Geometry

4.3 Prove Triangles Congruent by SSS

## SSS (Side-Side-Side Congruence Postulate)

Two triangles

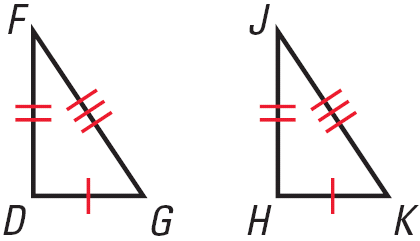
Three sides

cpngruent

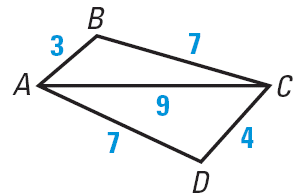
Three sides

If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of one triangle are \_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_ of another triangle, then the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are \_\_\_\_\_\_\_\_\_\_\_\_\_.

cpngruent

True or False

ΔDFG ≅ ΔHJK



true

ΔACB ≅ ΔCAD

false

Given: ;

C

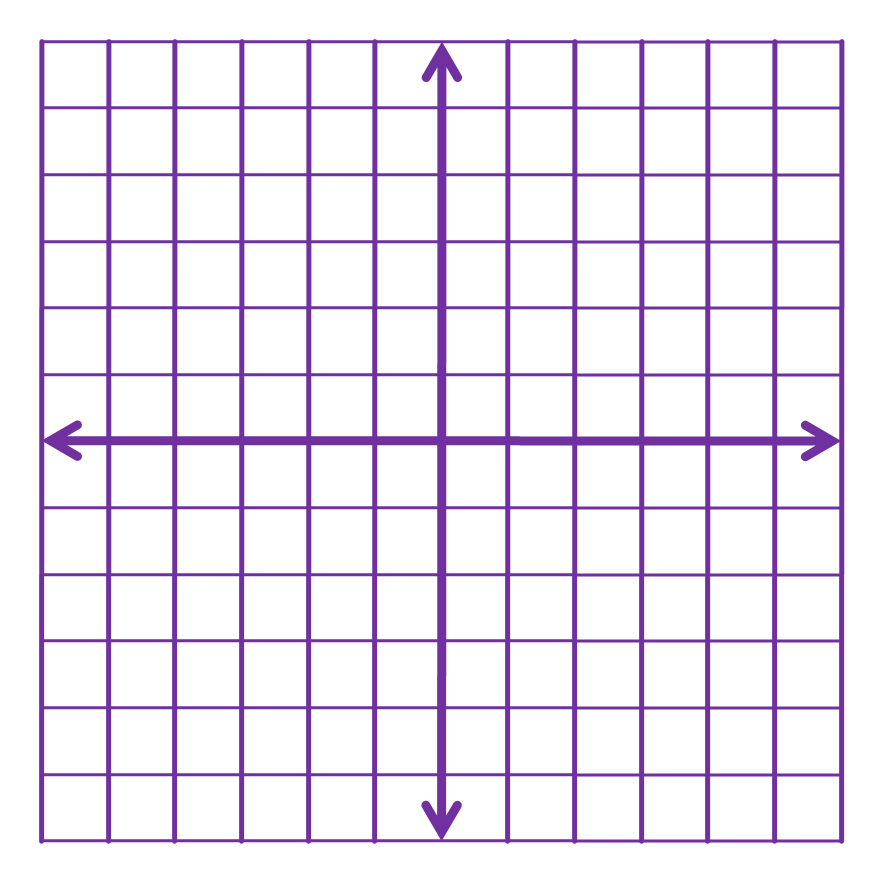
B

D

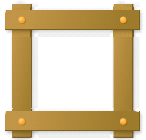
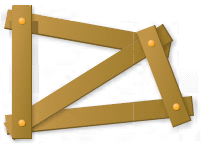
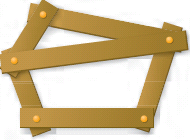
A

Prove:

|  |  |
| --- | --- |
| Statements | Reasons |
| 1. | 1. Given |
| 2. | 2. Reflexive |
| 3. | 3. SSS |

ΔJKL has vertices J(–3, –2), K(0, –2), and L(–3, –8). ΔRST has vertices R(10, 0), S(10, – 3), and T(4, 0). Graph the triangles in the same coordinate plane and show that they are congruent.

Determine whether the figure is stable.



Stable since has triangular construction

Not stable

Not stable, lower section does not have triangular construction

Assignment: 236 #2-30 even, 31-37 all = 22 total

Extra Credit: 239 #2, 4 = +2