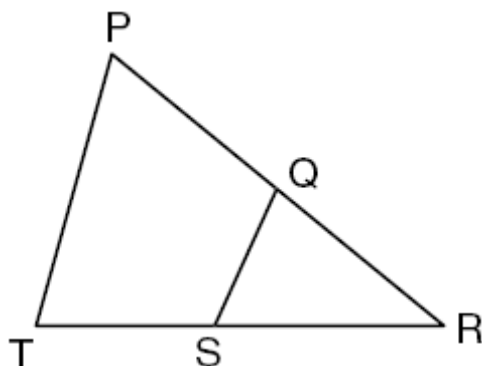


NAME: _____

G.G.44: Establish similarity of triangles, using the following theorems: AA, SAS, and SSS

1. fall0821ge, P.I. G.G.44

In the diagram below of $\triangle PRT$, Q is a point on \overline{PR} , S is a point on \overline{TR} , \overline{QS} is drawn, and $\angle RPT \cong \angle RSQ$.

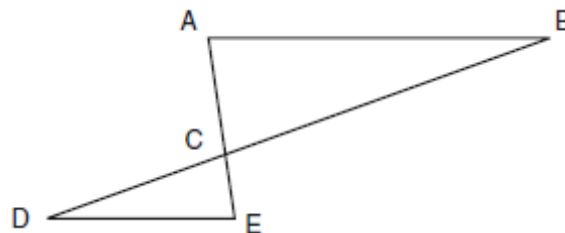


Which reason justifies the conclusion that $\triangle PRT \sim \triangle SRQ$?

- [A] SAS [B] SSS [C] AA [D] ASA

2. 060917ge, P.I. G.G.44

In the diagram of $\triangle ABC$ and $\triangle EDC$ below, \overline{AE} and \overline{BD} intersect at C , and $\angle CAB \cong \angle CED$.

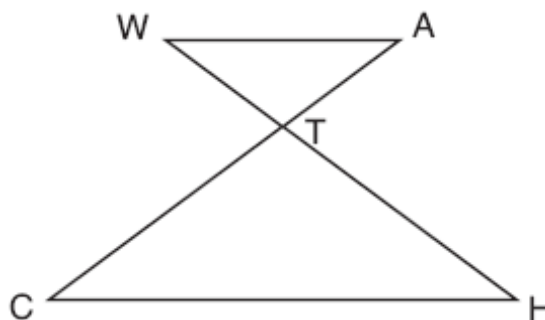


Which method can be used to show that $\triangle ABC$ must be similar to $\triangle EDC$?

- [A] AA [B] SSS [C] SAS [D] HL

3. 010833b, P.I. G.G.44

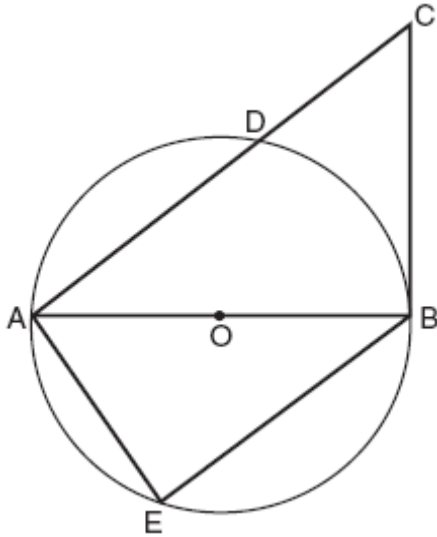
In the accompanying diagram, $\overline{WA} \parallel \overline{CH}$ and \overline{WH} and \overline{AC} intersect at point T . Prove that $(WT)(CT) = (HT)(AT)$.



