LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 10

MATHEMATICS P2

JUNE EXAM 2026

MARKS: 50

DURATION: 1 HOUR

This question paper consists of 6 pages including the cover page.

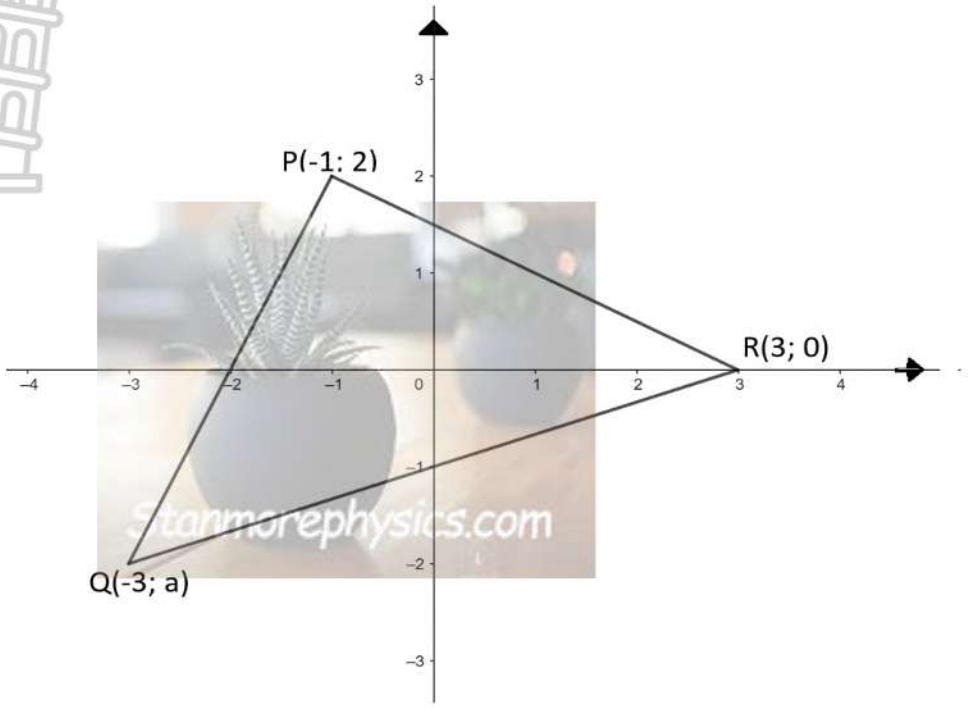
INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

1. This question paper consists of 4 questions.
2. Answer ALL the questions.
3. Number your answers according to the numbering system used in this question paper.
4. Clearly show ALL calculations, diagrams, graphs, etc. which you have used in determining your answers.
5. Answers only will NOT necessarily be awarded full marks.
6. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
7. If necessary, round off answers to TWO decimal places, unless stated otherwise.
8. Diagrams are NOT necessarily drawn to scale.
9. Write neatly and legibly.

QUESTION 1

$P(-1;\ 2)$, $R(3;0)$ *and* $Q(-3;\ a)$ are the vertices of a triangle in the Cartesian plane and $PR = PQ$



1.1 Determine the coordinates of E, the midpoint of PR (4)

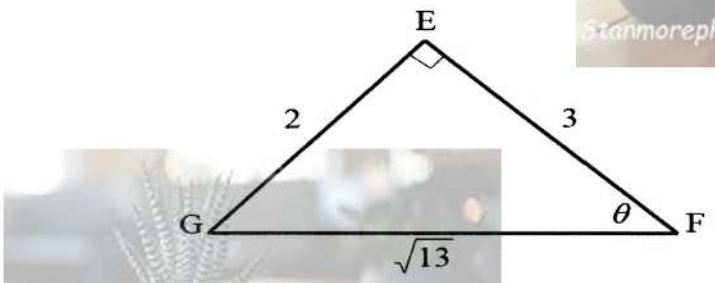
1.2 Show that $a = -2$ if the midpoint of QR is $(0;\ -1)$ (3)

1.3 Determine the gradient of EQ (2)

[9]

QUESTION 2

2.1 In EFG, $\hat{E} = 90°$ and $\hat{F} = \theta$. $EG = 2$ units, $EF = 3$ units and $FG = \sqrt{13}$ units



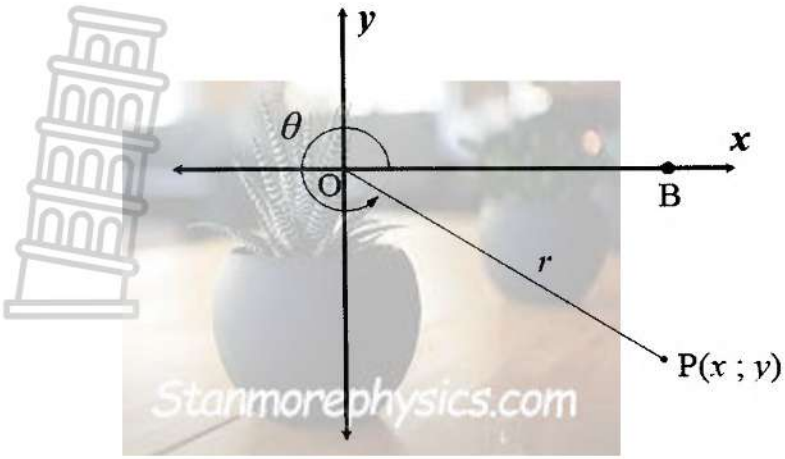
Write down the values of:

2.1.1 $\tan\theta$ (1)

