



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

PROVINCIAL WEEKLY TEST

GRADE 10

MATHEMATICS

MARKING GUIDELINE

19/07/2024

MARKS : 30

DURATION : 1 HOUR

QUESTION 1

1.1	In $\triangle PQR$ $\widehat{QRP} = 42^\circ$ (QR $\parallel$ to the horizontal plane) $\therefore \tan 42^\circ = \frac{PQ}{QR}$ $\therefore PQ = 700 \times \tan 42^\circ$ $\therefore PQ = 630$		✓ R ✓ trig ratio ✓ answer	(3)
1.2	1.2.1	$\sin 55^\circ = \frac{x}{15}$ $\therefore x = 15 \times \sin 55^\circ$ $\therefore x = 12.29 \text{ cm}$	✓ trig ratio ✓ answer	(2)
	1.2.2	$\tan 21^\circ = \frac{4,4}{y}$ $\therefore y = \frac{4,4}{\tan 21^\circ}$ $\therefore y = 11,48 \text{ cm}$ OR $y^2 = x^2 - (AD)^2$ $= (12,29)^2 - (4,4)^2$ $\therefore y = 11,48 \text{ cm}$	✓ trig ratio ✓ answer ✓ trig ratio ✓ answer	(2)
TOTAL				[7]

QUESTION 2

2.1	2.1.1	$\sin 30^\circ = \frac{QR}{PR}$ $\therefore PR = \frac{25}{\sin 30^\circ}$ $\therefore PR = 50 \text{ units}$	✓ trig ratio ✓ answer	(2)
	2.1.2	$\cos \widehat{RPS} = \frac{50}{70}$ $\widehat{RPS} = 44,4^\circ$	✓ substitution ✓ answer	(2)
	2.1.3	$\widehat{SPT} = 15,6^\circ$ ($\widehat{SPT} = 90^\circ - (30^\circ + 44,4^\circ)$) $\therefore \tan 15,6^\circ = \frac{ST}{70}$ $ST = 70 \times \tan(15,6^\circ)$	✓ $\widehat{SPT} = 15,6^\circ$ ✓ substitution	(3)

		ST = 19,5 units	✓ answer	
TOTAL				[7]

QUESTION 3

3.1	3.1.1	$\tan \hat{A} = \frac{10}{24} = \frac{5}{12}$	✓ answer	(1)
	3.1.2	$\sin \hat{D}\hat{B}\hat{C} = \frac{6}{10} = \frac{3}{5}$	✓ answer	(1)
	3.1.3	$\cos \theta = \frac{10}{26} = \frac{5}{13}$	✓ answer	(1)
	3.1.4	$\sec \hat{D}\hat{C}\hat{B} = \frac{10}{6} = \frac{5}{3}$	✓ answer	(1)
3.2	$\frac{\cot \theta}{\operatorname{cosec} \hat{B}\hat{C}\hat{D}} = \frac{10}{24} \div \frac{10}{8}$ $= \frac{10}{24} \times \frac{8}{10}$ $\therefore \frac{\cot \theta}{\operatorname{cosec} \hat{B}\hat{C}\hat{D}} = \frac{1}{3}$		✓ substitution ✓ simplification ✓ answer	(3)
TOTAL				[7]

QUESTION 4

4.1	4.1.1	In $\triangle ABC$ $\cos 34^\circ = \frac{BC}{AC}$	In $\triangle BDC$ $\cos 34^\circ = \frac{DC}{BC}$	$\checkmark\checkmark \triangle$'s identification $\checkmark\checkmark$ ratios	(4)
	4.1.2	In $\triangle BDC$ $\tan 34^\circ = \frac{BD}{DC}$ $\tan 34^\circ = \frac{BD}{8,3}$ $\therefore BD = 8,3 \tan 34^\circ$ $BD = 5,6 \text{ cm}$		$\checkmark$ trig ratio $\checkmark$ simplifications $\checkmark$ answer	(3)
	4.1.3	$\sec 34^\circ = \frac{AC}{BC}$		$\checkmark\checkmark$	(2)
TOTAL					[9]

TOTAL: [30]