

Match the Sides

Follow matching endpoints through turns and reflections

GRADE 7 • 7.MG.2.b

7.MG.2.b "Identify corresponding sides of similar quadrilaterals and triangles."

NAME _____

DATE _____

BUILD UNDERSTANDING

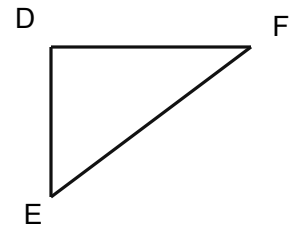
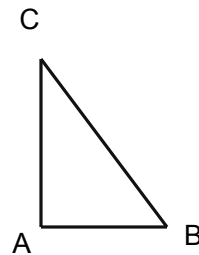
A similarity statement lists vertices in corresponding order. To match a side, match both of its endpoints. Turning or reflecting a figure changes its page direction but preserves the corresponding sides. All pairs on this sheet are similar as stated.

WORKED EXAMPLE

Triangle ABC ~ triangle DEF. Which side corresponds to AC? Use both drawings and the stated order.

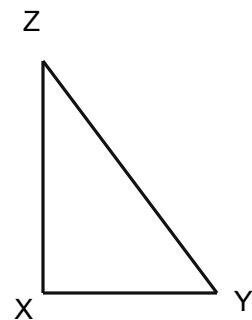
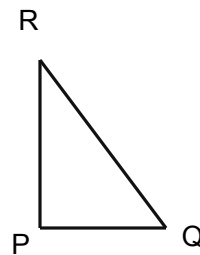
1. Match the first vertices A and D, then the third C and F.
2. Join those matching endpoints; orientation does not change the pair.

Answer: A matches D and C matches F, so AC corresponds to DF.

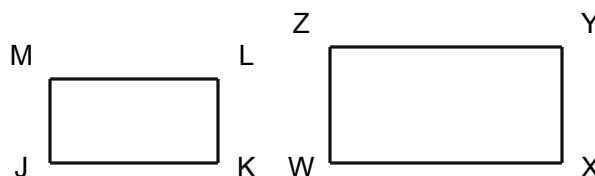


PRACTICE 4 problems

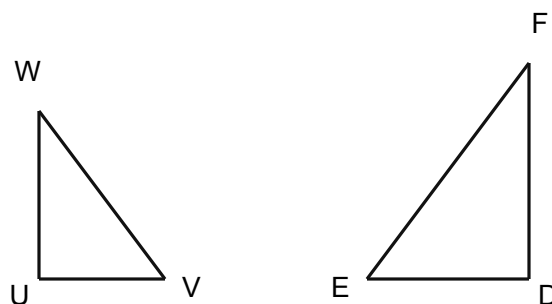
- 1** Triangle PQR ~ triangle XYZ. Name the sides corresponding to QR and PR. Explain one match using endpoints.



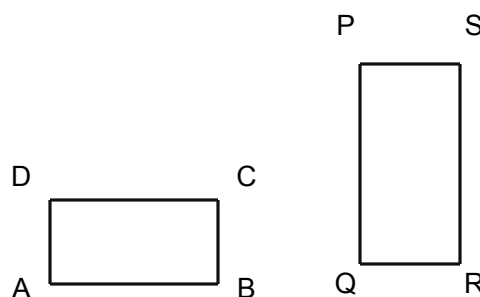
- 2** Quadrilateral JKLM $\sim$ WXYZ. Name the sides corresponding to LM and JM, using the vertex order.



- 3** The second triangle is reflected. Triangle UVW $\sim$ triangle DEF. List all three corresponding side pairs.

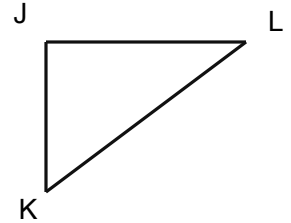
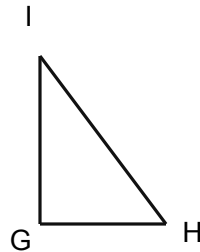


- 4** Quadrilateral ABCD $\sim$ PQRS. The second figure is turned. Which side corresponds to DA? Then give the pair for BC and explain why page direction is not the rule.

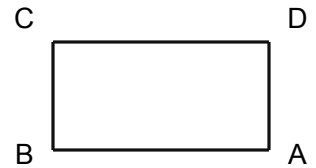
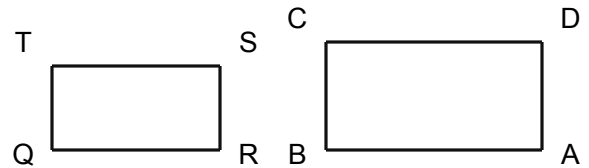


APPLY IT Show your work**1**

A club prints similar triangular logos GHI and JKL in that order. Edge GH carries its name and edge GI carries a border. Identify both matching edges on the larger logo.

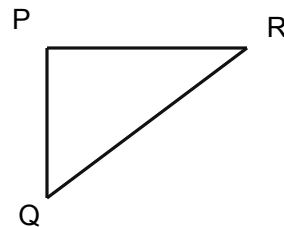
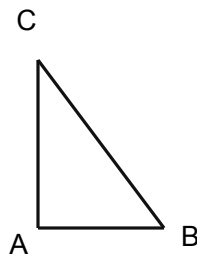
**2**

Similar screens QRST and ABCD are labeled in matching order. Edge RS carries a sponsor and edge QT carries a cable. Identify the two matching edges on ABCD.



CHALLENGE One step up

Triangle ABC ~ triangle PQR. A student pairs AB with QR because the sides seem to point the same way. Correct the match and list the other two pairs, using endpoints.



Accept side names in either direction, such as DF or FD, and pairs listed in either order. Require correct endpoints. Every supplied pair is built from the same triangle or rectangle by a uniform scale, with the displayed turn/reflection applied to the second member. No unrelated side measures are needed.

PRACTICE 1

QR corresponds to YZ; PR to XZ. Q matches Y and R matches Z.

PRACTICE 2

LM corresponds to YZ, and JM corresponds to WZ.

PRACTICE 3

UV with DE, VW with EF, and UW with DF. Reflection does not change the stated endpoint correspondence.

PRACTICE 4

DA corresponds to SP; BC corresponds to QR. Use matching endpoint labels from the order, not left/right or horizontal/vertical position.

APPLY IT 1

The name goes on JK and the border on JL.

G matches J, H matches K and I matches L. Thus GH matches JK and GI matches JL.

APPLY IT 2

The sponsor goes on BC; the cable goes on AD.

R matches B and S matches C; Q matches A and T matches D. Therefore RS matches BC and QT matches AD.

CHALLENGE

AB corresponds to PQ. The other pairs are BC with QR and AC with PR. A matches P, B matches Q, C matches R; page direction cannot replace those matches.