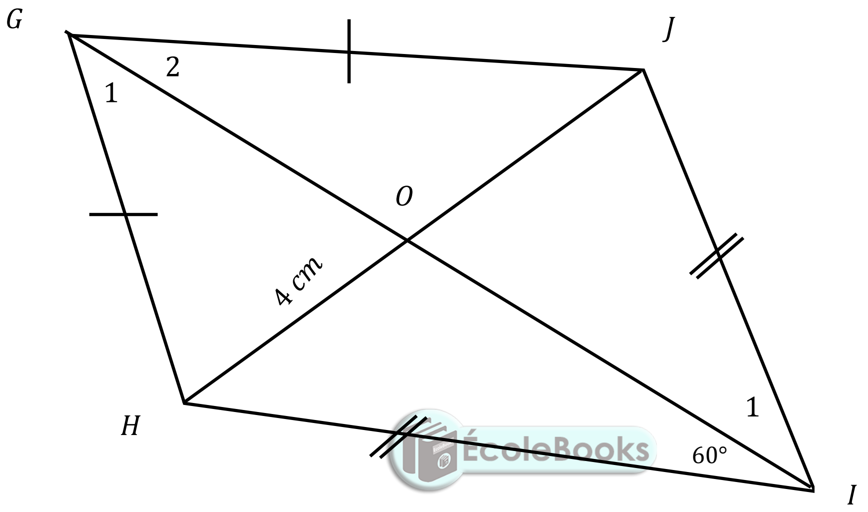
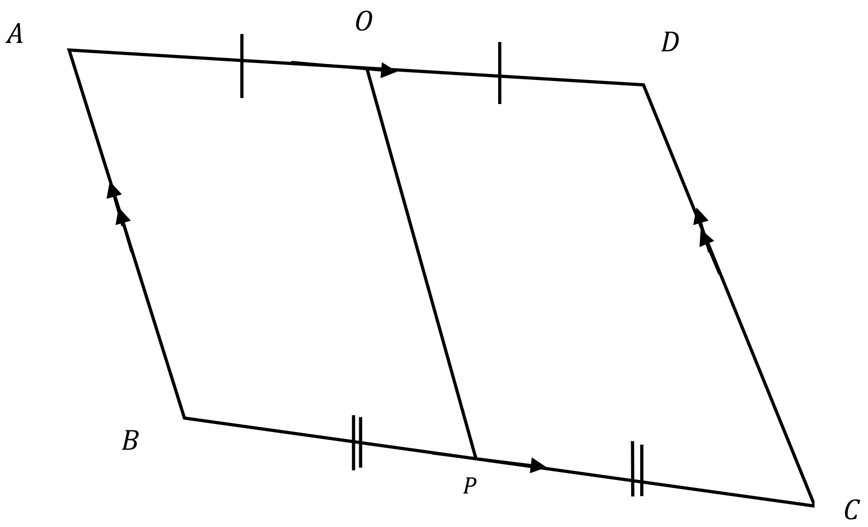
E-classroom	**Name: Memorandum**					
	Gr 10		**Date:**		**Time:**	$1\frac{1}{2}$ **HR**
CAPS Reference	**Euclidean Geometry**					
Topic	**Properties of Quadrilaterals**					

2.1



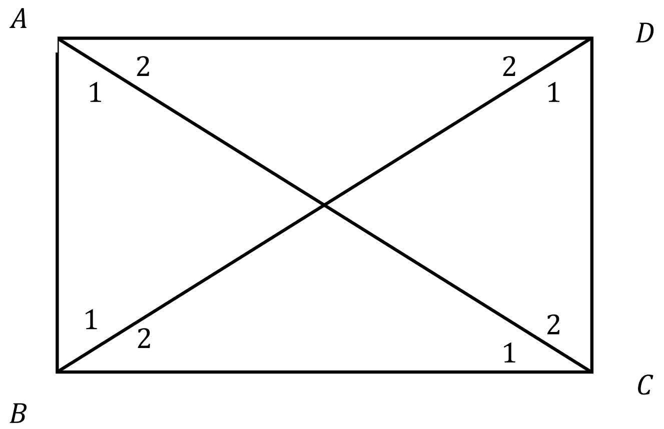
Statement	**Reason**
2.1.1 $OJ = \ 4cm$	GI $bisect$ HJ of $kite$ $GHIJ$
2.1.2 $\hat{I}_1 = 60°$	GI $bisect$ $\hat{I}$ of $kite$ $GHIJ$
2.1.3 In ΔHIO and ΔJIO 1) $HO = OJ = 4cm$ 2) $HI = JI$ 3) $OI = OI$ $\therefore \Delta HIO \equiv \Delta JIO$	 Proven at 2.1.1 Given Common s, s, s

