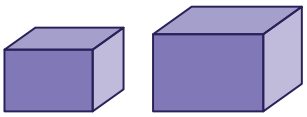
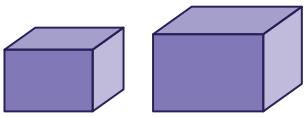
Scale Factor: Effect on Area & Volume · 1

Two similar solids have surface areas 16 and 25. What is the ratio of their volumes (smaller to larger)?



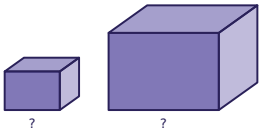
Scale Factor: Effect on Area & Volume · 2

Two similar solids have volumes 64 and 125. What is the ratio of their surface areas (smaller to larger)?



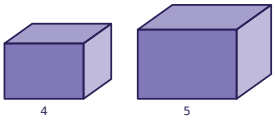
Scale Factor: Effect on Area & Volume · 3

Two similar solids have volumes 2 and 16. What is the ratio of their corresponding lengths (smaller to larger)?



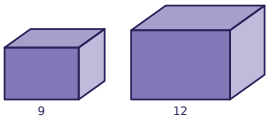
Scale Factor: Effect on Area & Volume · 4

The smaller solid has a volume of 128. Find the volume of the larger solid.



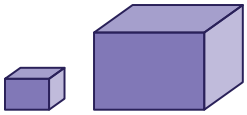
Scale Factor: Effect on Area & Volume · 5

The smaller solid has a surface area of 72. Find the surface area of the larger solid.



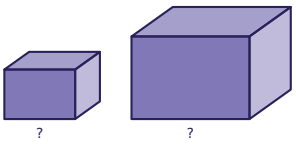
Scale Factor: Effect on Area & Volume · 6

Two similar solids have surface areas 12 and 75. What is the ratio of their volumes (smaller to larger)?



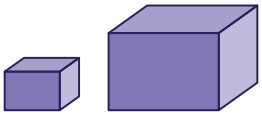
Scale Factor: Effect on Area & Volume · 7

Two similar solids have surface areas 36 and 100. What is the ratio of their corresponding lengths (smaller to larger)?



Scale Factor: Effect on Area & Volume · 8

Two similar solids have volumes 3 and 24. What is the ratio of their surface areas (smaller to larger)?



Scale Factor: Effect on Area & Volume · 2

ANSWER

$\frac{16}{25}$

Scale Factor: Effect on Area & Volume · 1

ANSWER

$\frac{64}{125}$

Scale Factor: Effect on Area & Volume · 4

ANSWER

250

Scale Factor: Effect on Area & Volume · 3

ANSWER

$\frac{1}{2}$

Scale Factor: Effect on Area & Volume · 6

ANSWER

$\frac{8}{125}$

Scale Factor: Effect on Area & Volume · 5

ANSWER

128

Scale Factor: Effect on Area & Volume · 8

ANSWER

$\frac{1}{4}$

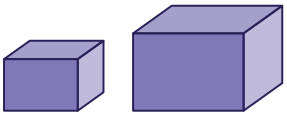
Scale Factor: Effect on Area & Volume · 7

ANSWER

$\frac{3}{5}$

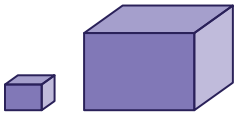
Scale Factor: Effect on Area & Volume · 9

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



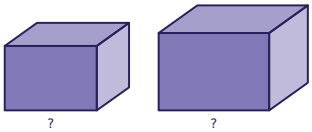
Scale Factor: Effect on Area & Volume · 10

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



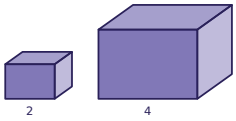
Scale Factor: Effect on Area & Volume · 11

Two similar solids have volumes 250 and 432. What is the ratio of their corresponding lengths (smaller to larger)?



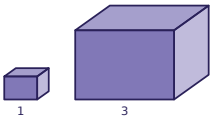
Scale Factor: Effect on Area & Volume · 12

The smaller solid has a volume of 4. Find the volume of the larger solid.



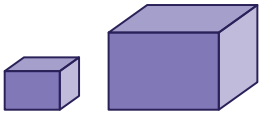
Scale Factor: Effect on Area & Volume · 13

The smaller solid has a surface area of 5. Find the surface area of the larger solid.



