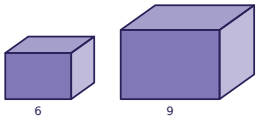
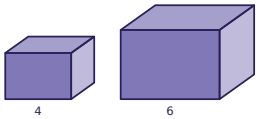
Scale Factor: Effect on Area & Volume · 1

The smaller solid has a surface area of 28. Find the surface area of the larger solid.



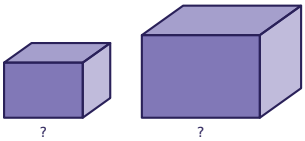
Scale Factor: Effect on Area & Volume · 2

The smaller solid has a volume of 32. Find the volume of the larger solid.



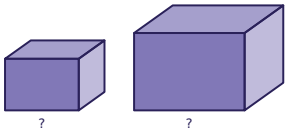
Scale Factor: Effect on Area & Volume · 3

Two similar solids have surface areas 16 and 36. What is the ratio of their corresponding lengths (smaller to larger)?



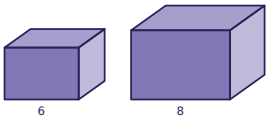
Scale Factor: Effect on Area & Volume · 4

Two similar solids have volumes 24 and 81. What is the ratio of their corresponding lengths (smaller to larger)?



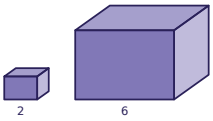
Scale Factor: Effect on Area & Volume · 5

The smaller solid has a surface area of 27. Find the surface area of the larger solid.



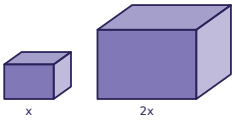
Scale Factor: Effect on Area & Volume · 6

The smaller solid has a volume of 5. Find the volume of the larger solid.



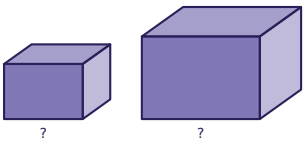
Scale Factor: Effect on Area & Volume · 7

Every dimension of a rectangular prism is multiplied by 2. By what number is its volume multiplied?



Scale Factor: Effect on Area & Volume · 8

Two similar solids have surface areas 8 and 18. What is the ratio of their corresponding lengths (smaller to larger)?



Scale Factor: Effect on Area & Volume · 2

ANSWER

108

Scale Factor: Effect on Area & Volume · 1

ANSWER

63

Scale Factor: Effect on Area & Volume · 4

ANSWER

$$\frac{2}{3}$$

Scale Factor: Effect on Area & Volume · 3

ANSWER

$$\frac{2}{3}$$

Scale Factor: Effect on Area & Volume · 6

ANSWER

135

Scale Factor: Effect on Area & Volume · 5

ANSWER

48

Scale Factor: Effect on Area & Volume · 8

ANSWER

$$\frac{2}{3}$$

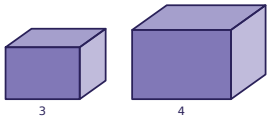
Scale Factor: Effect on Area & Volume · 7

ANSWER

8

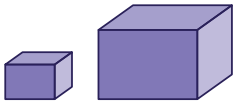
Scale Factor: Effect on Area & Volume · 9

The smaller solid has a surface area of 27. Find the surface area of the larger solid.



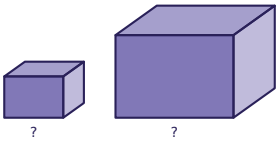
Scale Factor: Effect on Area & Volume · 10

The smaller solid has a volume of 6. Find the volume of the larger solid.



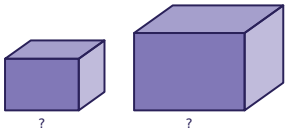
Scale Factor: Effect on Area & Volume · 11

Two similar solids have surface areas 1 and 4. What is the ratio of their corresponding lengths (smaller to larger)?



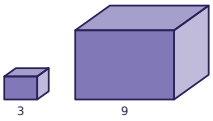
Scale Factor: Effect on Area & Volume · 12

Two similar solids have volumes 16 and 54. What is the ratio of their corresponding lengths (smaller to larger)?



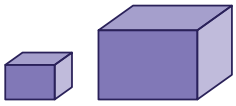
Scale Factor: Effect on Area & Volume · 13

The smaller solid has a surface area of 6. Find the surface area of the larger solid.



