RIGHT TRIANGLE RELATIONSHIPS

Follow instructions carefully, making observations and recording them in your notebook.

1) Observe the triangles below. Name them and list their obvious characteristics.
2) Use a tool (or calculate if possible) to find the missing measures of all three triangles. Use a chart like the one below to record your data.

ΔEAD	$\Delta???$	$\Delta???$
$m\angle EAD =$	$m\angle??? =$	$m\angle??? =$
$m\angle ADE =$	$m\angle??? =$	$m\angle??? =$
$m\angle DEA =$	$m\angle??? =$	$m\angle??? =$
$m\overline{EA} =$	$m\overline{??} =$	$m\overline{??} =$
$m\overline{AD} =$	$m\overline{??} =$	$m\overline{??} =$
$m\overline{DE} =$	$m\overline{??} =$	$m\overline{??} =$

3) For each triangle, form ratios using its segment lengths, then write them in decimal form.
4) What have you observed about these ratios?
5) Create a hypothesis about the relationships among the lengths of the sides of the right triangles based on the information that your group gathered and discussed.
6) Draw a set of 30-60-90 triangles similar to the one below and repeat this process. Does your hypothesis stand?