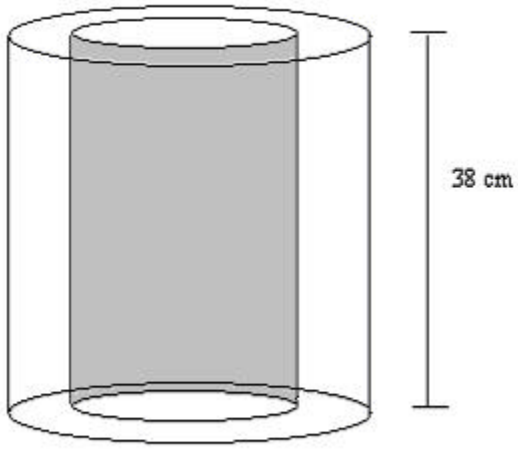
Volume

1. The figure below shows a cylinder with a 20 cm diameter with a cylindrical hole that measures 12 cm in diameter. If the height of both cylinders in 38 cm, what is the volume of the figure?

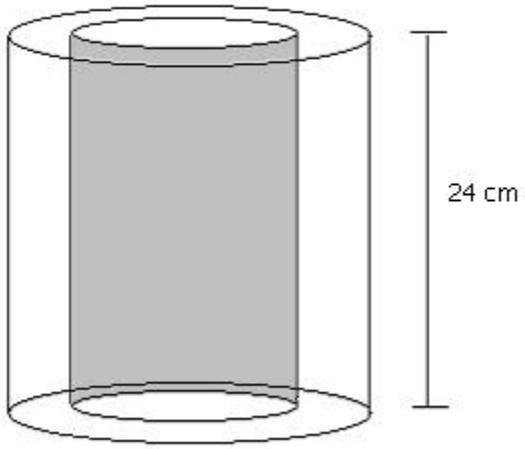
Remember: Volume of a right cylinder = ð * r^2 * h



a) 608ð cm^3
b) 2432ð cm^3
c) 1758ð cm^3
d) 9728ð cm^3

2. The figure below shows a cylinder with a 16 cm diameter with a cylindrical hole that measures 10 cm in diameter. If the height of both cylinders in 24 cm, what is the volume of the figure?

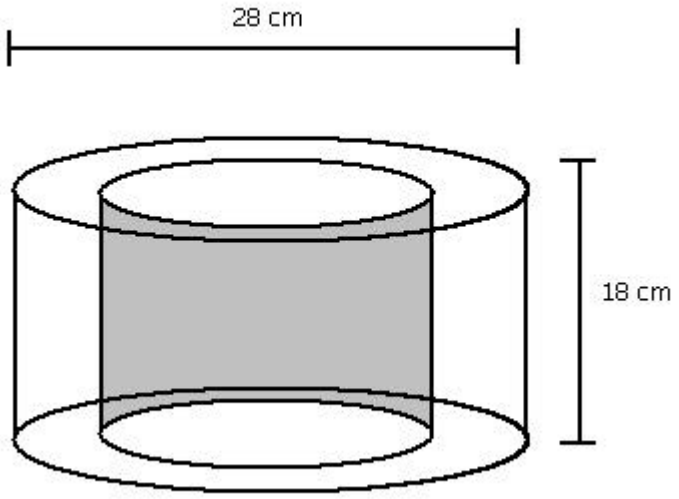
Remember: Volume of a right cylinder = ð * r^2 * h



a) 864ð cm^3
b) 3744ð cm^3
c) 936ð cm^3
d) 216ð cm^3

3. What is the volume of the figure below if the diameter of the smaller cylinder is one half the diameter of the larger cylinder?

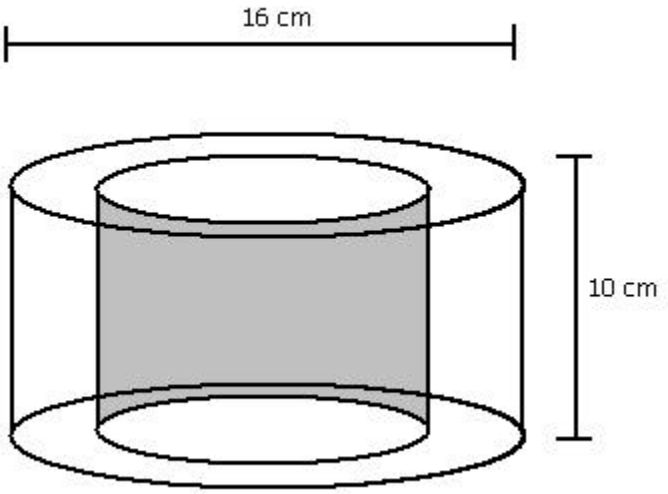
Remember: Volume of a right cylinder = ð * r^2 * h



