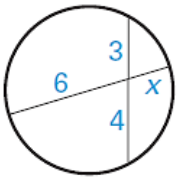
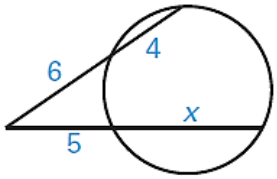
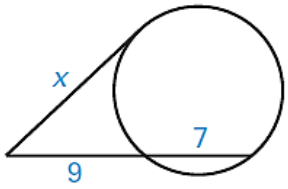
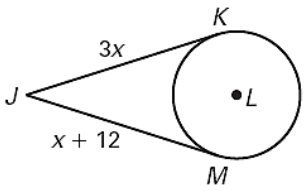
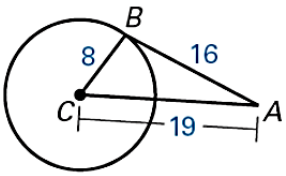
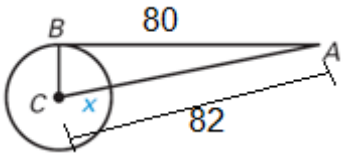
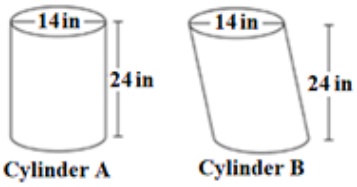
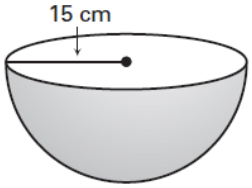
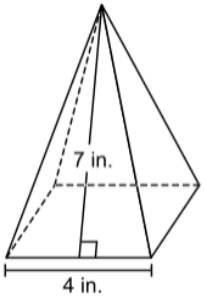
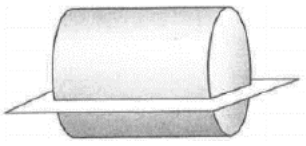
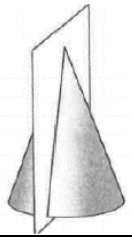
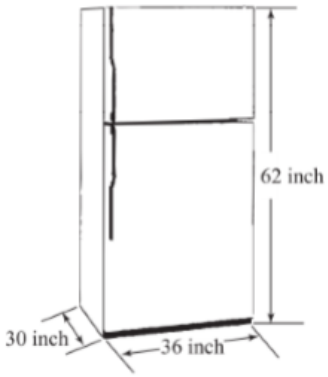
GSE Geometry Unit 4 – Segment Lengths and Volume EOC Review

Name: _____ Block: _____

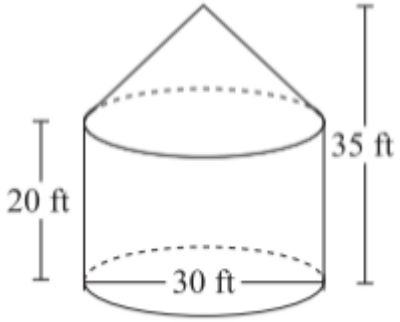
Vocabulary: Chord, tangent, volume, Cavalieri's Principle, Pythagorean Theorem, cross section.

1) Find the value of x. 	2) Find the value of x. 	3) Find the value of x. 
4) Find the value of x. 	5) Is $\overline{AB}$ **a tangent? Why or why not?** 	6) Find the value of x. 
7) Based on Cavalieri's Principle, what should be the volume of each cylinder? 	8) Find the volume of the hemisphere. 	9) If the volume of a cone is 23 in^3, what is the volume of a cylinder with the same base area and height? Explain how you got to your answer?
10) Find the volume of a square based pyramid. 	11) Name the cross section  	12) The state of Georgia has a surface area of 59,425 square miles with an approximate population of 9,983,400 people. How many people per square mile live in Georgia?

	Answers
1) What is the volume of a cylinder with a radius of 3 in. and a height of $\frac{9}{2}$ in.? A. $\frac{81}{2}\pi\ in^3$ B. $\frac{27}{4}\pi\ in^3$ C. $\frac{27}{8}\pi\ in^3$ D. $\frac{9}{4}\pi\ in^3$	1) _____
2) A cereal box is 10.4 inches high, 7.4 inches long, and 2.3 inches wide. What is the volume of the cereal box rounded to the nearest cubic inch? A. 77 B. 140 C. 177 D. 236	2) _____
3) Frances bought a new refrigerator to replace her old refrigerator shown below. Her new refrigerator has the same length and width as the old refrigerator but is 8 inches higher. How many more cubic inches of space are in Frances's new refrigerator compared to her old refrigerator? A. 8,640 B. 14,880 C. 17,856 D. 25,440 **Frances' Old Refrigerator**  	3) _____
4) Given is a stack of books, each 9 by 12 by 1 inch. What should be volume of the stack? 	4) _____

5) The grain bin below is made up of a cylinder with a cone on top. To the nearest cubic foot, how much grain will this bin hold?

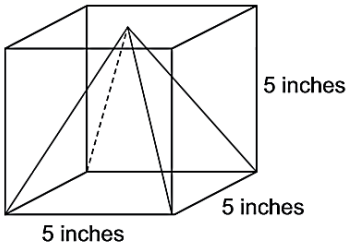
5) _____



A. $5{,}625\ cubic\ feet$
B. $17{,}671\ cubic\ feet$
C. $32{,}987\ cubic\ feet$
D. $70{,}650\ cubic\ feet$

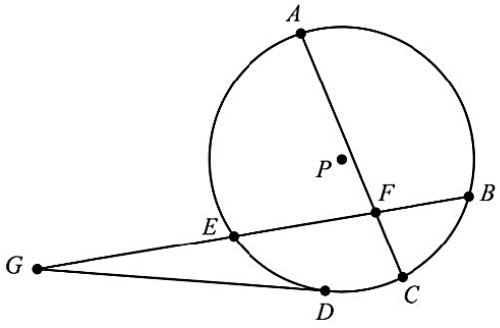
6) A square pyramid is packaged inside a box. The space inside the box around the pyramid is then filled with protective foam. About how many cubic inches of foam is needed to fill the space around the pyramid?

6) _____



A. 8 cubic inches
B. 41 cubic inches
C. 83 cubic inches
D. 125 cubic inches

7) In circle P below, DG is tangent. $AF = 8$, $EF = 6$. $BF = 4$, and $EG = 8$. Find $\overline{CF}$ and $\overline{DG}$.

$\overline{CF}$ = ___

$\overline{DG}$ = ___