

# SAT Math

## Area and Volume 1

Question # ID

1.1 5252e606

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The side length of a square is 55 centimeters (cm). What is the area, in  $\text{cm}^2$ , of the square?

- A. 110
- B. 220
- C. 3,025
- D. 12,100

1.2 59cb654c

The area of a square is 64 square inches. What is the side length, in inches, of this square?

- A. 8
- B. 16
- C. 64
- D. 128

1.3 0837c3b9

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Triangle  $ABC$  and triangle  $DEF$  are similar triangles, where  $\overline{AB}$  and  $\overline{DE}$  are corresponding sides. If  $DE = 2AB$  and the perimeter of triangle  $ABC$  is 20, what is the perimeter of triangle  $DEF$  ?

- A. 10
- B. 40
- C. 80
- D. 120

1.4 c88183f7

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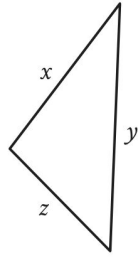
A rectangle has a length of 13 and a width of 6. What is the perimeter of the rectangle?

- A. 12
- B. 26
- C. 38
- D. 52

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1.5 29e9b28c



Note: Figure not drawn to scale.

The triangle shown has a perimeter of 22 units. If  $x = 9$  units and  $y = 7$  units, what is the value of  $z$ , in units?

- A. 6
- B. 7
- C. 9
- D. 16

1.6 3453aafc

What is the area, in square centimeters, of a rectangle with a length of 36 centimeters and a width of 34 centimeters?

- A. 70
- B. 140
- C. 1,156
- D. 1,224

1.7 f60bb551

The area of a rectangle is 630 square inches. The length of the rectangle is 70 inches. What is the width, in inches, of this rectangle?

- A. 9
- B. 70
- C. 315
- D. 560

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1.8 4420e500

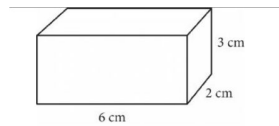
What is the area of a rectangle with a length of 4 centimeters (cm) and a width of 2 cm?

- A.  $6 \text{ cm}^2$
- B.  $8 \text{ cm}^2$
- C.  $12 \text{ cm}^2$
- D.  $36 \text{ cm}^2$

1.9 165c30c4

A rectangle has a length of 64 inches and a width of 32 inches. What is the area, in square inches, of the rectangle?

1.10 d683a9cc



The figure shows the lengths, in centimeters (cm), of the edges of a right rectangular prism. The volume  $V$  of a right rectangular prism is  $\ell wh$ , where  $\ell$  is the length of the prism,  $w$  is the width of the prism, and  $h$  is the height of the prism. What is the volume, in cubic centimeters, of the prism?

- A. 36
- B. 24
- C. 12
- D. 11

1.11 f39f88b7

A triangle has a base length of 40 centimeters and a height of 90 centimeters. What is the area, in square centimeters, of the triangle?

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1.12 93f48423

What is the area, in square inches, of a rectangle with a length of 7 inches and a width of 6 inches?

- A. 13
- B. 20
- C. 42
- D. 84

1.13 d2047497

What is the area of a rectangle with a length of 17 centimeters (cm) and a width of 7 cm?

- A.  $24 \text{ cm}^2$
- B.  $48 \text{ cm}^2$
- C.  $119 \text{ cm}^2$
- D.  $576 \text{ cm}^2$

1.14 a490003a

The width of a rectangle is 7 centimeters. The length of the rectangle is 40 centimeters longer than the width. What is the area, in square centimeters, of this rectangle?

- A. 7
- B. 14
- C. 54
- D. 329

1.15 50774285

Each base of a right rectangular prism has a length of 19 inches and a width of 8 inches. The prism has a volume of 2,736 cubic inches. What is the height, in inches, of the prism?

- A. 18
- B. 27
- C. 144
- D. 152

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1.16 fc5ef8d3

The table gives the perimeters of similar triangles  $TUV$  and  $XYZ$ , where  $\overline{TU}$  corresponds to  $\overline{XY}$ . The length of  $\overline{TU}$  is 6.

	Perimeter
Triangle $TUV$	50
Triangle $XYZ$	150

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

- A. 2
- B. 6
- C. 18
- D. 56

1.17 0e40dfb0

A rectangle has a length of 3 units and a width of 39 units. Which expression gives the area, in square units, of this rectangle?

- A.  $2(3 + 39)$
- B.  $2(3 \cdot 39)$
- C.  $3 + 39$
- D.  $3 \cdot 39$

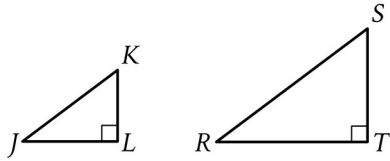
1.18 2b41a4c4

A right rectangular prism has a length of 11 meters, a width of 8 meters, and a height of 10 meters. What is the volume, in cubic meters, of the prism?

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1.19 babd7461



Note: Figure not drawn to scale.

In the figure shown, triangle  $JKL$  is similar to triangle  $RST$ , where  $J$  corresponds to  $R$  and  $K$  corresponds to  $S$ . The length of  $\overline{JK}$  is 15, and the perimeter of triangle  $JKL$  is 36. The length of  $\overline{RS}$  is 135. What is the perimeter of triangle  $RST$ ?

- A. 324
- B. 540
- C. 2,916
- D. 8,100

1.20 bb560789

Triangle R has an area of 80 square centimeters ( $\text{cm}^2$ ). Square S has side lengths of 4 cm. What is the total area of triangle R and square S, in  $\text{cm}^2$ ?

- A. 42
- B. 44
- C. 84
- D. 96