## 8.1 Classifying Polygons Homework

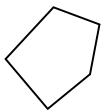
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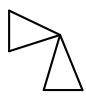
Solve each problem. Show your work.

1. Classify each figure as concave, convex, or neither.

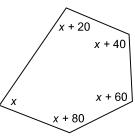




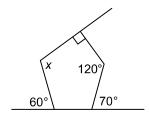




2. Find x and the measure of each angle.



3. Find *x*.



- 4. How many sides does a regular polygon have if each interior angle has a measure of 172°?
- 5. Find the measure of an interior angle in a regular heptagon.

- 6. Find the measure of an exterior angle in a regular hexagon.
- 7. How many sides does a regular polygon have if each exterior angle measures 72°?

8. How many sides does a regular polygon have if each interior angle has a measure of 170°?	9. Find the sum of the measures of the interior angles of a 15-gon.
10. How many sides does a regular polygon have if each exterior angle measures 15°?	11. Find the measure of an interior angle in a regular 16-gon.
12. How many sides does a regular polygon have if each interior angle has a measure of 160°?	13. Find the measure of an exterior angle in a regular nonagon.
14. Seven exterior angles of an octagon measure 70°, 42°, 30°, 22°, 50°, 68°, and 55°. What is the measure of the eighth exterior angle?	15. Find x and y.  88°  142°  136°  136°  x
16. Find the measure of an interior angle in a regular dodecagon.	17. Find the measure of the sum of the exterior angles in a decagon.