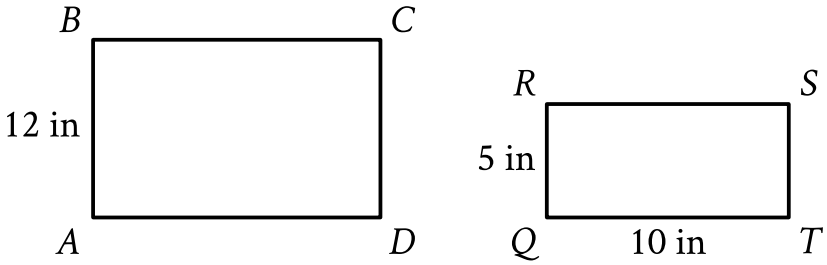
Question ID 724c6ca2

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 724c6ca2



Note: Figure not drawn to scale.

Rectangles $ABCD$ and $QRST$ shown are similar, where A, B, C, and D correspond to Q, R, S, and T, respectively. What is the length, in inches (in), of $\overline{AD}$?

A. 60

B. 24

C. 17

D. 10

Question ID 4ee1c94d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 4ee1c94d

A right circular cylinder has a volume of 432 cubic centimeters. The area of the base of the cylinder is 24 square centimeters. What is the height, in centimeters, of the cylinder?

A. 18

B. 24

C. 216

D. $10{,}368$

Question ID dbb97818

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: dbb97818

A cylinder has a diameter of 8 inches and a height of 12 inches. What is the volume, in cubic inches, of the cylinder?

A. 16π

B. 96π

C. 192π

D. 768π

Question ID 5714ab73

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 5714ab73

The length of the edge of the base of a right square prism is 6 units. The volume of the prism is $2{,}880$ cubic units. What is the height, in units, of the prism?

A. $4\sqrt{30}$

B. 36

C. $24\sqrt{5}$

D. 80

Question ID bccbe438

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

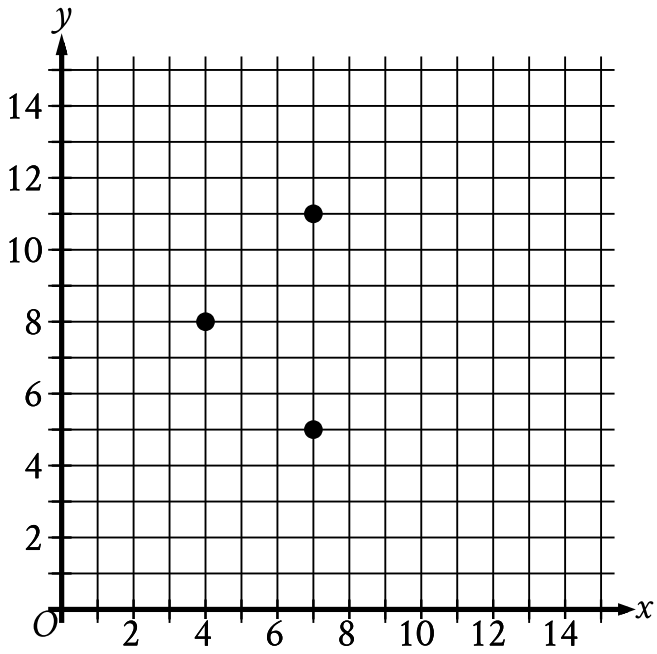
ID: bccbe438

A triangular prism has a height of 8 centimeters (cm) and a volume of $216\ \text{cm}^3$. What is the area, in cm^2, of the base of the prism? (The volume of a triangular prism is equal to Bh, where B is the area of the base and h is the height of the prism.)

Question ID f8cb4ee2

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: f8cb4ee2



The three points shown define a circle. The circumference of this circle is $k\pi$, where k is a constant. What is the value of k?

A. 3

B. 6

C. 7

D. 9

Question ID f9c5558d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: f9c5558d

Square X has a side length of 12 centimeters. The perimeter of square Y is 2 times the perimeter of square X. What is the length, in centimeters, of one side of square Y?

A. 6

B. 10

C. 14

D. 24

Question ID f92d252b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: f92d252b

A right circular cylinder has a volume of 377 cubic centimeters. The area of the base of the cylinder is 13 square centimeters. What is the height, in centimeters, of the cylinder?

Question ID 489aba1c

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 489aba1c

A circle has a circumference of 31π centimeters. What is the diameter, in centimeters, of the circle?

