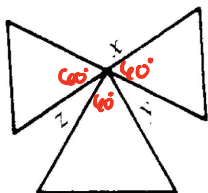
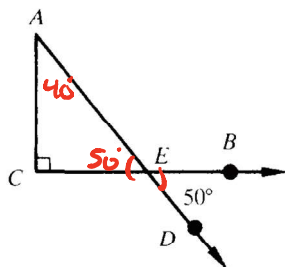


Practice Exercise 12

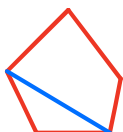
1. In the figure, the three triangles are equilateral and share a common vertex. Find the value of $x + y + z$.



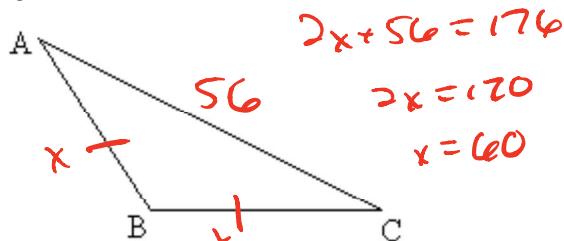
- A. 90°
 B. 120°
 C. 180°
 D. 360°
 E. Cannot be determined from the information given
2. In the figure, $\angle C$ measures 90° , \overline{CB} and \overline{AD} are straight line segments, and $\angle BED$ measures 50° . What is the measure of $\angle A$?



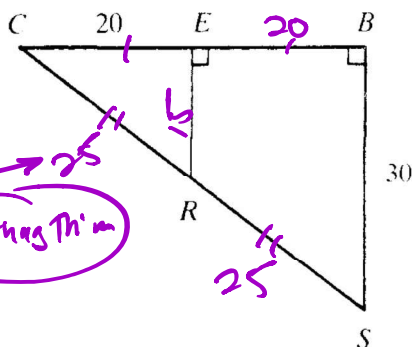
- A. 40°
 B. 50°
 C. 90°
 D. 100°
 E. 130°
3. If a straight line is drawn from one vertex of a pentagon to another vertex, which of the following pairs of polygons could be produced?
- A. Two triangles
 B. Two quadrilaterals
 C. A triangle and a quadrilateral
 D. A quadrilateral and a pentagon
 E. All of the above



4. The perimeter of the triangle below is 176 units. If sides AB and BC are the same length, and side AC is 56, what are the lengths of sides AB and BC?

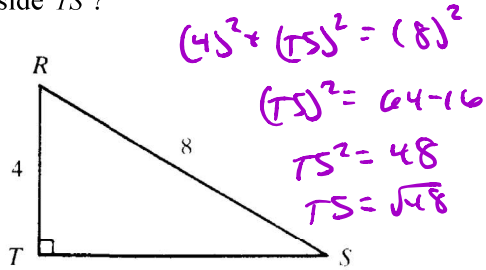


- A. 56
 B. 60
 C. 68
 D. 72
 E. 90
5. In a triangle, the longest side is 8 units more than the shortest side, and the shortest side is half the remaining side. Find the length of the longest side if the triangle's perimeter is 32 units.
- A. 18
 B. 14
 C. 12
 D. 10
 E. 6
6. In the figure below, E is the midpoint of \overline{BC} , and \overline{RE} and \overline{SB} are each perpendicular to \overline{BC} . If CE is 20 and SB is 30, how long is the perimeter of quadrilateral $REBS$?



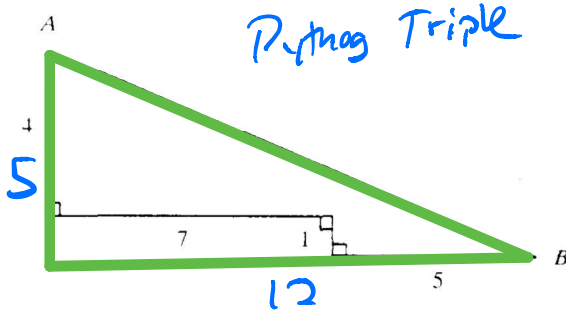
- A. 50
 B. 70
 C. 90
 D. 120
 E. 220

7. In the figure, $\triangle RST$ is a right triangle. Hypotenuse \overline{RS} is 8 units long, and side \overline{RT} is 4 units long. How many units long is side \overline{TS} ?



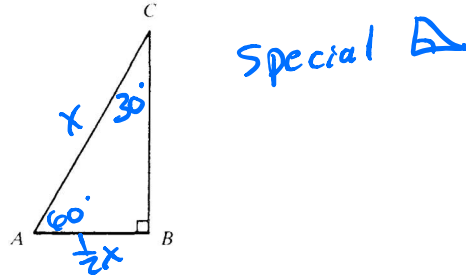
- A. $2\sqrt{3}$ D. 8
 B. 4 E. None of the above
 C. $4\sqrt{3}$

8. In the figure below, what is the length of the segment AB ?



- A. 11 D. 16
 B. 13 E. 17
 C. $5 + \sqrt{66}$

9. In the figure below, $AB = \frac{1}{2}AC$ and $\angle ABC$ is a right angle. What is the measure of $\angle ACB$?



- A. 25° D. 45°
 B. 30° E. 60°
 C. 40°

10. What is the length of a side of a square with a diagonal of length $5\sqrt{2}$ units?

- A. $\frac{5\sqrt{2}}{2}$ D. 10
 B. 5 E. $10\sqrt{2}$
 C. $\frac{10\sqrt{2}}{2}$

