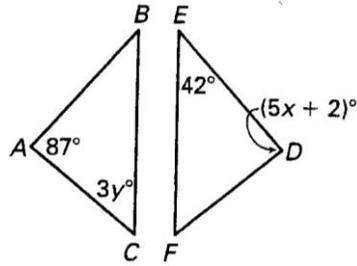


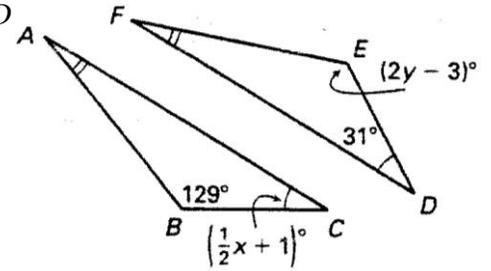
5.3 ~ Congruence & Transformations

Set up and solve equations to find the value of the variable(s).

1. $\triangle ABC \cong \triangle DFE$



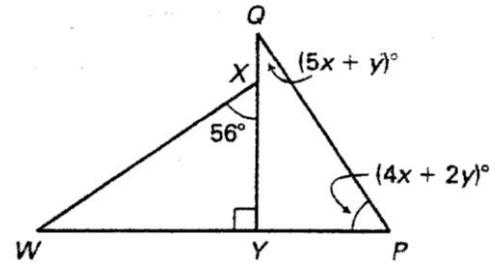
2. $\triangle ABC \cong \triangle FED$



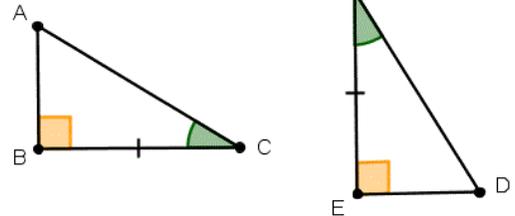
3. $\triangle ABC \cong \triangle DEF$, $EF = x^2 - 7$, $BC = 4x - 2$
Find the value of x that makes sense.

4. $\triangle DEF \cong \triangle PQR$, $m\angle E = 3x^2 - 20x + 40$,
 $m\angle Q = 9x$. Find the values of x .

5. $\triangle WXY \cong \triangle QPY$, set up and solve a system of equations to find the values of x and y .

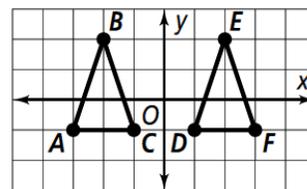


6. $\triangle ABC \cong \triangle DEF$, $m\angle A = 52^\circ$, $m\angle D = 15x - 8y$, and $m\angle F = 6x + 14y$
Set up and solve a system of equations to find the values of x and y .

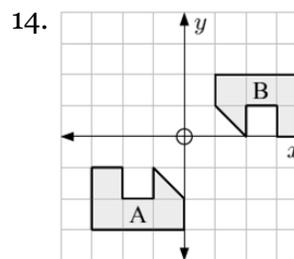
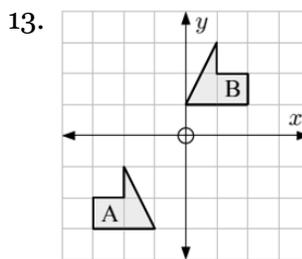
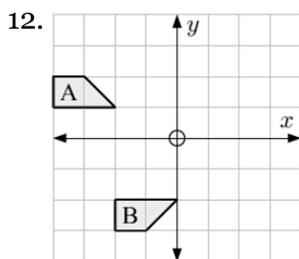
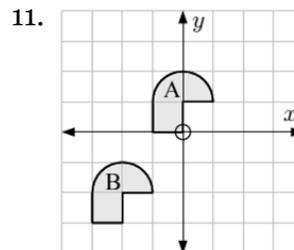
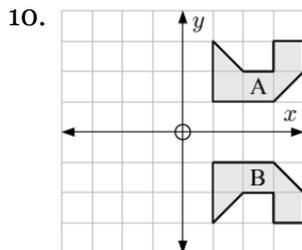
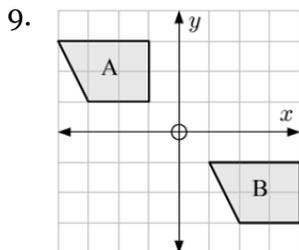


7. Given $\triangle QRS \cong \triangle TUV$, $SR = 2m^2 - 9m + 5$ & $VU = 8 - 8m$. Set up and solve an equation to find the value of the variable and then find SR .

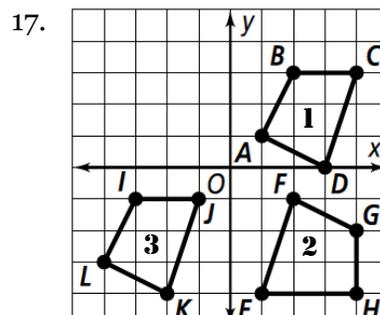
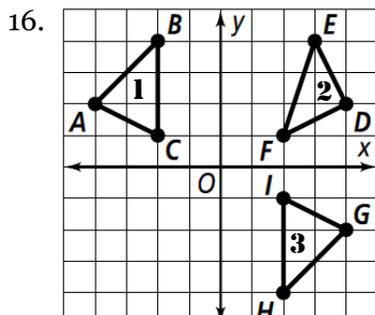
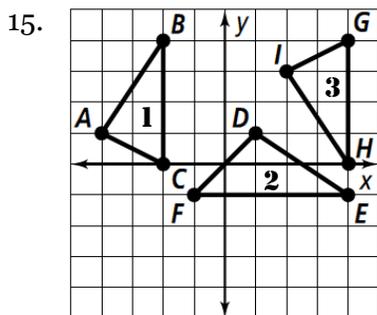
8. A classmate says that $\triangle ABC$ is congruent to $\triangle DEF$ because there is a reflection across the y -axis that maps $\triangle ABC$ on to $\triangle DEF$. What is your classmate's error?



Describe the congruence transformation(s) that maps Figure A on to Figure B.



Identify a pair of congruent figures and write a congruence statement. Then describe a sequence of congruence transformations that maps the first figure onto the second.



Describe the congruence transformation(s) that maps $\triangle ABC$ on to $\triangle DEF$.