Question ID 9019ad99

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 9019ad99

A triangle has a base length of 56 centimeters and a height of 112 centimeters. What is the area, in square centimeters, of the triangle?

A. 168

B. $1{,}568$

C. $3{,}136$

D. $6{,}272$

Question ID 0e8cf28f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 0e8cf28f

A right circular cylinder has a height of 8 meters (m) and a base with a radius of 12 m. What is the volume, $\text{in } \text{m}^3$, of the cylinder?

A. 8π

B. 20π

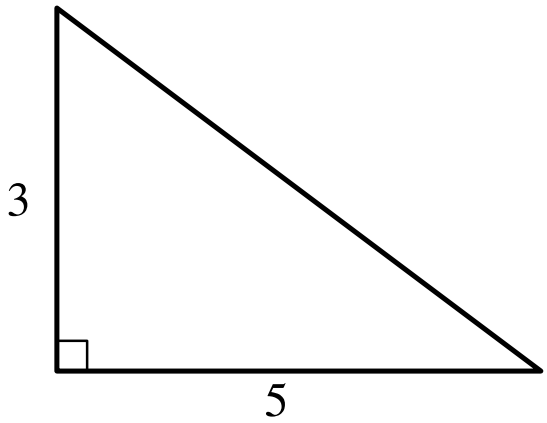
C. 768π

D. $1{,}152\pi$

Question ID 919b2d08

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 919b2d08



Note: Figure not drawn to scale.

The figure shows the lengths, in inches, of two sides of a right triangle. What is the area of the triangle, in square inches?

Question ID af517132

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: af517132

A triangle has a base length of 10 centimeters and a corresponding height of 70 centimeters. What is the area, in square centimeters, of the triangle?

A. 700

B. 350

C. 175

D. 80

Question ID e582b600

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: e582b600

A circle has a radius of 43 meters. What is the area, in square meters, of the circle?

A. $\frac{43\pi}{2}$

B. 43π

C. 86π

D. $1{,}849\pi$

Question ID 41b0fa3d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 41b0fa3d

The length of each edge of a box is 29 inches. Each side of the box is in the shape of a square. The box does not have a lid. What is the exterior surface area, in square inches, of this box without a lid?

Question ID 221df55b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 221df55b

The table gives the perimeters of similar triangles TUV and XYZ, where $\overline{TU}$ corresponds to $\overline{XY}$. The length of $\overline{TU}$ is 18.

	Perimeter
Triangle TUV	37
Triangle XYZ	333

What is the length of $\overline{XY}$?

A. 2

B. 18

C. 55

D. 162

Question ID 1c15c90f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 1c15c90f

A circle has a radius of 2.1 inches. The area of the circle is $b\pi$ square inches, where b is a constant. What is the value of b?

Question ID 04bbbda6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 04bbbda6

A sphere has a radius of $\frac{17}{5}$ feet. What is the volume, in cubic feet, of the sphere?

A. $\frac{5\pi}{17}$

B. $\frac{68\pi}{15}$

C. $\frac{32\pi}{5}$

D. $\frac{19{,}652\pi}{375}$

Question ID e5ba4117

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: e5ba4117

A right circular cylinder has a base diameter of 22 centimeters and a height of 6 centimeters. What is the volume, in cubic centimeters, of the cylinder?

A. 132π

B. 264π

C. 726π

D. $2{,}904\pi$

Question ID 3b66e6a3

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 3b66e6a3

Circle K has a radius of 4 millimeters (mm). Circle L has an area of 100π mm^2. What is the total area, in mm^2, of circles K and L?

A. 14π

B. 28π

C. 56π

D. 116π

Question ID 9c3d5225

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 9c3d5225

Square A has side lengths that are 246 times the side lengths of square B. The area of square A is k times the area of square B. What is the value of k?

A. $60{,}516$

B. 492

C. 246

D. 123

Question ID 5c415b89

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: 5c415b89

A cube has an edge length of 41 inches. What is the volume, in cubic inches, of the cube?

A. 164

B. $1{,}681$

C. $10{,}086$

D. $68{,}921$

Question ID dbe21855

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Area and volume	Medium

ID: dbe21855

The length of each side of a square is 94 centimeters (cm). Which expression gives the area, in cm^2, of the square?

A. $2 \cdot 94$

B. $2 \cdot 94 \cdot 94$

C. $4 \cdot 94$

D. $94 \cdot 94$