



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

PROVINCIAL WEEKLY TEST

GRADE 10

MATHEMATICS

19/07/2024

MARKS : 30

DURATION : 1 HOUR

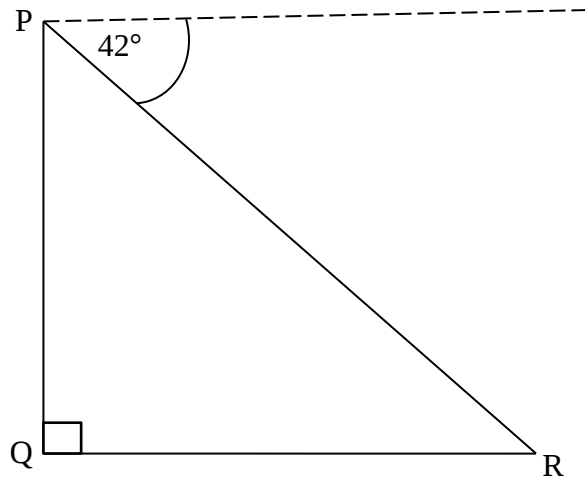
INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

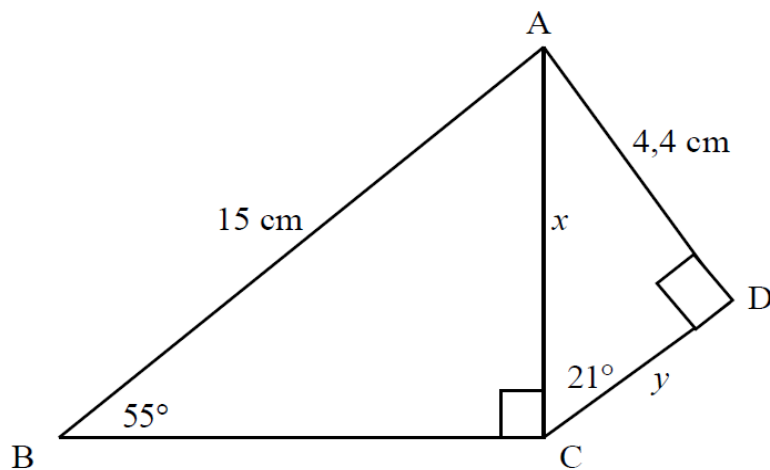
1. This Test consists of 4 questions.
2. Answer ALL the questions.
3. Clearly show ALL calculations, diagrams, and etcetera that you have used in determining your answers.
4. ANSWER ONLY will not necessarily be awarded full marks.
5. You may use an approved scientific calculator (non-programmable and non-graphic), unless stated otherwise.
6. Round off to TWO decimal places unless stated otherwise.
7. Number the answers correctly according to the numbering system in this question paper.
8. Write legibly and present your work neatly.

QUESTION 1

- 1.1 Referring to the diagram below, calculate the height of a cliff PQ if the angle of depression from the top of the cliff to a boat R, at sea, in the same horizontal plane, is 42° . The boat is 700 m from the cliff. (3)



- 1.2 In the diagram below, $\hat{ACB} = 90^\circ$, $AB = 15\text{cm}$, $AD = 4,4\text{cm}$, $\hat{B} = 55^\circ$, $\hat{ACD} = 21^\circ$ and $\hat{ADC} = 90^\circ$



Determine the value of:

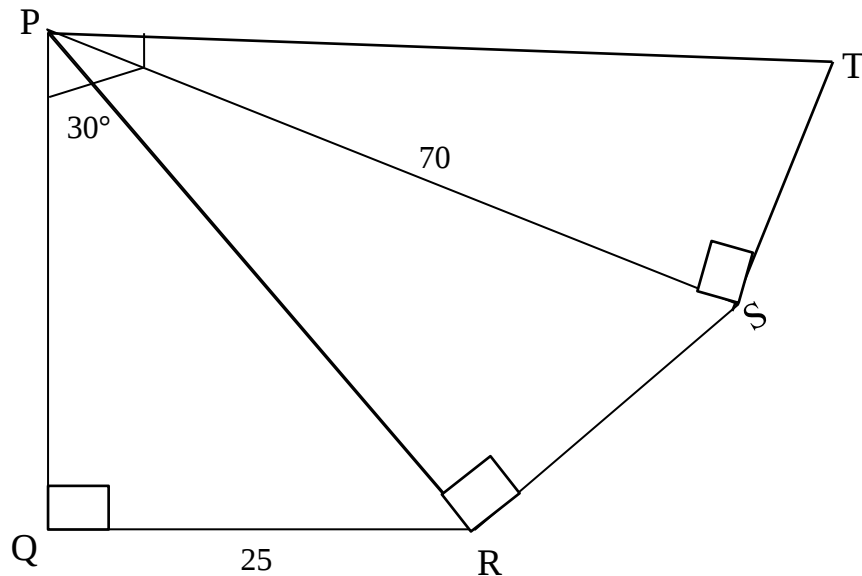
1.2.1 x (2)