NAME: _____

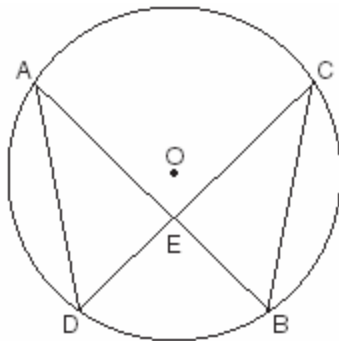
4. 080627b, P.I. G.G.44

In the accompanying diagram of circle O , diameter \overline{AOB} is drawn, tangent \overline{CB} is drawn to the circle at B , E is a point on the circle, and $\overline{BE} \parallel \overline{ADC}$. Prove: $\triangle ABE \sim \triangle CAB$



5. 060133b, P.I. G.G.44

Given: chords \overline{AB} and \overline{CD} of circle O intersect at E , an interior point of circle O ;
chords \overline{AD} and \overline{CB} are drawn.



Prove: $(AE)(EB) = (CE)(ED)$

G.G.44: Establish similarity of triangles, using the following theorems: AA, SAS, and SSS

[1] C _____

[2] A _____

[6] A complete and correct proof that includes a concluding statement is written.

[5] A proof is written that demonstrates a thorough understanding of the method of proof and contains no conceptual errors, but one statement or reason is missing or is incorrect or no concluding statement is written.

or [5] $\frac{WT}{HT} = \frac{AT}{CT}$ or an equivalent proportion

is proven, but no further correct work is shown.

[4] A proof is written that demonstrates a good understanding of the method of proof and contains no conceptual errors, but two statements and/or reasons are missing or are incorrect.

[3] A proof is written that demonstrates a good understanding of the method of proof, but one conceptual error is made.

or [3] $\triangle WAT \sim \triangle HCT$ is proven, but no further correct work is shown.

[2] Some correct relevant statements about the proof are made, but three or four statements and/or reasons are missing or are incorrect.

[1] Only one correct statement and reason are written, other than the given and/or the prove statements.

[0] A zero response is completely incorrect, irrelevant or incoherent or is a correct response that was obtained by an obviously

[3] incorrect procedure.

[4] A complete and correct proof that includes a concluding statement is written.

[3] A proof is written that demonstrates a thorough understanding of the method of proof and contains no conceptual errors, but one reason is missing or is incorrect or the concluding statement is missing.

or [3] Two pairs of angles are proven congruent, but the triangles are not proven similar.

[2] A proof is written that demonstrates a good understanding of the method of proof and contains no conceptual errors, but two statements or reasons are missing or are incorrect.

or [2] A proof is written that demonstrates a good understanding of the method of proof, but one conceptual error is made, such as using an incorrect method to prove that two angles are congruent.

or [2] $\angle E$ and $\angle ABC$ are proven congruent, but the remainder of the proof is missing or is incorrect.

[1] Some correct relevant statements about the proof are made, such as showing that $\angle CAB$ and $\angle ABE$ are congruent, but the remainder of the proof is missing or is incorrect.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[4] incorrect procedure.

[6] A complete and correct proof is shown, such as the example below:

Statements	Reasons
1 Chords \overline{AB} and \overline{CD} of circle O intersect at E , and chords \overline{AB} and \overline{CD} are drawn.	1 Given
2 $\angle A \cong \angle C$	2 Inscribed angles of a circle that intercept the same arc are congruent.
3 $\angle AED \cong \angle CEB$	3 Vertical angles are congruent.
4 $\triangle AED \sim \triangle CEB$	4 AA \cong AA
5 $\frac{AE}{CE} = \frac{ED}{EB}$	5 Corresponding sides of similar triangles are in proportion.
6 $(AE)(EB) = (CE)(ED)$	6 In a proportion, the product of the means equals the product of the extremes.

[5] $\triangle AED$ and $\triangle CEB$ are correctly proved to be similar, and the appropriate proportion is written with justification.

or [5] A correct proof is shown, but one of the justifications is missing or is incorrect.

[4] $\triangle AED$ and $\triangle CEB$ are correctly proved to be similar, but no further work is shown.

[3] A correct proof is shown, but more than one justification is missing or is incorrect.

[2] The triangles are said to be similar, and the conclusion is written.

[1] Only one correct statement and justification are given.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[5] incorrect procedure.