To prove two figures are congruent you must show:
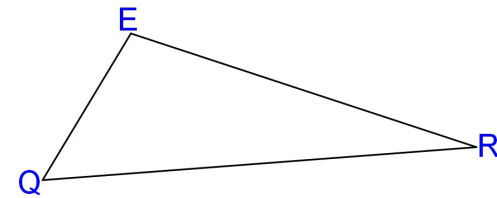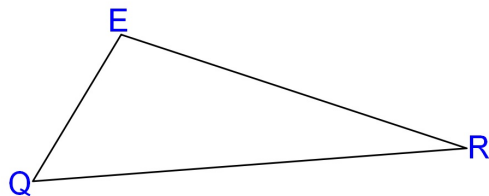
- All pairs of corresponding sides are congruent

AND

- All pairs of corresponding angles are congruent

"two sides and the included angle of a triangle"

Side	Side	Included Angle
$\overline{ER}$	$\overline{EQ}$	$\angle E$
$\overline{QR}$	$\overline{ER}$	$\angle R$

"two angles and the included side of a triangle"

Angle	Angle	Included side.
$\angle Q$	$\angle R$	$\overline{QR}$
$\angle E$	$\angle Q$	$\overline{EQ}$

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1. What sides include $\angle B$?

$\overline{BR}$ $\overline{BG}$

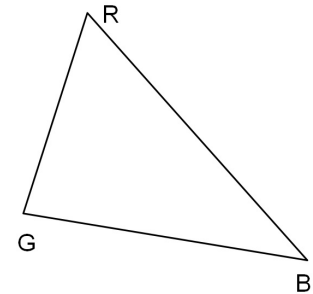2. What angle is included between $\overline{GR}$ and $\overline{RB}$?

$\angle R$

3. What angles inclued $\overline{GB}$?

$\angle G$ $\angle B$

4. What side is included between $\angle R$ and $\angle B$?

$\overline{RB}$

Use a ruler and a protractor to create a triangle with the following characteristics:

- One side is 15 cm long
- Another side is 9 cm long
- The included angle has a measure of 40°

After you've made your triangle compare it with other people's triangles.

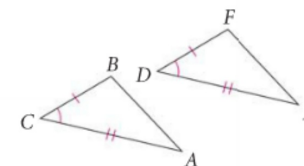Everybody should have the same triangle.

Postulate 4-2 **Side-Angle-Side (SAS) Postulate**

If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the two triangles are congruent.
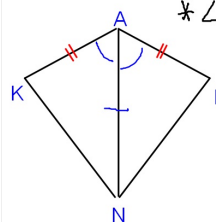
$$\triangle BCA \cong \triangle FDE$$

SAS

Can you use SAS to prove each pair of triangle congruent?
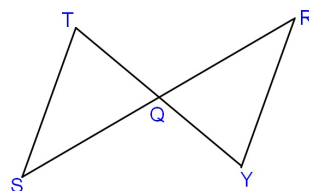If yes, write a congruence statement.

1. AN bisects ∠KAD

    ∗ ∠KAN ≅ ∆AN
      def of bisect
    ∗ $\overline{AK} \cong \overline{AD}$
      is given
    ∗ $\overline{AN} \cong \overline{AN}$
      reflexive prop

2. $\overline{RS}$ and $\overline{TY}$ bisect each other.

Yes   △KAN ≅ △DAN SAS