2.2



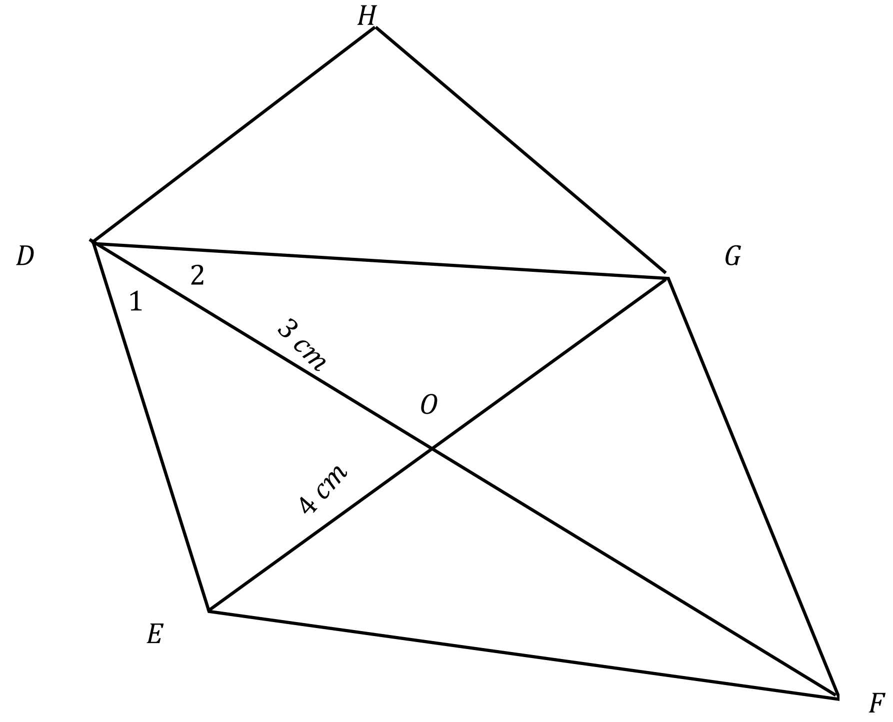
Statement	Reason
2.2 $AD = BC$ But $AO = OD$ $\therefore AO + OD = AD$ And $BP = PC$ $\therefore BP + PC = BC$ $\therefore OD = PC$ And OD//PC $\therefore OPCD$ is a parallelogram	Given ABCD is a parallelogram Given Given Given One pair of opposite sides are equal and parallel.

2.3



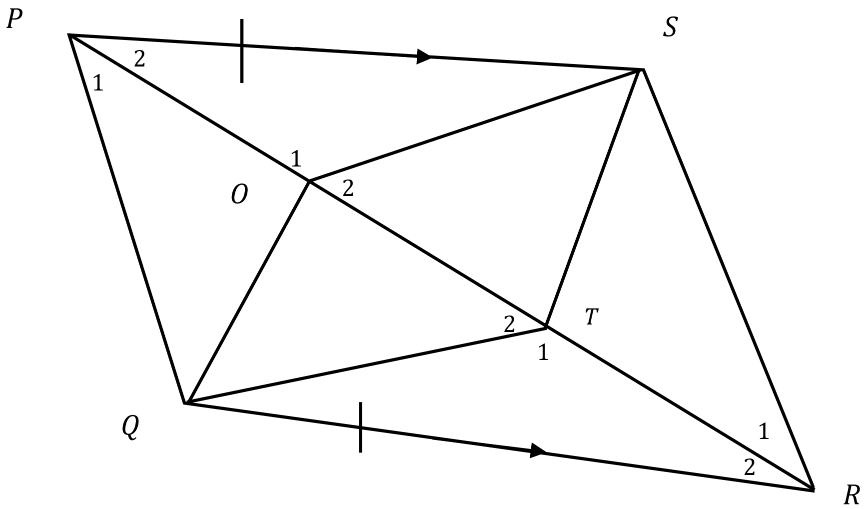
Statement	**Reason**
In ΔABC and ΔCDB	
1) $AB = CD$	Opposite sides of a parallelogram $ABCD$ are equal
2) $BC = BC$	Common
3) $AC = BD$	Given
$\therefore \Delta ABC \equiv \Delta CDB$	s, s, s
$\therefore \hat{C} = \hat{B}$ and $\hat{A} = \hat{D}$	
$\therefore \hat{C} = \hat{B} = \hat{A} = \hat{D} = 90°$	Interior <s of a quadrilaterals is equal to 360°
$\therefore ABCD$ a rectangle	

2.4



Statement	**Reason**
2.4.1 $D\hat{O}G = 90°$	$DF \perp EG$ of kite $DEFG$
2.4.2 $DG^2 = 4^2 + 3^2$ $= 16 + 9$ $DG = \sqrt{25}$ $DG = 5\ cm$	(Pyth)
2.4.3 $DO = HG$ $OG = DH$ $\therefore DOGH$ is a rectangle	Given Given Opposite of rectangle are equal

2.5



Statement	**Reason**
2.5 In ΔPOS and ΔQTR 1) $PS = QR$ 2) $\widehat{P_2} = \widehat{R_2}$ 3) $\widehat{P_1} + \widehat{P_2} = \widehat{T_2} + \widehat{T_2} = 180°$ $\therefore \widehat{P_1} = \widehat{T_1}$ $\therefore \Delta POS \equiv \Delta QTR$ $\therefore \Delta POQ \equiv \Delta STR$ $\therefore QTSO$ is a parallelogram	 Given Alternating <s PS//QR <s on a straight line S, A, A