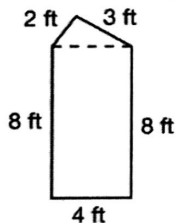Name _____ Date _____ Class_____

1. (23) A ribbon surrounds the edge of a circular hat that has a radius of 8 inches. Find the length of the ribbon to the nearest tenth inch. Use 3.14 for π.
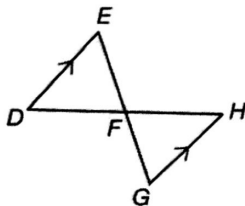
2. (37) Find a line that is parallel to $y = x + 7$ and passes through the point (2, 4).

3. (20) State the converse of this statement: *If a quadrilateral is a square, then it is a rhombus.* Determine whether the original statement and its converse are true.

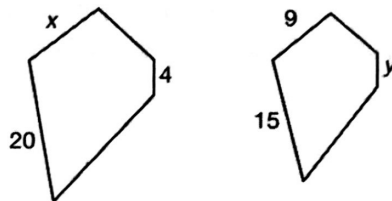4. (40) Find the perimeter of the composite figure below.

5. (30) Write a two-column proof to prove that $\triangle EDF \cong \triangle GHF$ given that F is a midpoint of $\overline{DH}$ and $\overrightarrow{DE} \parallel \overrightarrow{GH}$.
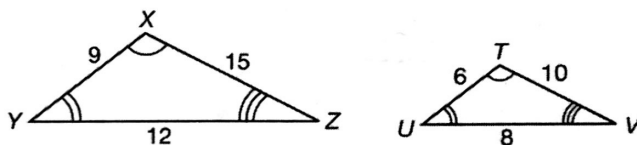

6. (42) Find the distance from the point P (2, 6) to the line $x = 6$.

7. (44) The pentagons in the diagram are similar. Find the values of x and y.

8. (41) Consider $\triangle XYZ$ and $\triangle TUV$ shown below. Write a proportion to show that $XY : TU = XZ : TV$.

9. (32) In triangle DRS, $\overline{DN}$ is a median, and X is the centroid of the triangle. What is the length of $\overline{DX}$ if $\overline{DN}$ measures 53.4 centimeters?

10. (33) A triangle has side lengths that measure 9, 10, and 13 units. Classify the triangle by side lengths and angles.

Saxon Geometry