



48. The diagram shows a solid block of metal with a cylinder cut out of it. The length of each edge of the cube is 8 inches and the radius of each base of the cylinder is 2 inches.
- What is the volume of the block of metal before the cylinder was removed?
  - What is the volume of the cylinder?
  - What is the approximate volume of the block of metal (to the nearest whole number) after the cylinder has been removed?

Show your work and explain your answer.