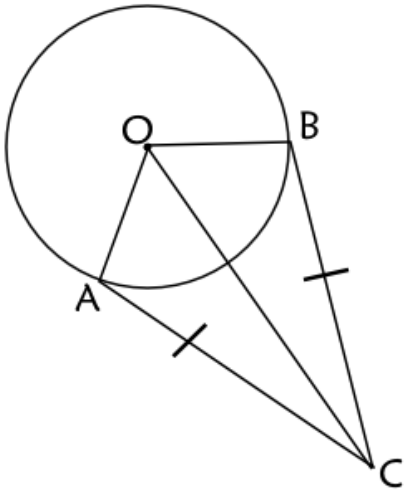
Printable Assessments
CAMI Maths: Grade 9

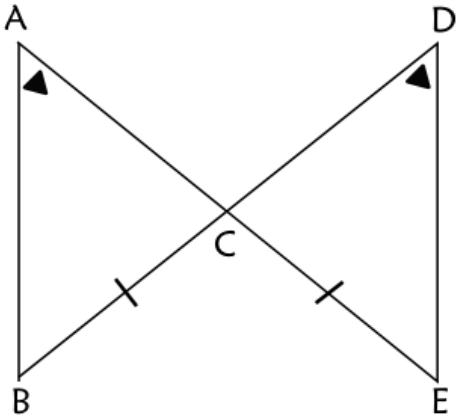
Congruency and Similarity

1. Congruency.

1.1 Proof ΔOBC congruent to ΔOAC.



1.2 Proof ΔABC congruent to ΔDEC.



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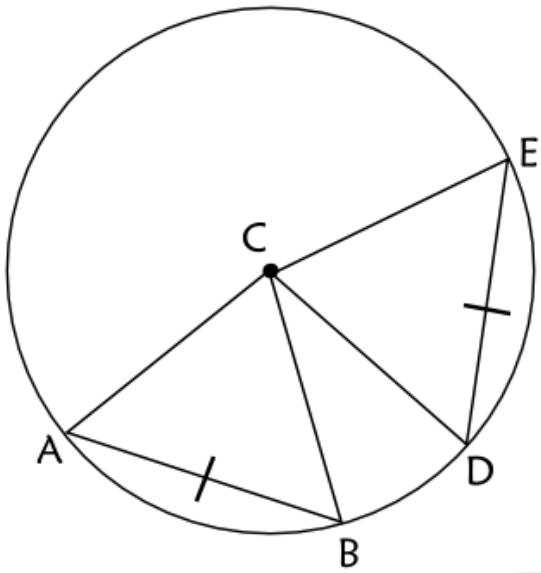
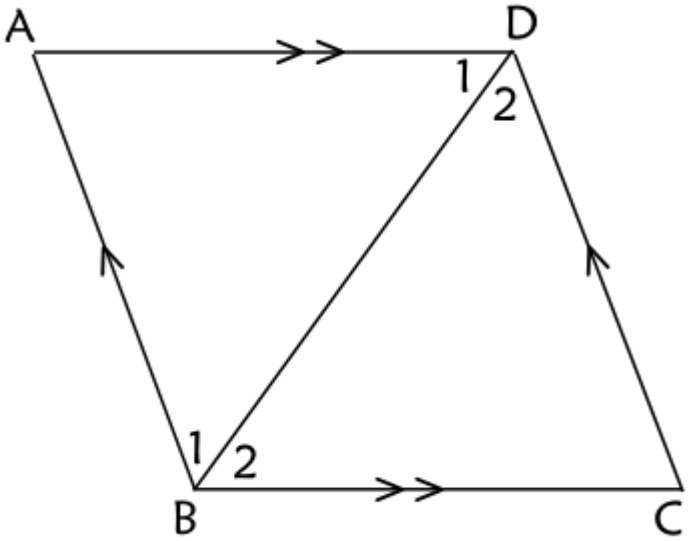
1.3 Proof ΔABC congruent to ΔDEC.



