**Lesson 8: Geometry**

1. $\overbar{AB}=10$ and $\overbar{AD}$ is 3 times as long as $\overbar{DB}$. Find area of the shaded region.



1. A cube with the volume of 64 is inscribed in a sphere. Find volume of the sphere.
2. Find all side lengths of $∆ABC$ and area.



1. Square ABCD is inscribed in the circle. $\overbar{BC}=8$. Find area of the shaded region.



1. Find *a* as a function of *b* and *c*.



1. Line *q* follows $3x-4y=8$. Line *r* is perpendicular to line *q* and passes through (7, 12) and (*t*, *t*+1). Find the value of *t*.
2. Line *a* follows $5x+10y=30$. Line *b* is parallel to line *a* and passes through (-1, -8). Find the value for which line *b* intersects the y-axis.
3. A large mosaic is 80in long and 60in wide. It is to be covered by smaller 2in x2in tiles. How many tiles are needed to cover the mosaic?