UNIT 6: GEOMETRY REVIEW SHEET

**Part 1: Simplifying radicals.**

1. $5\sqrt{6}∙\frac{1}{6}\sqrt{216}$ 2. $-21\sqrt{27x^{5}} $ 3. $3\sqrt{98a^{3}b^{7}}$ 4. $\sqrt{12}∙\sqrt{75}$

**Part 2: Solving radical equations.**

5. $3-\sqrt{x}=-2$ 6. $\sqrt{10b+6}=6$ 7. $\sqrt{n+5}=\sqrt{5n-11}$

8. $-2\sqrt{2r+5}=6$

**Part 3: Pythagorean Theorem.**

9. The area of a square is 49in2. Find the length of its diagonal. Leave your answer as a simplified radical.

10. Determine if the following sides lengths create a right triangle: 13, 38, 35

11. If you walked 3 blocks north and then 8 blocks west and then 10 blocks south, how far are you from your starting point if each block is 2/10 of a mile?

**Part 4: Distance and Midpoint**

Find the distance and midpoint between each pair of points.

12. A(3,5) and B(8,5) 13. A(10,-2) and B(-6,3)

14. M is the midpoint of AB. If A is located at (6,10) and M is located at (5,7), find the coordinates of B.

**Part 5: Geometry**

15. Find the perimeter of a triangle if the vertices are located at A(2,1) B(6,-3) and C(1,-7).

16. The volume of a cylinder is 1526.04 in3. If the height is 6in, find the length of the diameter.

17. Find the volume of a sphere if the circumference around the sphere is 31.4 inches.

18. If you double the radius of a sphere, how many times greater is the new volume?