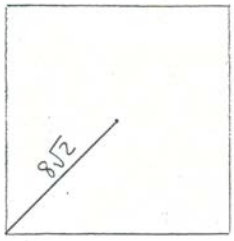
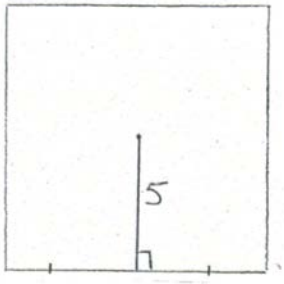
Area of Regular Polygons

Remember, $A = \frac{1}{2}ap$ [$a$ is the apothem and $p$ is the perimeter]!

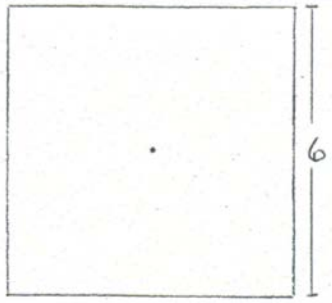
1. Find the area of a square with a radius of $8\sqrt{2}$. **256**



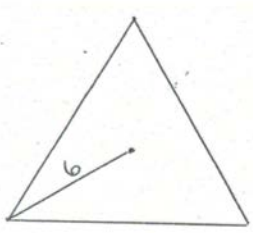

2. Find the area of a square with apothem length of 5. **100**



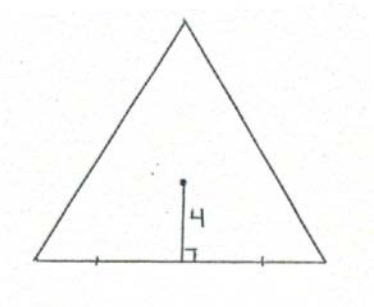

3. Find the radius of a square with a side length of 6. **$3\sqrt{2}$**



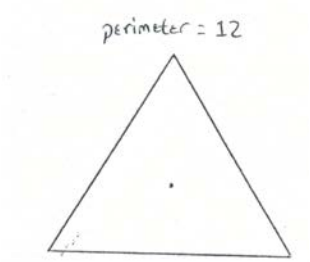

4. Find the area of an equilateral triangle with a radius of 6. **$27\sqrt{3}$**



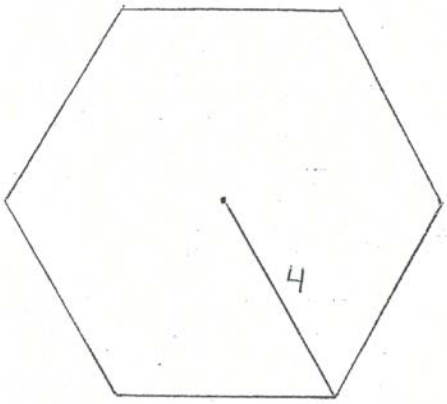
5. Find the area of an equilateral triangle with apothem length of 4. **$48\sqrt{3}$**




6. Find the area of an equilateral triangle with a perimeter of 12. **$4\sqrt{3}$**




7. Find the area of a regular hexagon with a radius of 4. **$24\sqrt{3}$**




8. Find the area of a regular hexagon with apothem length of $5\sqrt{3}$. **$150\sqrt{3}$**