1 $\left(3x-\frac{1}{4}\right)^2$ (3)

2.1.2 $\left(2x^2-3xy\right)\left(4x^4+6x^3y+9x^2y^2\right)$ (3)

2.1.3 $\frac{2x^2-8}{x^2-x-6} \div \frac{2x^2+6x}{x^2-9}$ (6)

2.1.4 $\frac{9.3^{n+2}+5.3^n}{3^n-3^{n+1}}$ (5)



2.2 Factorise the following fully:

2.2.1 $2x^2+2px-2mx-2mp$ (4)

2.2.2 $\frac{8a^3}{125}-b^3$ (2)

2.3 **Without using a calculator**, simplify the following

$$\frac{1979}{1978^2-1}$$ (3)

[25]

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QUESTION 3

3.1 Solve for x

3.1.1 $8(x+1)-7x=7(3-x)$ (3)

3.1.2 $6x^2-5x=6$ (3)

3.1.3 $2^{3x+1}=128$ (3)

3.2 Solve the following inequality and represent the solution graphically:

$$-4 \leq \frac{3x-2}{2} < 8 \quad (5)$$

3.3 Solve for x and y simultaneously:

$$2^{x+2}=8^{2y-1}$$
$$3x+2=4y+1 \quad (6)$$

3.4 Make t the subject of the formula in the following equation:

$$\frac{at+x}{b}=p \quad (4)$$

3.5 The perimeter of a rectangle is 24m, its length is thrice the breadth.

Determine the length and the breadth of the rectangle. (4)

[28]

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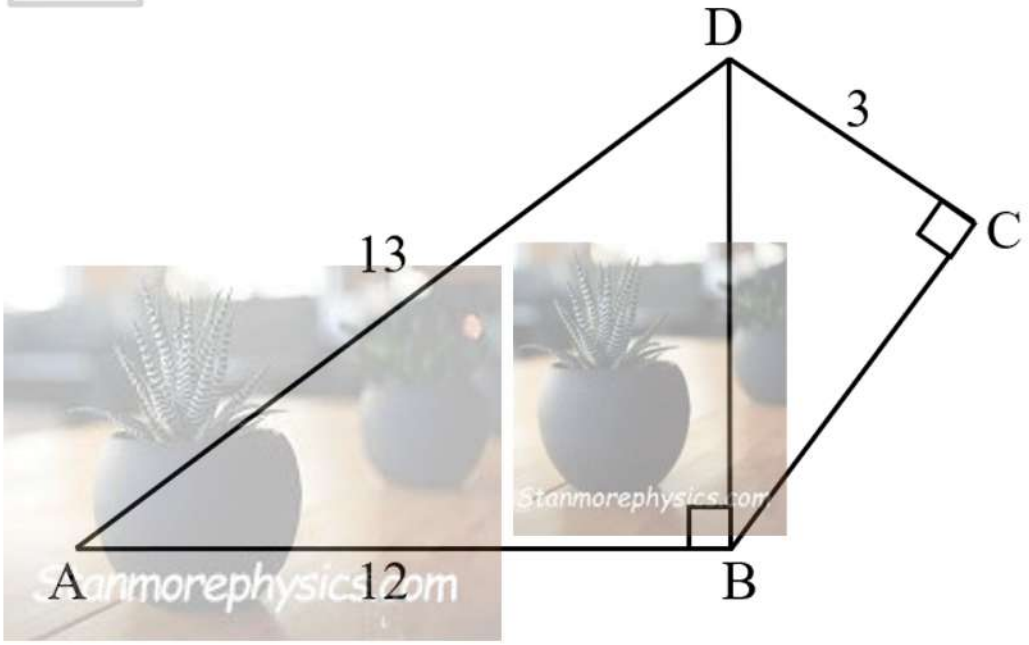
QUESTION 4

In the quadrilateral below, AD =13 units, AB =12 units and DC =3 units. $D\hat{A}B$ and $D\hat{C}B$ are two right angles in the quadrilateral ABCD.



4.1 Calculate the length of

4.1.1 DB (3)

4.1.2 BC (2)

4.2 Write down the size of angle ADB in terms of 90° and angle A (3)

4.3 Write down the value of:

4.3.1 $\tan A$ (2)

4.3.2 $\sec B\hat{D}C$ (2)

4.3.3 $\sin(90^\circ - A)$ (1)

[13]

----------GRAND TOTAL =75