a) 3528ð cm^3
b) 2898ð cm^3
c) 882ð cm^3
d) 2646ð cm^3

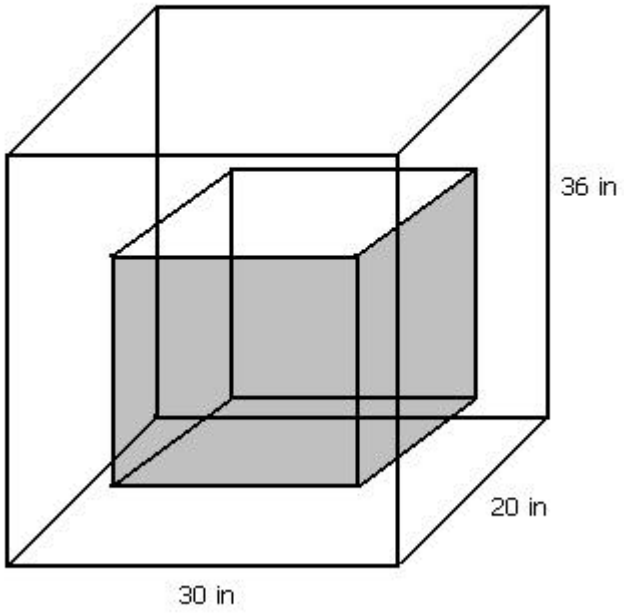
4. What is the volume of the figure below if the diameter of the smaller cylinder is one half the diameter of the larger cylinder?

Remember: Volume of a right cylinder = ð * r^2 * h



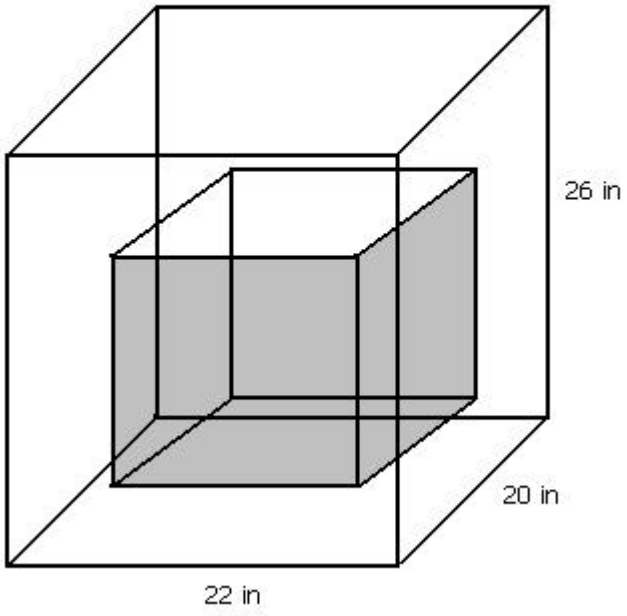
a) 480ð cm^3
b) 80ð cm^3
c) 640ð cm^3
d) 160ð cm^3

5. Peter is packing for college. He has a small box that he would like to place in a larger box. If the small box measures 15 in. tall by 15 in. long by 15 in. wide, what is the volume left in the large box once the small one has been placed inside. (Dimensions for the large can be seen in the illustration below.)



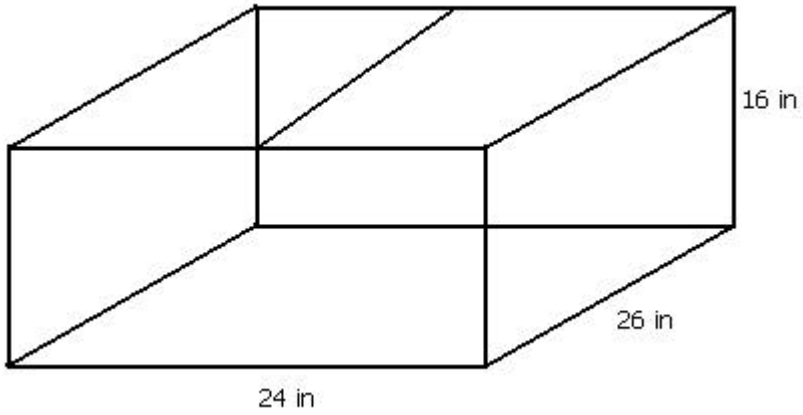
a) 1575 in^3
b) 3750 in^3
c) 18225 in^3
d) 4950 in^3

6. Mary is packing away all of her Christmas presents in one large box. She has a small box in particular that measures 12 in. tall by 16 in. long by 16 in. wide. What is the volume left in the large box once the small one has been placed inside. (Dimensions for the large can be seen in the illustration below.)



