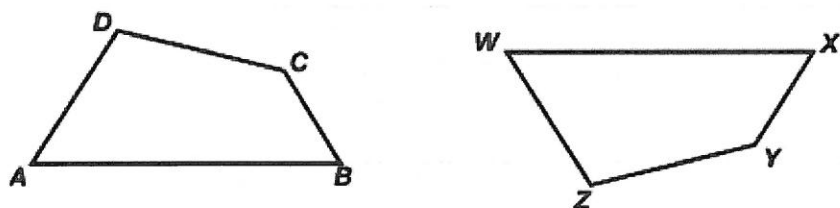
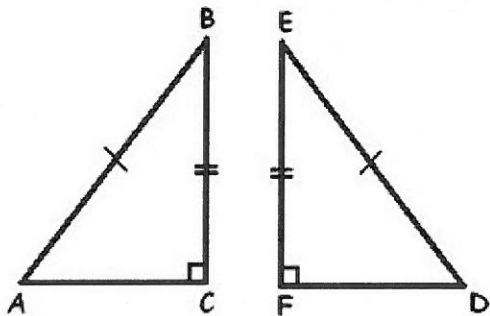


5.2 Practice Problems

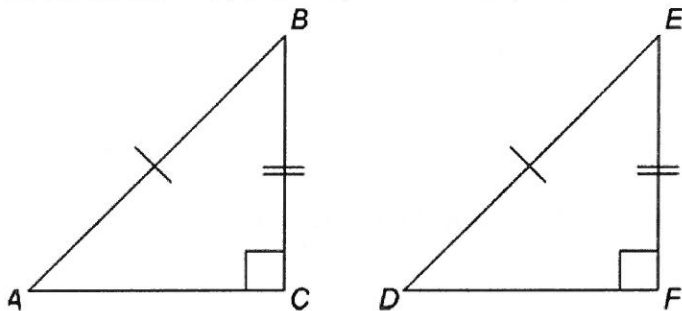
Triangles, Triangle Sum Theorem, Exterior Angle Theorem, Congruent Triangles

1. Identify all pairs of corresponding congruent angles and sides for each pair of congruent polygons. Then, write two different congruence statements for the polygons.

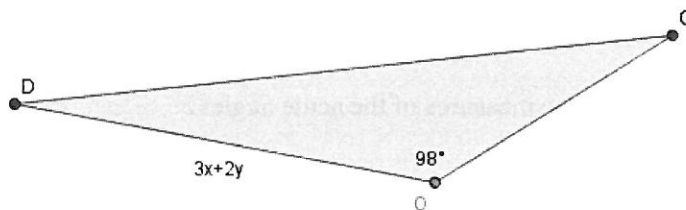
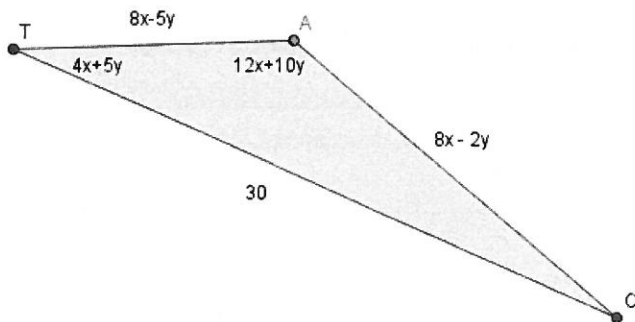


$$ABCD \cong WXYZ$$

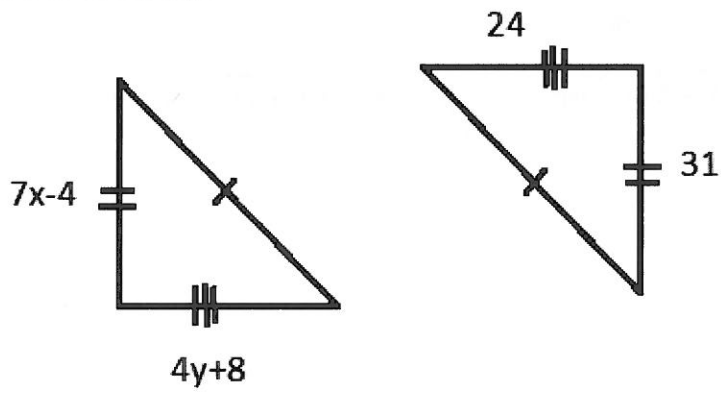
2. Given: $AB = 5$, $BC = 4$, $m\angle E = 40^\circ$, Find: DF and $m\angle D$.



