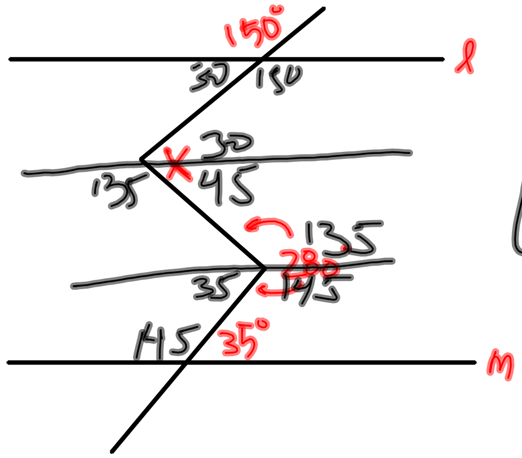
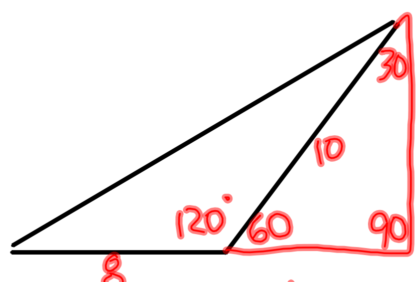
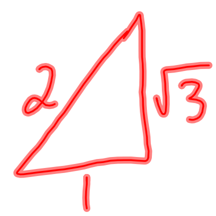


$l \parallel m$

Find x.

$\boxed{x = 75°}$





Find the area

$$\frac{\frac{80\sqrt{3}}{2}}{2} \qquad \frac{8\left(\frac{10\sqrt{3}}{2}\right)}{2}$$