2. Similarity.

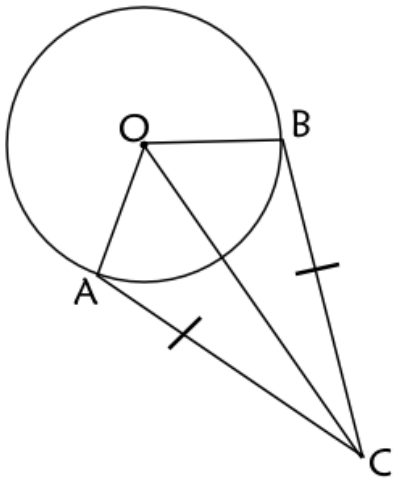
2.1 Proof that ΔABC is similar to ΔDEC.



MEMO

1. Congruency.

1.1 Proof ΔDEF congruent to ΔDEI. [8.3.6.1; 8.3.6.2]

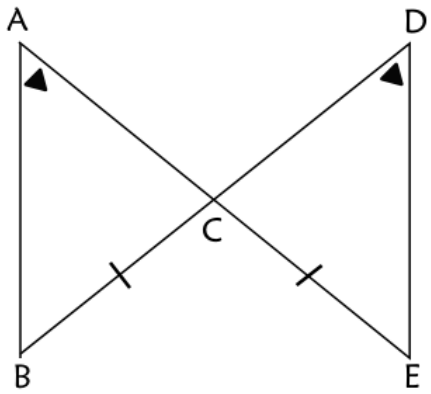


In ΔOBC and ΔOAC:

OB = OA (radii)
OC = OC (common)
BC = AC (given)

$\Delta OBC \equiv \Delta OAC$ (SSS)

1.2 Proof ΔABC congruent to ΔDEC.



In ΔABC and ΔDEC:

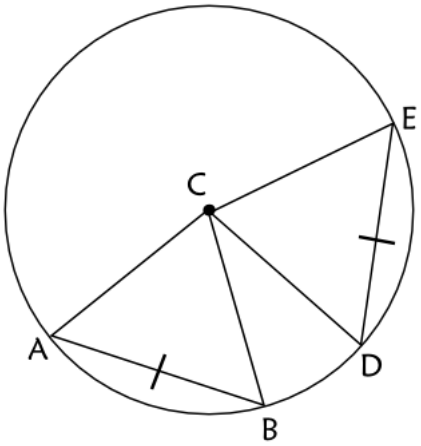
$\hat{A} = \hat{D}$ (given)

BC = CE (given)

$\hat{C}_1 = \hat{C}_2$ (opp. angles)

$\Delta ABC \equiv \Delta DEC$ (SSS)

1.3 Proof ΔABC congruent to ΔDEC.



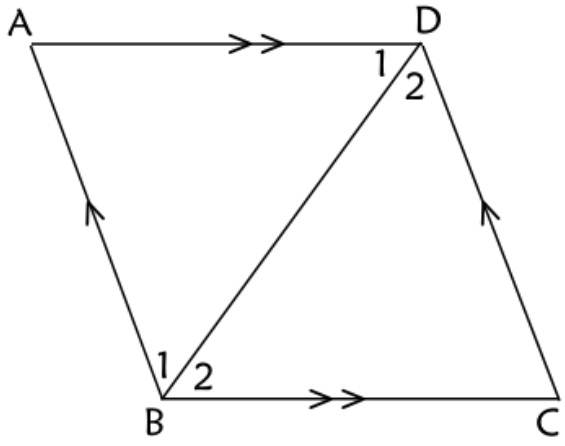
In ΔABC and ΔDEC:

AB = DE (given)
AC = CE (radius)
BC = DC (radius)

$\Delta ABC \equiv \Delta DEC$ (SSS)

2. Similarity. [8.3.7.1; 8.3.7.2]

2.1 Proof that ΔABC is similar to ΔDEC.



In ΔABD and ΔCDB:

$\hat{A} = \hat{C}$ (opp. <'s $\overset{m}{||}$)

$\hat{D}_1 = \hat{B}_2$ (alt. <'s)

$\hat{B}_1 = \hat{D}_2$ (alt. <'s)

$\Delta ABD \,|||\, \Delta CDB$ (AAA)