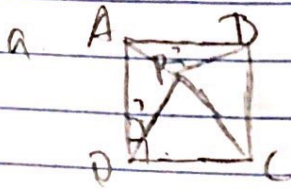
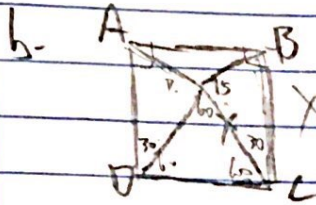


1.21.



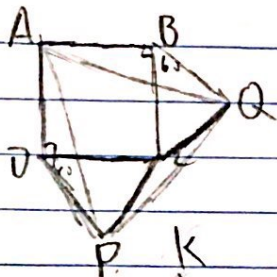
$\angle PAD = 30^\circ$



$CP = BC$

$\angle BPA = 360 - 75 - 75 - 60 = 150^\circ$

1.22



$\angle ABQ = \angle ADP = 90 + 60 = 150^\circ$

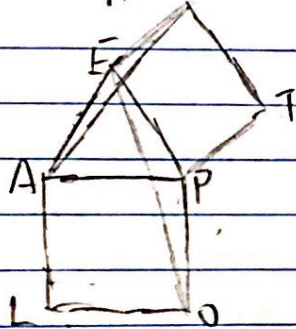
$\angle PAQ = 90^\circ - \angle BAQ - \angle DAP = 60^\circ$

$AB = BQ = AD = DP$

$AP = AQ$

ΔAPQ is equilateral

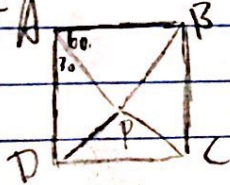
1.23



Yes. $AE = EK = EP$

$\angle KEA = \angle EPO = 150^\circ$

1.24

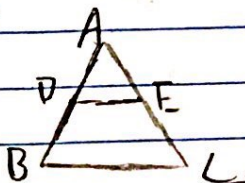


$AD = AP$

$\angle ADP = \angle APD = 75^\circ = \angle BPC$

$360 - 150 - 60 = 150^\circ = \angle CPD$

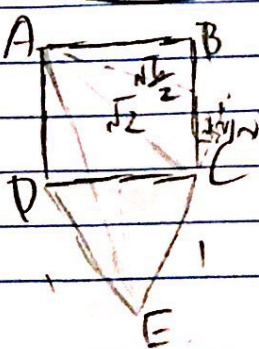
1.25.



$AD = AE = DE = 4$

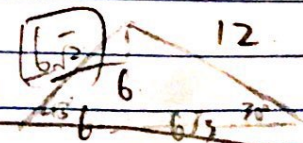
$AB + BC + AC = 24$

1.26

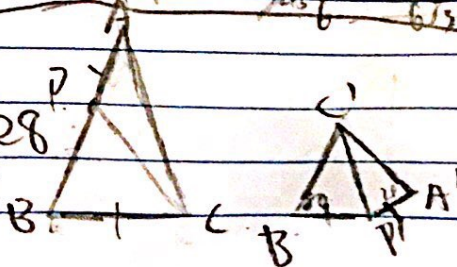


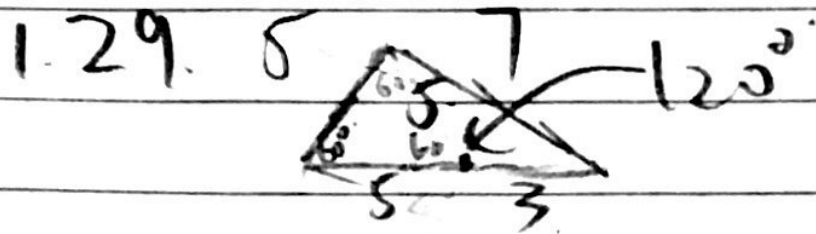
$1 \cdot \frac{\sqrt{6}}{2} \cdot \frac{1}{2} = \frac{\sqrt{6}}{4}$

1.27

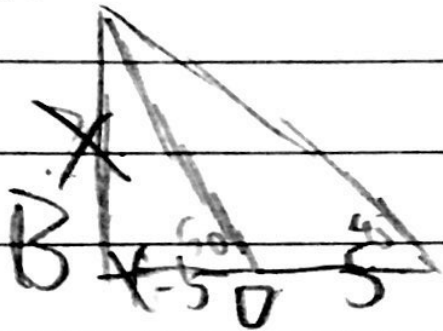


1.28





1.30A



$$(X-5)\sqrt{3} = X$$

$$X\sqrt{3} - 5\sqrt{3} = X$$

$$X\sqrt{3} - X = 5\sqrt{3}$$

$$X(\sqrt{3}-1) = 5\sqrt{3}$$

$$X = \frac{5\sqrt{3}}{\sqrt{3}-1}$$