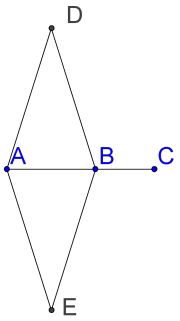
MATH 3440 Homework 4 Due date: September 19 (Wednesday)

Office Hours: M 3pm-4pm, W 11am-noon, 3pm-4pm, F 1pm-2pm and 3-4pm at UH2080B or make appointment
Course homepage:
`http://math.utoledo.edu/~mtsui/3440f12/3440.html`

(1) (20 pts) Problem 9 in Problem Set 1.2 (on page 39). You can use GeoGebra in part (b). You should start with a segment $\overline{AB}$ and $\overline{AC}$ where $m(\overline{AC}) > m(\overline{AB})$. Then use Euclidean construction to construct the rhombus (no length information can be used). Explain your constructions.



(2) (15 pts) Problem 11 in Problem Set 1.2 (on page 39). In this problem, you can not use $m(\angle A) + m(\angle B) + m(\angle C) = \pi$. You can only use exterior angle Theorem and the fact that each interior angle in a triangle and its exterior angle is a linea pair.

(3) (15 pts) Problem 12 in Problem Set 1.2 (on page 39). (Hint: Create two triangles inside the quadrilateral.)

(4) (15 pts) Problem 13 in Problem Set 1.2 (on page 39).

(5) (15 pts) Problem 14 in Problem Set 1.2 (on page 40). You can use GeoGebra in this problem to do the construction. rhombus

(6) (20 pts) Problem 20 in Problem Set 1.2 (on page 40).