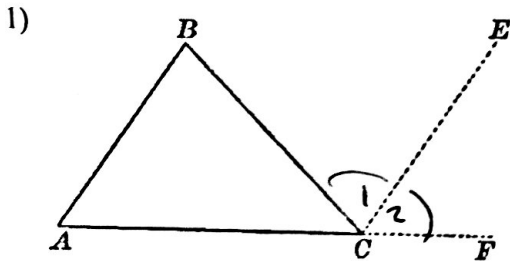


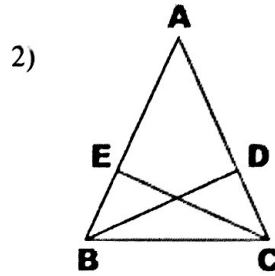
Name: _____
 Date: _____
 Class: _____

Geometry
 Unit 7
 HW 7-2

Using the diagram and given create a conclusion statement (and give a reason) that comes directly from the given information.

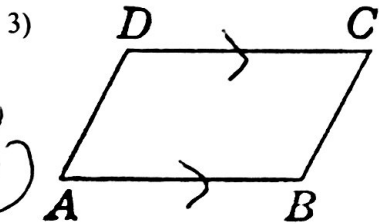


Given: \overline{CE} bisects $\angle BCF$
 $\angle 1 \cong \angle 2 \rightarrow$ bisector creates 2 \cong parts



(compare $m\angle ABD$, $m\angle DBC$, $m\angle ABC$)

$m\angle ABD + m\angle DBC = m\angle ABC$
 \rightarrow sum of parts = whole

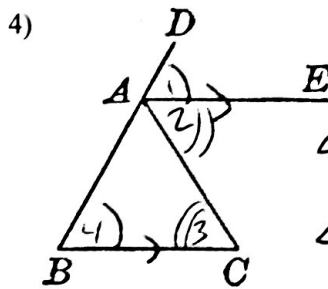


Given: $\overline{AB} \parallel \overline{DC}$

(find 2 pair of cons. int \angle s)

$m\angle A + m\angle D = 180$
 $m\angle C + m\angle B = 180$

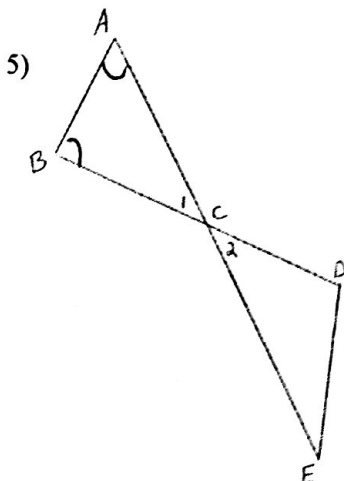
\rightarrow cons. int \angle s are supp w/ \parallel lines



Given: $\overline{AE} \parallel \overline{BC}$

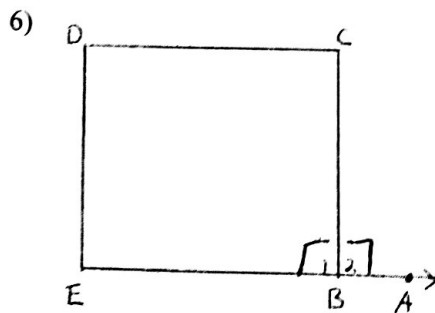
(find alt int \angle s and corr \angle s)

$\angle 1 \cong \angle 4 \rightarrow$ corr \angle s \cong when lines \parallel
 $\angle 2 \cong \angle 3 \rightarrow$ alt int \angle 's \cong when lines \parallel



Given: $\triangle ABC$ is isos with $\angle C$ as the vertex
 (What are its base angles?)

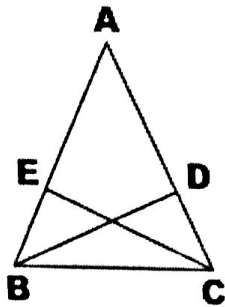
$\angle A \cong \angle B \rightarrow$ base \angle 's of isos $\triangle \cong$



Given: $\overline{BC} \perp \overline{EA}$

$m\angle 1 = 90^\circ$
 $m\angle 2 = 90^\circ \rightarrow \perp$ lines create $\perp \angle$'s
 $\angle 1 \cong \angle 2 \rightarrow$ both 90°

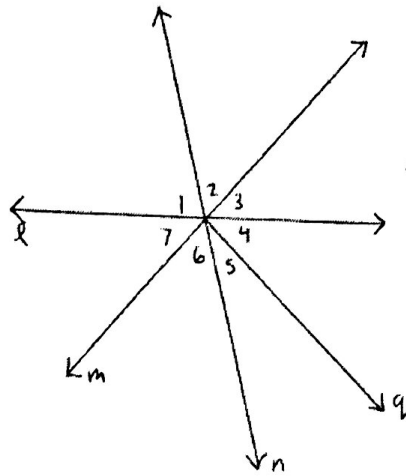
7)



(compare AE, EB, AB)

$AE + EB = AB \rightarrow$ sum of parts = whole

8)

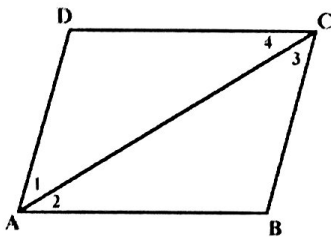


$$\begin{aligned} m\angle 7 + m\angle 4 + m\angle 2 &= 180 \\ m\angle 1 + m\angle 2 + m\angle 3 &= 180 \\ m\angle 2 + m\angle 3 + m\angle 4 + m\angle 5 &= 180 \\ m\angle 4 + m\angle 5 + m\angle 6 + m\angle 7 &= 180 \end{aligned}$$

\rightarrow \angle 's that form a straight line total 180°

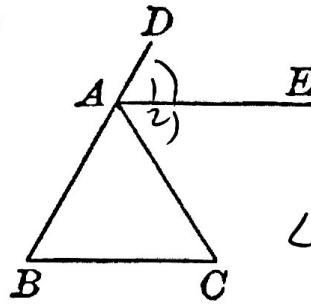
Given: l, m, n are all lines
(find 4 groups of angles that total 180°)

9)



Given: ABCD is a rhombus
(What angles are congruent?)

10)



Given: \overline{AE} bisects $\angle DAC$

$\angle 1 \cong \angle 2 \rightarrow$ bisector creates 2 \cong parts

$\angle 1 \cong \angle 2 \rightarrow$ diags bisect corner \angle 's of a rhombus
 $\angle 3 \cong \angle 4$
 $\angle D \cong \angle B \rightarrow$ opp \angle 's of a rhombus are \cong
 $\angle DAB \cong \angle DCB$