2.1.2 $cosec\,\theta$ (1)

2.1.3 $\cos(90° - \theta)$ (2)

2.2 In the diagram below, $P(x;\ y)$ is a point in the fourth quadrant.



$B\hat{O}P = \theta$ and $17\cos\theta - 15 = 0$

Make use of the information provided and the diagram to:

2.2.1 Determine the length of OP. (1)

2.2.2 Calculate the value of tan θ. (3)

2.2.3 Prove that $cos^2\theta + sin^2\theta = 1$ (2)

[10]

QUESTION 3

3.1 Solve for x, correct to ONE decimal place, where $0° \leq x \leq 90°$:

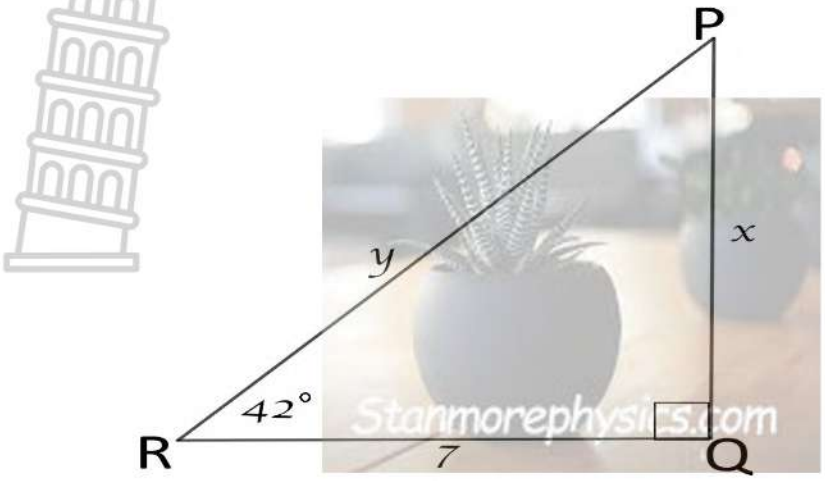
3.1.1 $\tan 2x = 1{,}01$ (2)

3.1.2 $\frac{\sin(2x-20°)}{3} = 0.099$ (3)

3.2 WITHOUT the use of a calculator, show all working, determine the value of:

$$\frac{\sin 60°.\sec 30° + tan^2 60°}{2\tan 45°}$$ (5)

3.3 In the diagram below, determine the value of x and y (4)

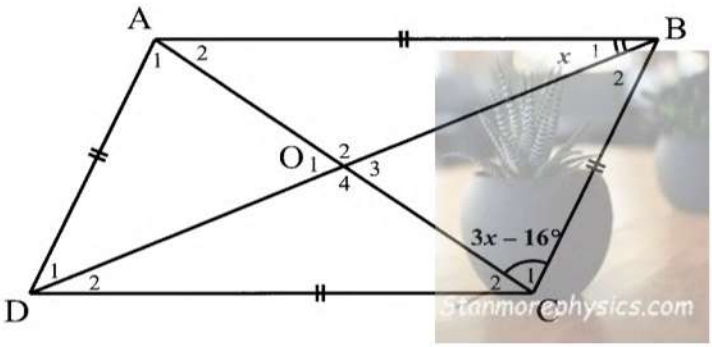


[14]

QUESTION 4

4.1 In the diagram below, the diagonals of a rhombus ABCD intersect at O.

$\hat{B}_1 = x$ *and* $\hat{C}_1 = 3x - 16°$



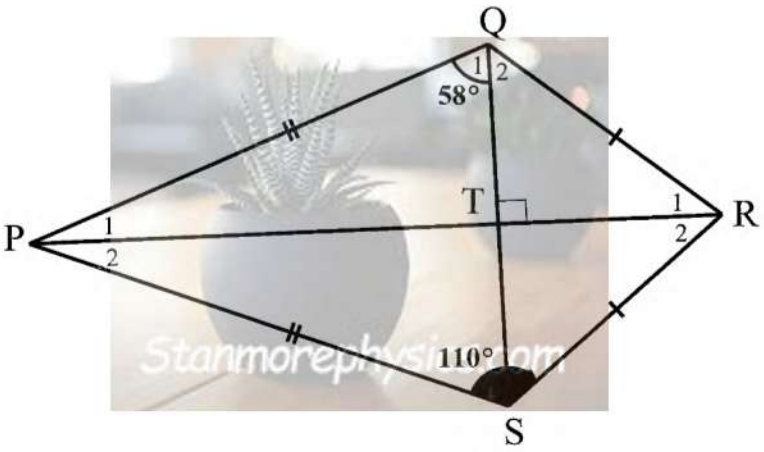
4.1.1 State numerical value of $\hat{O}_3$. (1)

4.1.2 Calculate the value of x. (3)

4.1.3 Hence, find the value of $\hat{A}_1$. (2)

4.2 In the quadrilateral PQRS below, $\hat{Q}_1 = 58°$ and $P\hat{S}R = 110°$

$QS \perp PR$, $QR = RS$ and $PQ = PS$.



Use the diagram to calculate, with reasons, the size of:

4.2.1 $\hat{P}_1$ (2)

4.2.2 $\hat{R}_2$ (3)

4.3 In the diagram below, ST ∥ QR.

4.3.1 Complete: □PST /// □ …. (1)

4.3.2 Prove the statement in 4.3.1 (3)

4.3.3 Hence, if $PS = 2cm$; $SQ = 10cm$ and $ST = 3cm$, calculate QR. (2)

[17]

TOTAL: 50 MARKS