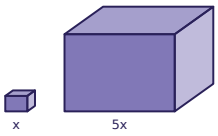
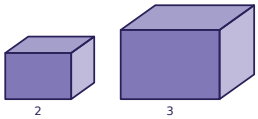
Scale Factor: Effect on Area & Volume · 1

Every dimension of a rectangular prism is multiplied by 5. By what number is its surface area multiplied?



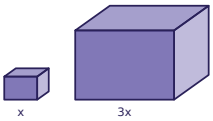
Scale Factor: Effect on Area & Volume · 2

The smaller solid has a surface area of 20. Find the surface area of the larger solid.



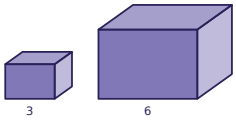
Scale Factor: Effect on Area & Volume · 3

Every dimension of a rectangular prism is multiplied by 3. By what number is its volume multiplied?



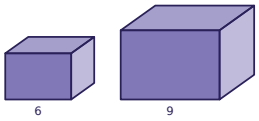
Scale Factor: Effect on Area & Volume · 4

The smaller solid has a surface area of 9. Find the surface area of the larger solid.



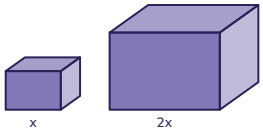
Scale Factor: Effect on Area & Volume · 5

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



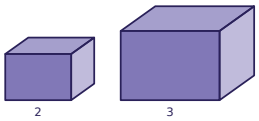
Scale Factor: Effect on Area & Volume · 6

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



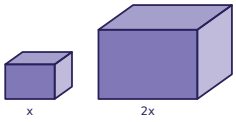
Scale Factor: Effect on Area & Volume · 7

The smaller solid has a volume of 48. Find the volume of the larger solid.



Scale Factor: Effect on Area & Volume · 8

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



Scale Factor: Effect on Area & Volume · 2

ANSWER

45

Scale Factor: Effect on Area & Volume · 1

ANSWER

25

Scale Factor: Effect on Area & Volume · 4

ANSWER

36

Scale Factor: Effect on Area & Volume · 3

ANSWER

27

Scale Factor: Effect on Area & Volume · 6

ANSWER

4

Scale Factor: Effect on Area & Volume · 5

ANSWER

108

Scale Factor: Effect on Area & Volume · 8

ANSWER

8

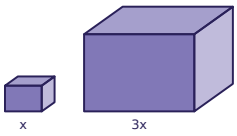
Scale Factor: Effect on Area & Volume · 7

ANSWER

162

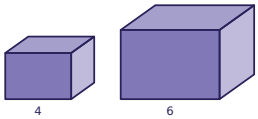
Scale Factor: Effect on Area & Volume · 9

Every dimension of a rectangular prism is multiplied by 3. By what number is its surface area multiplied?



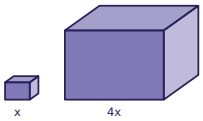
Scale Factor: Effect on Area & Volume · 10

The smaller solid has a surface area of 24. Find the surface area of the larger solid.



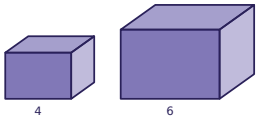
Scale Factor: Effect on Area & Volume · 11

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



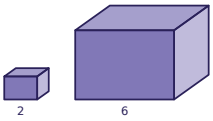
Scale Factor: Effect on Area & Volume · 12

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



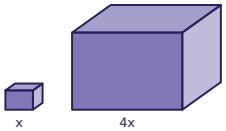
Scale Factor: Effect on Area & Volume · 13

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



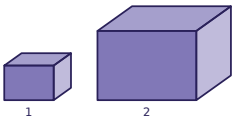
Scale Factor: Effect on Area & Volume · 14

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



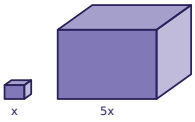
Scale Factor: Effect on Area & Volume · 15

The smaller solid has a volume of 2. Find the volume of the larger solid.



Scale Factor: Effect on Area & Volume · 16

Every dimension of a rectangular prism is multiplied by 5. By what number is its volume multiplied?



Scale Factor: Effect on Area & Volume · 10

ANSWER

54

Scale Factor: Effect on Area & Volume · 9

ANSWER

9

Scale Factor: Effect on Area & Volume · 12

ANSWER

63

Scale Factor: Effect on Area & Volume · 11

ANSWER

64

Scale Factor: Effect on Area & Volume · 14

ANSWER

16

Scale Factor: Effect on Area & Volume · 13

ANSWER

162

Scale Factor: Effect on Area & Volume · 16

ANSWER

125

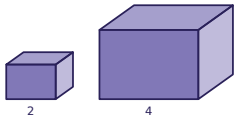
Scale Factor: Effect on Area & Volume · 15

ANSWER

16

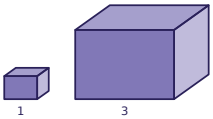
Scale Factor: Effect on Area & Volume · 17

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



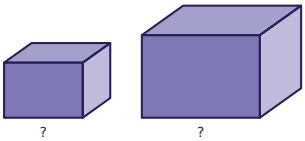
Scale Factor: Effect on Area & Volume · 18

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



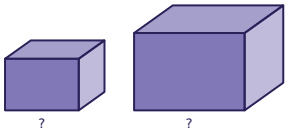
Scale Factor: Effect on Area & Volume · 19

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



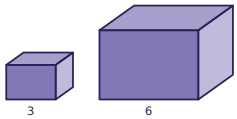
Scale Factor: Effect on Area & Volume · 20

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



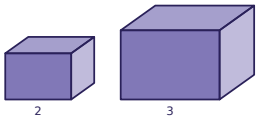
Scale Factor: Effect on Area & Volume · 21

The smaller solid has a surface area of 4. Find the surface area of the larger solid.



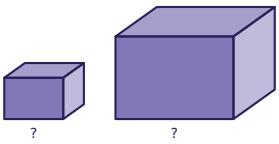
Scale Factor: Effect on Area & Volume · 22

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



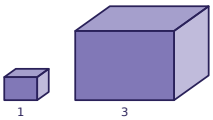
Scale Factor: Effect on Area & Volume · 23

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 · 24

The smaller solid has a surface area of 2. Find the surface area of the larger solid.



Scale Factor: Effect on Area & Volume · 18

ANSWER

135

Scale Factor: Effect on Area & Volume · 17

ANSWER

24

Scale Factor: Effect on Area & Volume · 20

ANSWER

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

Scale Factor: Effect on Area & Volume · 19

ANSWER

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

Scale Factor: Effect on Area & Volume · 22

ANSWER

108

Scale Factor: Effect on Area & Volume · 21

ANSWER

16

Scale Factor: Effect on Area & Volume · 24

ANSWER

18

Scale Factor: Effect on Area & Volume · 23

ANSWER

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