

Name : \_\_\_\_\_

## Ratio of Surface Areas and Volumes

Sheet 3

- 1) If the scale factor of two similar triangular pyramids is  $4 : 7$ , what will be the ratio of their surface areas and the ratio of their volumes?

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- 2) E and F are similar figures with a scale factor of  $2.1 : 1.6$ . Find the ratio of their surface areas and the ratio of their volumes.

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- 3) Two octagonal prisms are similar. The scale factor of their surface areas is  $16 : 25$ . Find the ratio of their volumes.

5. Determine the ratio of the surface areas of two similar cubes if the ratio of their volumes is  $27 : 64$ .

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- 4) If the pentagonal prisms are similar and the ratio of their surface areas is  $16 : 25$ , find the ratio of their volumes.

6. If the scale factor of two similar figures is  $3 : 5$ , find the ratio of their surface areas.

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- 5) Determine the ratio of the surface areas of two similar heptagonal prisms if the ratio of their volumes is  $27 : 64$ .

7. The scale factor of two similar figures is  $2 : 3$ . Find the ratio of their surface areas.

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- 6) Derek keeps goldfish and tropical fish in two similar fish tanks. The scale factor of the fish tanks is  $9 : 1$ . What is the ratio of their surface areas and their volumes?

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**Ratio of Surface Areas and Volumes**

- 1) If the scale factor of two similar triangular pyramids is 4 : 7, what will be the ratio of their surface areas and the ratio of their volumes?

**Ratio of surface areas is 16 : 49 ; Ratio of volumes is 64 : 343**

- 2) E and F are similar figures with a scale factor of 2.1 : 1.6. Find the ratio of their surface areas and the ratio of their volumes.

**Ratio of surface areas is 441 : 256**

**Ratio of volumes is 9261 : 4096**

- 3) Two octagonal prisms are similar with a scale factor of 5 : 4. Determine the ratio of their surface areas and the ratio of their volumes.

**Ratio of surface areas is 25 : 16**

**Ratio of volumes is 125 : 64**

- 4) If the pentagonal pyramids are similar with a scale factor of 8 : 5, find the ratio of their surface areas and the ratio of their volumes.

**Ratio of surface areas is 64 : 25**

**Ratio of volumes is 512 : 125**

- 5) Determine the ratio of their surface areas and the ratio of their volumes if the scale factor of two similar heptagonal prisms is 3 : 2.

**Ratio of surface areas is 36:82.81 ; Ratio of volumes is 216 : 753:571**

- 6) Derek keeps goldfish and tropical fish in two similar fish tanks. The scale factor of the fish tanks is 9 : 1. What is the ratio of their surface areas and their volumes?

**Ratio of surface areas is 81 : 1 ; Ratio of volumes is 729 : 1**