a) 8368 in^3
b) 336 in^3
c) 19242 in^3
d) 10348 in^3

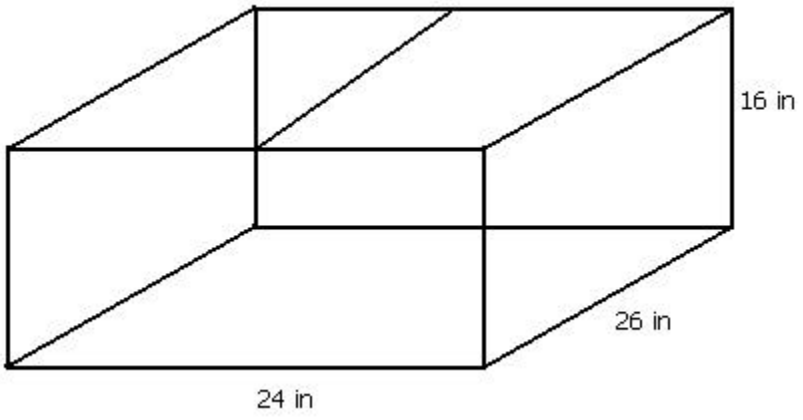
7. George is the new equipment manager for his high school baseball team. He has a large box (shown below) which holds all of the baseballs used for practice. If each ball has a volume of 7 in^3, what is the most number of baseballs he could fit into the box?

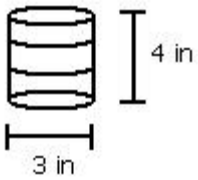


a) 876 baseballs
b) 1426 baseballs
c) 968 baseballs
d) 2907 baseballs

8. Gary, a clerk at a local grocery store, is packing up canned vegetables for a food drive. The measurements of the box and can of vegetables are illustrated below. What is the most number of cans Gary could possibly fit into the box?

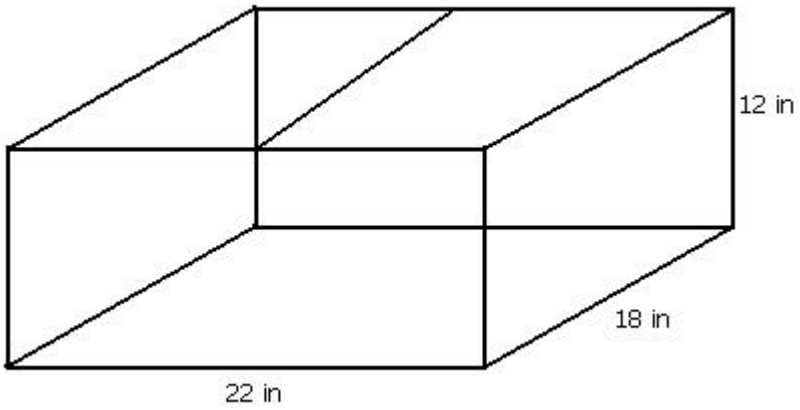
Remember: Volume of a right cylinder = ð * r^2 * h





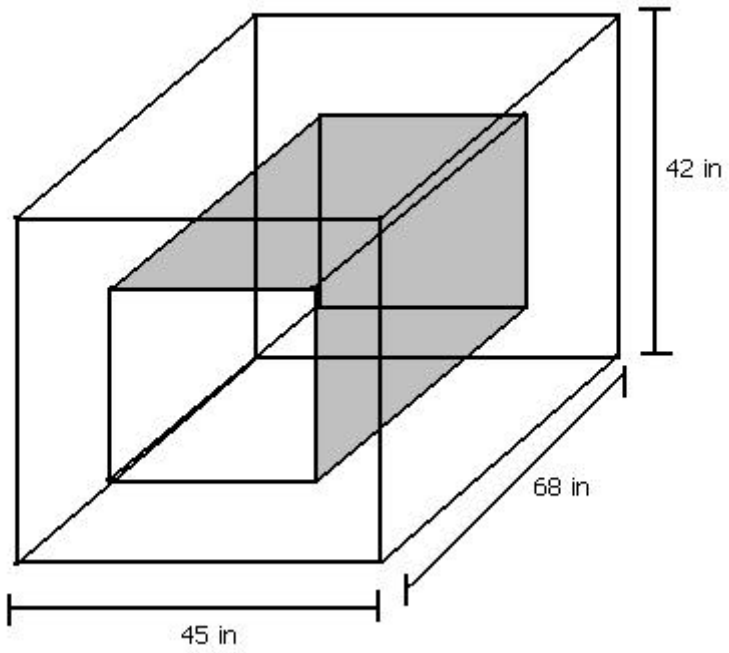
a) 277 cans
b) 88 cans
c) 1664 cans
d) 353 cans

9. Ted is moving and needs to pack away his extensive collection of video cassettes. He has a large box (measurements given below) to put his movies in. Ted discovered that all of his video cassettes measure 7 inches tall by 3.5 inches long by 1 inch wide. What is the most number of video cassettes Ted can fit into the box?



a) 153 cassettes
b) 161 cassettes
c) 193 cassettes
d) 1572 cassettes

10. Below is a diagram of a large rectangle with a rectangular hole running from one side to the other. The hole has a height of 22 inches and a length of 25 inches. The width of the hole, 68 inches, is the same as the large rectangle. What is the volume of the large rectangle with this hallowed out portion?



a) 87,530 in^3
b) 91,120 in^3
c) 400 in^3
d) 109,820 in^3