

Name : _____

Surface Area and Volume

L2S3

- 1) The volumes of similar square pyramids R and S are 480 cubic yards and 7.5 cubic yards respectively. Determine the surface area of S, if the surface area of R is 44 square yards.

- 2) The surface area and the volume of cube G are 294 square inches and 343 cubic inches. If the surface area of cube F is 6 square inches, find the volume of cube F.

- 3) The surface areas of two similar figures are 100 square feet and 180 square feet respectively. Find the ratio of their volumes.

- 4) Two heptagonal pyramids are similar. The volume of the larger pyramid is 648 cubic feet. What will be the surface area of the smaller pyramid if its volume is 900 cubic feet?

- 5) Two octagonal prisms are similar. The surface area of the larger prism is 48 square yards. Determine the surface area of the smaller prism if its volume is 1/8 of the larger prism's volume.

- 6) The sum of surface areas of two similar figures is 68 square inches. If the volumes of the figures are 81 cubic inches and 375 cubic inches, what will be the surface area of each figure?

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Answer key

Surface Area and Volume

L2S3

- 1) The volumes of similar square pyramids R and S are 480 cubic yards and 7.5 cubic yards respectively. Determine the surface area of S, if the surface area of R is 44 square yards.

2.75 square yards

- 2) The surface area and the volume of cube G are 294 square inches and 343 cubic inches. If the surface area of cube F is 6 square inches, find the volume of cube F.

- 3) The surface areas of two similar cubes are 150 square feet and 180 square feet respectively. Find the ratio of their volumes.

- 4) Two heptagonal pyramids are similar. The surface area of the larger pyramid is 648 square feet. What will be the surface area of the smaller pyramid if its volume is 900 cubic feet?

- 5) Two octagonal prisms are similar. The surface area of the larger prism is 48 square yards. Determine the volume of the smaller prism if its surface area is 3 cubic yards.

64 cubic yards ; 512 cubic yards

- 6) The sum of surface areas of two similar figures is 68 square inches. If the volumes of figures are 81 cubic inches and 375 cubic inches, what will be the surface area of each figure?

18 square inches ; 50 square inches

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