$$\frac{80\sqrt{3}}{4} \qquad \frac{80\sqrt{3}}{2} \cdot \frac{1}{2}$$

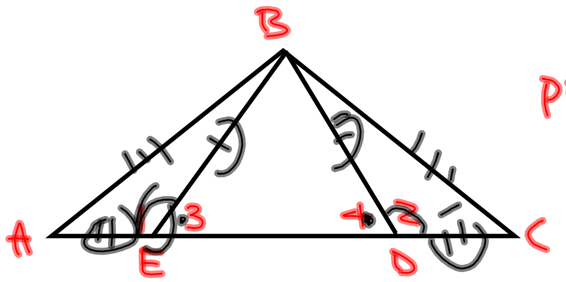
$$20\sqrt{3}$$

$$10\sqrt{3} = 2x \qquad \frac{10}{x} = \frac{2}{\sqrt{3}}$$

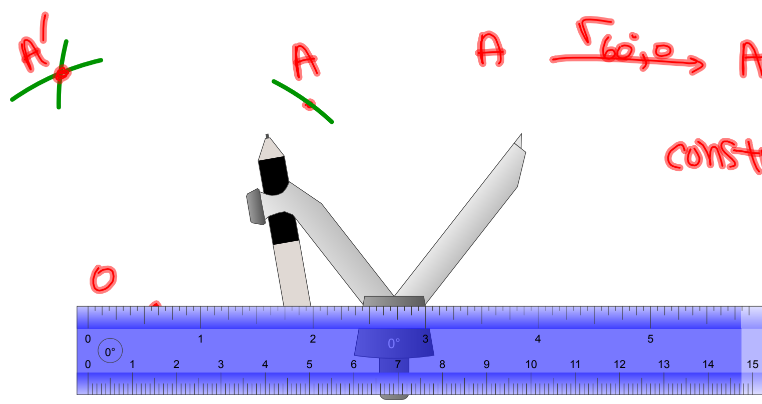
$$\frac{10\sqrt{3}}{2} = x$$

Given: △BDE is isos, $\overline{BE} \cong \overline{BD}$

$\overline{AE} \cong \overline{CD}$



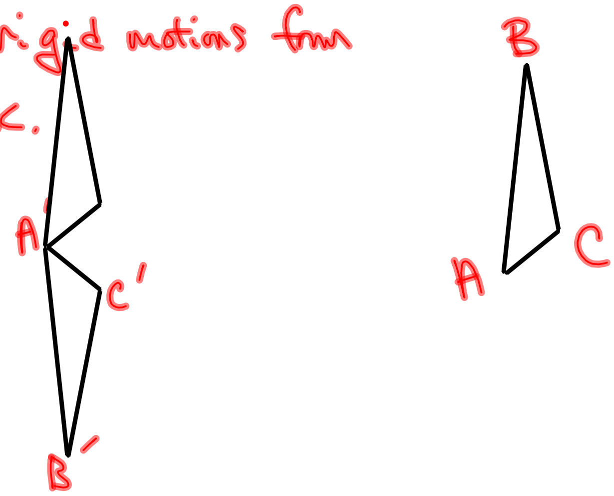
prove: △ABC is isos.



$A \xrightarrow{r_{60°, O}} A'$

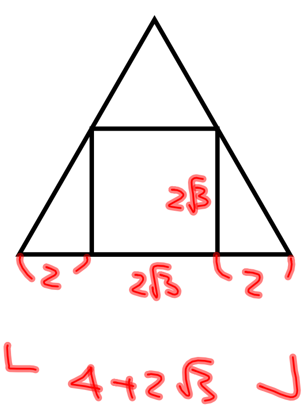
construct A'.

Express $\triangle A'B'C'$ using rigid motions from $\triangle ABC$.



E22

10)



$A=\frac{\sqrt{3}}{4}s^2$

$A=\frac{\sqrt{3}}{4}(4+2\sqrt{3})^2$

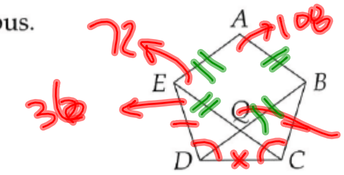
$=\frac{\sqrt{3}}{\cancel{4}}(\overset{7}{\cancel{28}}+\overset{4}{\cancel{16}}\sqrt{3})$

$=\boxed{7\sqrt{3}+12}$

$(4+2\sqrt{3})^2=16+16\sqrt{3}+12$

$=28+16\sqrt{3}$

9.4.1 *ABCDE* at right is a regular pentagon. Show that *AEQB* is a rhombus.



① $\triangle EDC \cong \triangle BCD$ by SAS

② $m\angle DEC = m\angle DBC = 36$

1 int $\angle = 108$

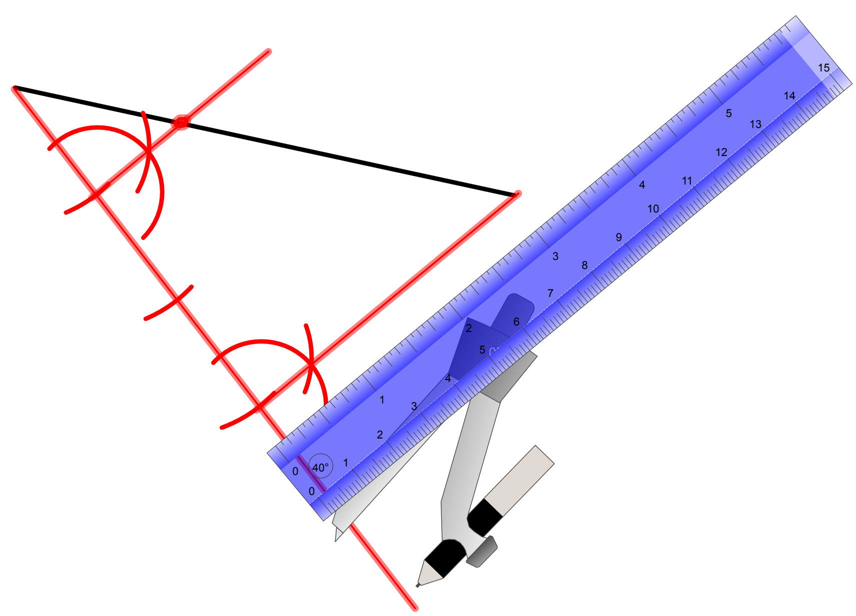
③ $m\angle AEQ = m\angle ABQ = 72$

④ $m\angle EQB = 108 \rightarrow = m\angle EAB$

⑤ AEQB is ▱ b/c opp. $\angle$'s are $\cong$.