1.2.2 y (2)

[7]

QUESTION 2

- 2.1 In the diagram below, PQR, PRS and PST are right – angled triangles.
 $\widehat{QPT} = 90^\circ$ and $\widehat{QPR} = 30^\circ$. $QR = 25$ units and $PS = 70$ units.

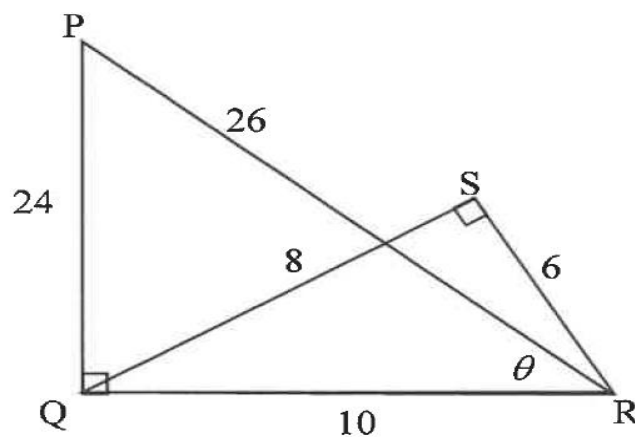


Calculate the:

- 2.1.1 Length of PR (2)
 2.1.2 Size of $\widehat{RPS}$ (2)
 2.1.3 Length of ST (3)
 [7]

QUESTION 3

- 3.1 $\triangle PQR$ and $\triangle SQR$ are right – angled triangles as shown in the diagram below. $PR = 26$, $PQ = 24$, $QS = 8$, $SR = 6$, $QR = 10$ and $\widehat{PRQ} = \theta$



Refer to the diagram above and WITHOUT using a calculator, write down the value of:

$$3.1.1 \quad \tan \hat{A} \quad (1)$$

$$3.1.2 \quad \sin \hat{D}BC \quad (1)$$

$$3.1.3 \quad \cos \theta \quad (1)$$

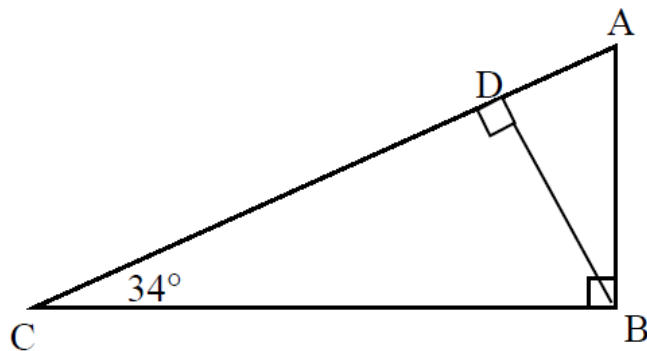
$$3.1.4 \quad \sec \hat{D}CB \quad (1)$$

$$3.2 \quad \text{WITHOUT using a calculator, determine the value of } \frac{\cot \theta}{\operatorname{cosec} \hat{B}CD} \quad (3)$$

[7]

QUESTION 4

4.1 Refer to the picture below:



$$4.1.1 \quad \text{Write down two ratios for } \cos 34^\circ \quad (4)$$

$$4.1.2 \quad \text{If } CD = 8,3 \text{ cm, calculate the value of } BD. \quad (3)$$

$$4.1.3 \quad \text{Write down a trigonometric definition for } \frac{AC}{BC} \quad (2)$$

[9]

TOTAL: [30]