## Unit 2 Lesson 2: Congruent Parts, Part 2

### 1 Math Talk: Which Are Congruent? (Warm up)

#### Student Task Statement

Each pair of figures is congruent. Decide whether each congruence statement is true or false.

$△ABC≅△FED$



$PZJM≅LYXB$



Triangle $ABC$ is congruent to triangle $FED$.

Quadrilateral $PZJM$ is congruent to quadrilateral $LYXB$.

$△JKL≅△QRS$



$ABCDE≅PQRST$



Triangle $JKL$ is congruent to triangle $QRS$.

Pentagon $ABCDE$ is congruent to pentagon $PQRST$.

### 2 Which Triangles Are Congruent?

#### Student Task Statement

Here are 3 triangles.



1. Triangle $PQR$ is congruent to which triangle? Explain your reasoning.
2. Show a sequence of rigid motions that takes triangle $PQR$ to that triangle. Draw each step of the transformation.
3. Explain why there can’t be a rigid motion from triangle $PQR$ to the other triangle.

### 3 Are These Parts Congruent?

#### Student Task Statement





1. Triangle $ABD$ is a rotation of triangle $CDB$ around point $E$ by $180^{∘}$. Is angle $ADB$ congruent to angle $CDB$? If so, explain your reasoning. If not, which angle is $ADB$ congruent to?
2. Polygon $HIJKL$ is a reflection and translation of polygon $GFONM$. Is segment $KJ$ congruent to segment $NM$? If so, explain your reasoning. If not, which segment is $NM$ congruent to?
3. Quadrilateral $PQRS$ is a rotation of polygon $VZYW$. Is angle $QRS$ congruent to angle $ZYW$? If so, explain your reasoning. If not, which angle is $QRS$ congruent to?

#### Images for Activity Synthesis





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