⑥ Since $AE = AB$, AEQB is ◇.

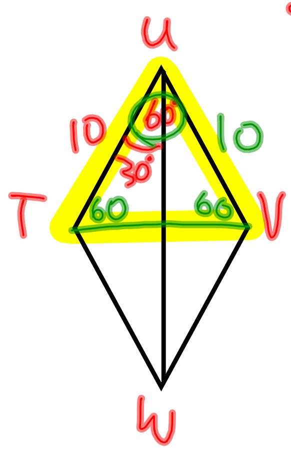
▱ with $\cong$ consecutive sides is ◇.



8.4.4 $TUVW$ is a rhombus with $TU = 10$ and $\angle TUV = 60°$.

(a) Show that $\angle TUW = 30°$.

(b) Find $[TUVW]$.



$$= \cancel{2} \cdot \frac{\sqrt{3}}{\cancel{4}_{2}} \cdot (10)^2$$

$$= \frac{\sqrt{3} \cdot \cancel{100}^{50}}{\cancel{2}} = 50\sqrt{3}$$

8.4.3 Diagonals $\overline{AC}$ and $\overline{BD}$ of quadrilateral $ABCD$ are perpendicular. Prove that $[ABCD] = (AC)(BD)/2$.
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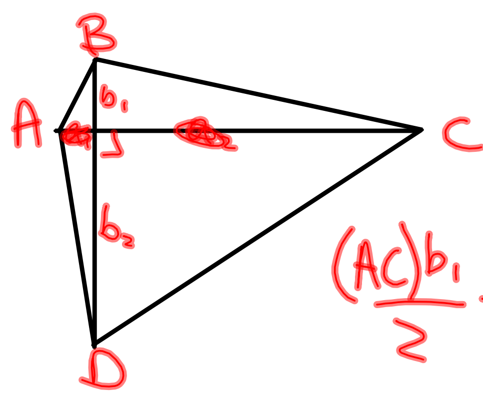
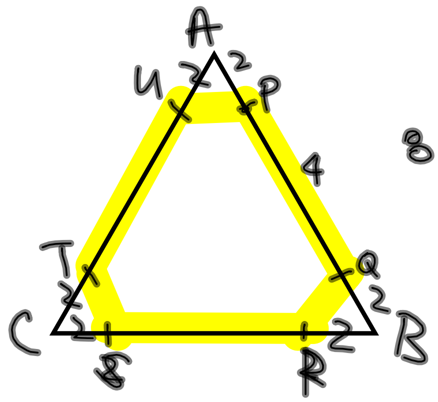


$$\frac{(AC)b_1}{2} + \frac{(AC)b_2}{2}$$

$$= \frac{AC}{2} \cdot (b_1 + b_2) = \frac{(AC)(BD)}{2}$$

5. In equilateral triangle ABC with $AB = 8$, points P and Q are chosen on side $\overline{AB}$ so that $AP = BQ = 2$. Similarly, points R and S are chosen on side $\overline{BC}$ so that $BR = CS = 2$, and points T and U are chosen on side $\overline{CA}$ so that $CT = AU = 2$. If the area of hexagon $PQRSTU = H$, find H^2.



$\triangle - 3\triangle$

8

$\frac{\sqrt{3}}{4}8^2 - 3\left(\frac{\sqrt{3}}{\cancel{4}}\cancel{2^2}\right)$

$= 16\sqrt{3} - 3\sqrt{3} = 13\sqrt{3}$

$507 = (13\sqrt{3})^2$