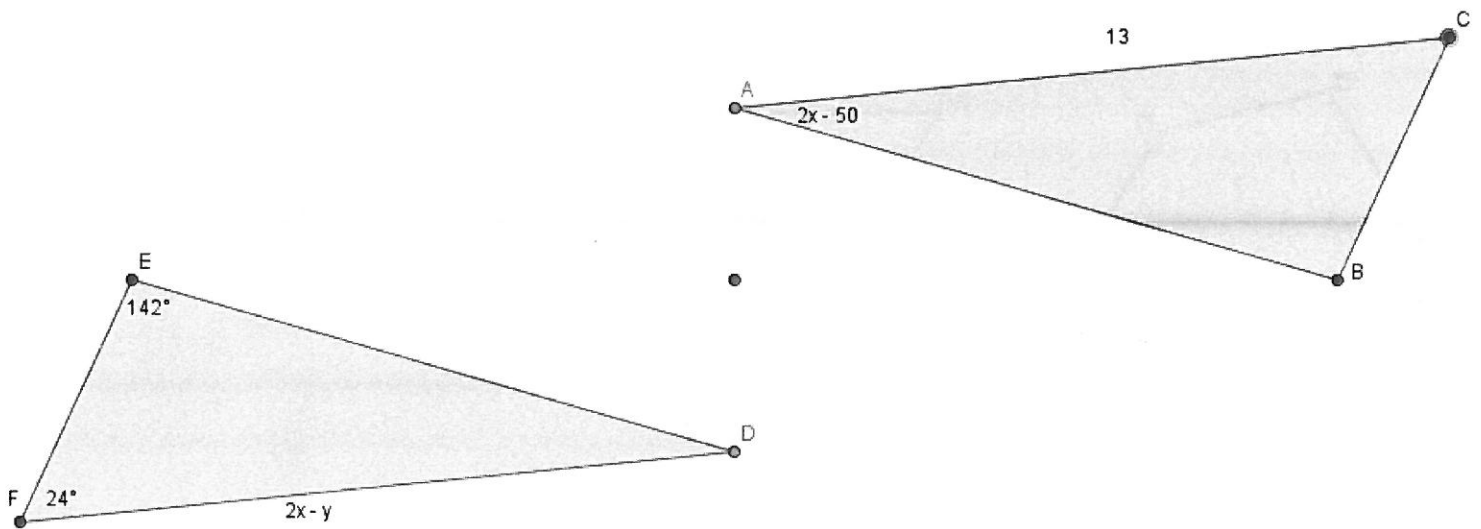
3. Given $DOG \cong CAT$, find the measure of angle C and segment GO.



4. Solve for x and y .

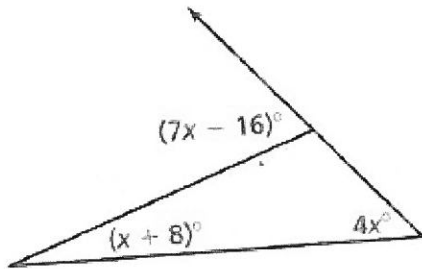


5. Find the measure of angle B.

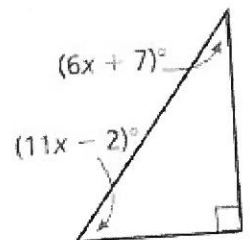


6. Classify $\triangle ABC$ with vertices $A(-2, 3)$, $B(0, -3)$, and $C(3, -2)$ by its sides. Determine if it's a right triangle.

7. Find the measure of the exterior angle.



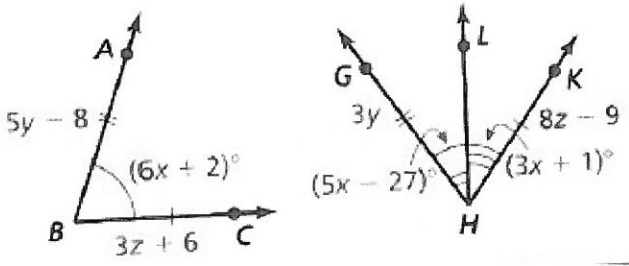
8. Find the measures of the acute angles.



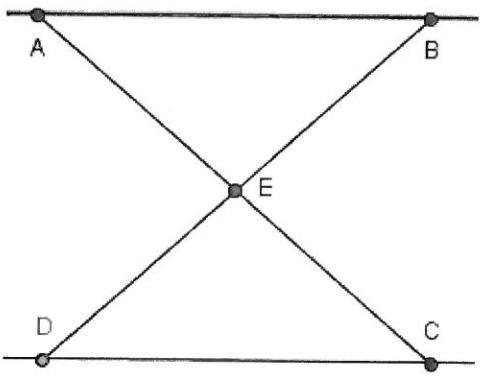
9. Find the measure of one acute angle of a right triangle if it is 3 times the sum of the measure of the other acute angle and 8.

10. Find the measure of one acute angle in a right triangle if it is twice the difference of the measure of the other acute angle and 12.

11. Solve for x, y and z.



12. Given $\overline{AB} \parallel \overline{DC}$, E is the midpoint of \overline{AC} and \overline{BD} , $\overline{AB} \cong \overline{DC}$, Prove triangle $ABE \cong CDE$.



13. Given $LMN \cong PQR$, $m\angle L = 40$, $m\angle M = 90$, $m\angle P = 17x - y$, $m\angle R = 2x + 4y$, solve for x and y.

14. Given $STU \cong XYZ$, $m\angle T = 28$, $m\angle U = 4x + y$, $m\angle X = 130$, $m\angle Y = 8x - 6y$, solve for x and y.

15. Find the missing numbered angle measures.