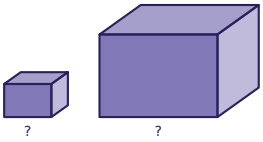
Scale Factor: Effect on Area & Volume · 14

Two similar solids have surface areas 3 and 12. What is the ratio of their volumes (smaller to larger)?



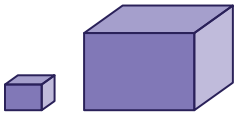
Scale Factor: Effect on Area & Volume · 15

Two similar solids have surface areas 8 and 50. What is the ratio of their corresponding lengths (smaller to larger)?



Scale Factor: Effect on Area & Volume · 16

Two similar solids have volumes 1 and 27. What is the ratio of their surface areas (smaller to larger)?



Scale Factor: Effect on Area & Volume · 10

ANSWER

$\frac{1}{9}$

Scale Factor: Effect on Area & Volume · 9

ANSWER

$\frac{8}{27}$

Scale Factor: Effect on Area & Volume · 12

ANSWER

32

Scale Factor: Effect on Area & Volume · 11

ANSWER

$\frac{5}{6}$

Scale Factor: Effect on Area & Volume · 14

ANSWER

$\frac{1}{8}$

Scale Factor: Effect on Area & Volume · 13

ANSWER

45

Scale Factor: Effect on Area & Volume · 16

ANSWER

$\frac{1}{9}$

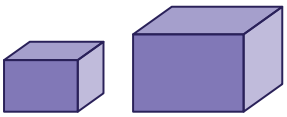
Scale Factor: Effect on Area & Volume · 15

ANSWER

$\frac{2}{5}$

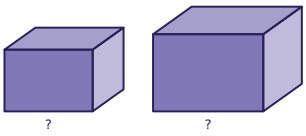
Scale Factor: Effect on Area & Volume · 17

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



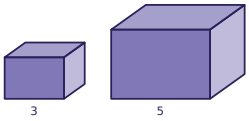
Scale Factor: Effect on Area & Volume · 18

Two similar solids have volumes 128 and 250. What is the ratio of their corresponding lengths (smaller to larger)?



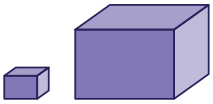
Scale Factor: Effect on Area & Volume · 19

The smaller solid has a volume of 135. Find the volume of the larger solid.



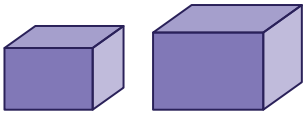
Scale Factor: Effect on Area & Volume · 20

The smaller solid has a surface area of 8. Find the surface area of the larger solid.



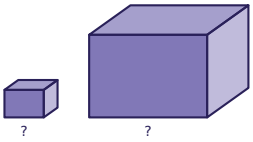
Scale Factor: Effect on Area & Volume · 21

Two similar solids have surface areas 32 and 50. What is the ratio of their volumes (smaller to larger)?



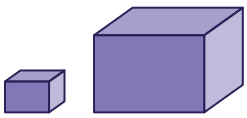
Scale Factor: Effect on Area & Volume · 22

Two similar solids have surface areas 3 and 27. What is the ratio of their corresponding lengths (smaller to larger)?



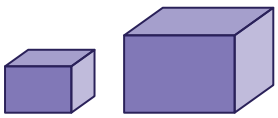
Scale Factor: Effect on Area & Volume · 23

Two similar solids have volumes 24 and 375. What is the ratio of their surface areas (smaller to larger)?



Scale Factor: Effect on Area & Volume · 24

Two similar solids have surface areas 36 and 100. What is the ratio of their volumes (smaller to larger)?



Scale Factor: Effect on Area & Volume · 18

ANSWER

$\frac{4}{5}$

Scale Factor: Effect on Area & Volume · 17

ANSWER

$\frac{4}{9}$

Scale Factor: Effect on Area & Volume · 20

ANSWER

72

Scale Factor: Effect on Area & Volume · 19

ANSWER

625

Scale Factor: Effect on Area & Volume · 22

ANSWER

$\frac{1}{3}$

Scale Factor: Effect on Area & Volume · 21

ANSWER

$\frac{64}{125}$

Scale Factor: Effect on Area & Volume · 24

ANSWER

$\frac{27}{125}$

Scale Factor: Effect on Area & Volume · 23

ANSWER

$\frac{4}{25}$