

## Honors Geometry Ch 11 WS #1

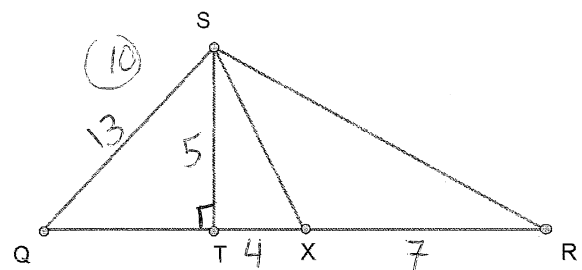
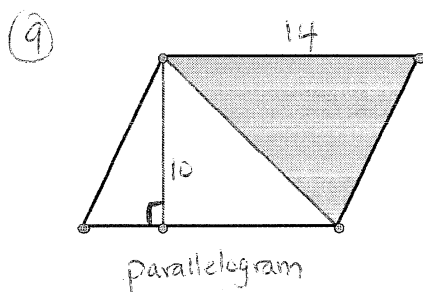
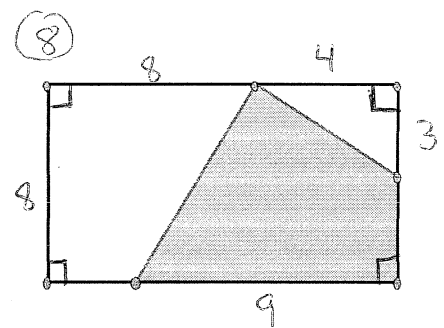
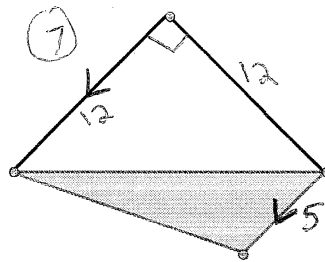
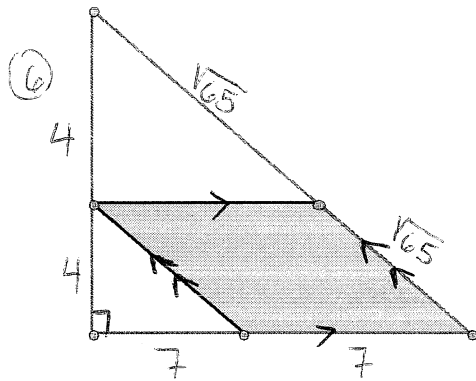
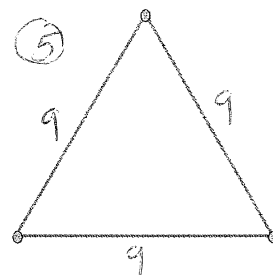
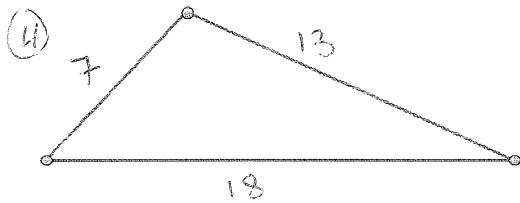
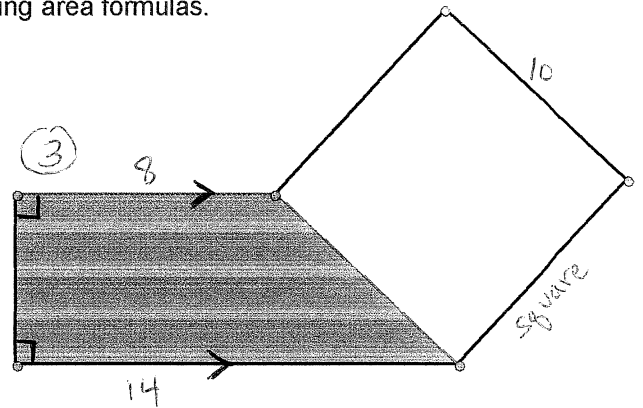
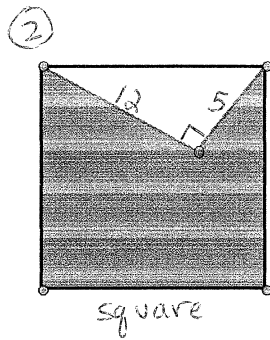
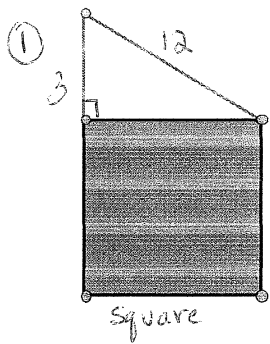
### Part I

For each problem make a sketch and show all steps for the solution including area formulas.

1. An equilateral triangle has perimeter of 51 cm. Find its area.
2. In a rectangle the ratio of the sides is 3:4. If the area is 96 sq. cm, find the lengths of the sides.
3. Find the lengths of the sides of a rectangle if the perimeter is 30 cm and the area is 56 sq. cm.
4. A rectangular picture is 12 X 16 inches. If a frame of uniform width contains an area of 163 sq. inches, what is the width of the frame?
5. The length of a garden is 6 feet more than the width. A walkway 3 feet wide surrounds the outside of the garden. The total area of the walkway is 288 sq. feet. Find the dimensions of the garden.
6. Find the dimensions and maximum area of a rectangle if its perimeter is 24 inches.
7. Find the area of a square with radius  $8\sqrt{2}$  units.
8. Find the area of a regular hexagon with apothem of 9 units.
9. Find the area of an equilateral triangle with radius of  $4\sqrt{3}$  units.
10. Find the area of a regular hexagon with perimeter 72 units.
11. Find the area of a regular hexagon with radius of 4 units.
12. Find the area and perimeter of a regular of a regular pentagon with radius 10 units.
13. Find the perimeter and area of a regular decagon with side length 5 units. Also find the measures of an exterior and interior angle.

## Part II

For each problem find the area of the given figure, or if a part is shaded find the area of the shaded region. In all problems show all steps for the solution including area formulas.



- a)  $\triangle QTS$       b)  $\triangle QRS$   
 c)  $\triangle XRS$       d)  $\triangle QXS$       e)  $\triangle TXS$