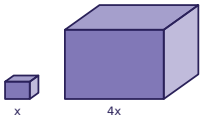
Scale Factor: Effect on Area & Volume · 14

The smaller solid has a volume of 3. Find the volume of the larger solid.



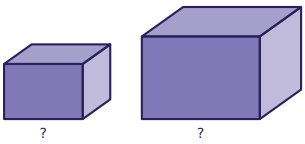
Scale Factor: Effect on Area & Volume · 15

Every dimension of a rectangular prism is multiplied by 4. By what number is its volume multiplied?



Scale Factor: Effect on Area & Volume · 16

Two similar solids have surface areas 12 and 27. What is the ratio of their corresponding lengths (smaller to larger)?



Scale Factor: Effect on Area & Volume · 10

ANSWER

48

Scale Factor: Effect on Area & Volume · 9

ANSWER

48

Scale Factor: Effect on Area & Volume · 12

ANSWER

$$\frac{2}{3}$$

Scale Factor: Effect on Area & Volume · 11

ANSWER

$$\frac{1}{2}$$

Scale Factor: Effect on Area & Volume · 14

ANSWER

24

Scale Factor: Effect on Area & Volume · 13

ANSWER

54

Scale Factor: Effect on Area & Volume · 16

ANSWER

$$\frac{2}{3}$$

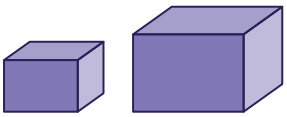
Scale Factor: Effect on Area & Volume · 15

ANSWER

64

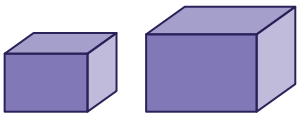
Scale Factor: Effect on Area & Volume · 17

Two similar solids have surface areas 12 and 27. What is the ratio of their volumes (smaller to larger)?



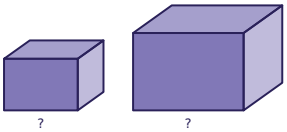
Scale Factor: Effect on Area & Volume · 18

Two similar solids have volumes 81 and 192. What is the ratio of their surface areas (smaller to larger)?



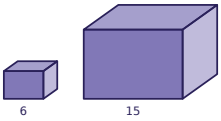
Scale Factor: Effect on Area & Volume · 19

Two similar solids have volumes 8 and 27. What is the ratio of their corresponding lengths (smaller to larger)?



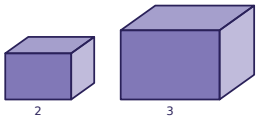
Scale Factor: Effect on Area & Volume · 20

The smaller solid has a volume of 32. Find the volume of the larger solid.



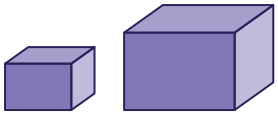
Scale Factor: Effect on Area & Volume · 21

The smaller solid has a surface area of 36. Find the surface area of the larger solid.



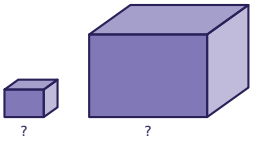
Scale Factor: Effect on Area & Volume · 22

Two similar solids have surface areas 27 and 75. What is the ratio of their volumes (smaller to larger)?



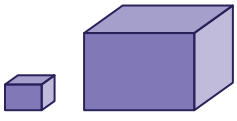
Scale Factor: Effect on Area & Volume · 23

Two similar solids have surface areas 4 and 36. What is the ratio of their corresponding lengths (smaller to larger)?



Scale Factor: Effect on Area & Volume · 24

Two similar solids have volumes 2 and 54. What is the ratio of their surface areas (smaller to larger)?



Scale Factor: Effect on Area & Volume · 18

ANSWER

$\frac{9}{16}$

Scale Factor: Effect on Area & Volume · 17

ANSWER

$\frac{8}{27}$

Scale Factor: Effect on Area & Volume · 20

ANSWER

500

Scale Factor: Effect on Area & Volume · 19

ANSWER

$\frac{2}{3}$

Scale Factor: Effect on Area & Volume · 22

ANSWER

$\frac{27}{125}$

Scale Factor: Effect on Area & Volume · 21

ANSWER

81

Scale Factor: Effect on Area & Volume · 24

ANSWER

$\frac{1}{9}$

Scale Factor: Effect on Area & Volume · 23

ANSWER

$\frac{1}{3}$