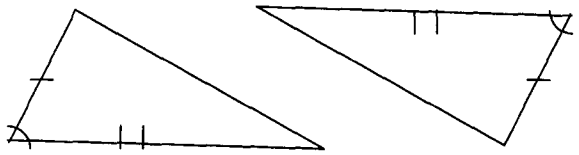
Math 142 Fall 2003 _____ NAME: answers
Quiz # 9 15
Sections 14.1 & 14.2 Seat: _____

Partial credit is based on work shown!

3pts
1. Is the following pair of triangles congruent? yes Justify your answer. SAS

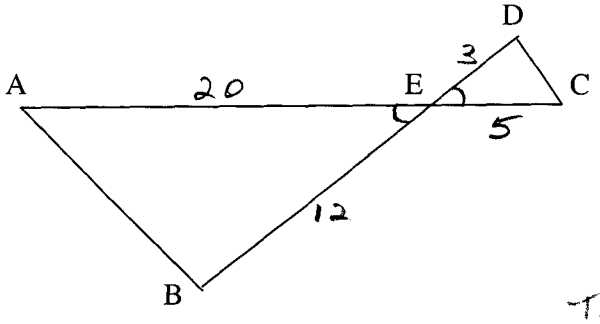


The diagram shows that two sides & the included angle of one triangle are congruent to two sides and the included angle in the other triangle. Thus, the triangles are congruent.

2pts
2. Which of the following are not sufficient to prove that triangles are congruent?

SAS, ASA, SSA, SSS, AAA SSA & AAA

6pts
3. a. In the following figure, AC = 25, CE = 5, DE = 3, and BE = 12. (All measurements are cm.)
Justify why triangles ABE and CDE are similar triangles.



$\angle AEB \cong \angle CED$ Vertical $\angle$s are $\cong$

$\frac{3}{12} = \frac{1}{4}$ and $\frac{5}{20} = \frac{1}{4}$

So corresponding sides are proportional

Thus $\triangle AEB \cong \triangle CDE$ by SAS

b. If CD = 2.6 centimeters then find the length of AB. Set up a proportion and show your work.

$\frac{CD}{AB} = \frac{1}{4}$ so $\frac{2.6}{AB} = \frac{1}{4}$

$AB = (2.6)(4) = 10.4$ cm

4pts
4. True or False. If false, tell why it is false.
True All equilateral triangles are similar. by AAA

false All rectangles are similar.
they are not all the same shape