

Released Test Questions

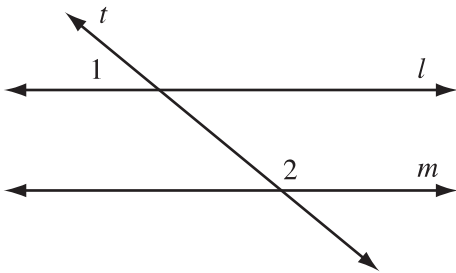
Geometry

- 25** Which of the following sets of numbers could represent the lengths of the sides of a triangle?

- A 2, 2, 5
 B 3, 3, 5
 C 4, 4, 8
 D 5, 5, 15

CSG10041

- 26** In the accompanying diagram, parallel lines l and m are cut by transversal t .

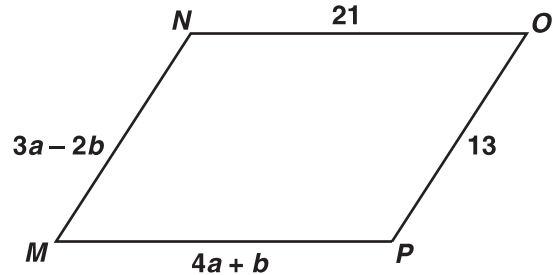


Which statement about angles 1 and 2 *must* be true?

- A $\angle 1 \cong \angle 2$.
 B $\angle 1$ is the complement of $\angle 2$.
 C $\angle 1$ is the supplement of $\angle 2$.
 D $\angle 1$ and $\angle 2$ are right angles.

CSG00579

- 27** What values of a and b make quadrilateral $MNOP$ a parallelogram?



- A $a = 1, b = 5$
 B $a = 5, b = 1$
 C $a = \frac{11}{7}, b = \frac{34}{7}$
 D $a = \frac{34}{7}, b = \frac{11}{7}$

CSG10163

- 28** Quadrilateral $ABCD$ is a parallelogram. If adjacent angles are congruent, which statement *must* be true?

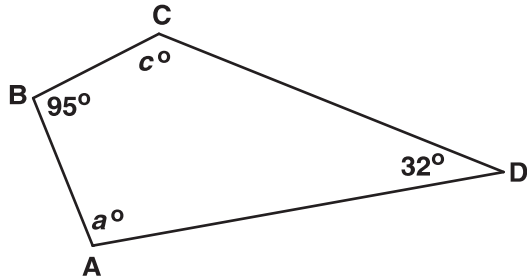
- A Quadrilateral $ABCD$ is a square.
 B Quadrilateral $ABCD$ is a rhombus.
 C Quadrilateral $ABCD$ is a rectangle.
 D Quadrilateral $ABCD$ is an isosceles trapezoid.

CSG20048

Geometry

Released Test Questions

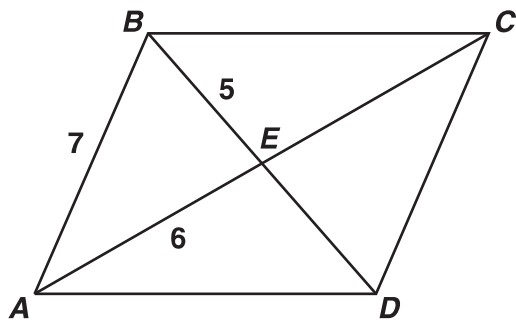
- 29** For the quadrilateral shown below, what is $m\angle a + m\angle c$?



- A 53°
- B 137°
- C 180°
- D 233°

CSG10162

- 30** If $ABCD$ is a parallelogram, what is the length of segment BD ?



- A 10
- B 11
- C 12
- D 14

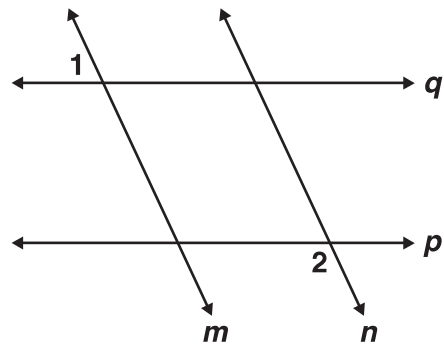
CSG20236

- 31** The diameter of a circle is 12 meters. If point P is in the same plane as the circle, and is 6 meters from the center of the circle, which *best* describes the location of point P ?

- A Point P must be on the circle.
- B Point P must be inside the circle.
- C Point P may be either outside the circle or on the circle.
- D Point P may be either inside the circle or on the circle.

CSG00532

- 32** Given: $p \parallel q$;
 $m \parallel n$;
 $m\angle 1 = 75^\circ$

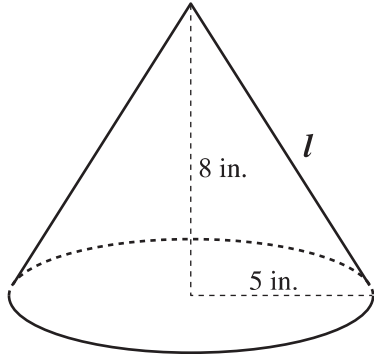


What is $m\angle 2$?

- A 15°
- B 75°
- C 90°
- D 105°

CSG20041

- 33** A right circular cone has radius 5 inches and height 8 inches.

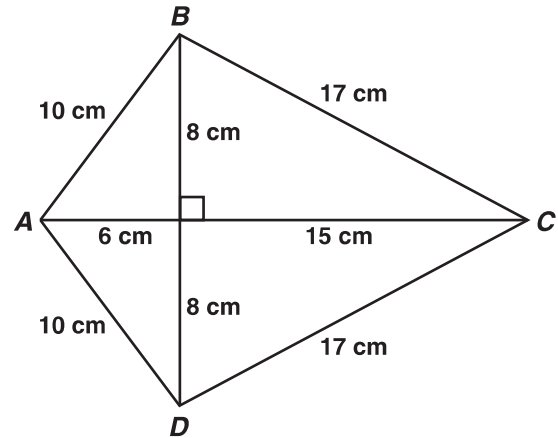


What is the lateral area of the cone? (Lateral area of cone = πrl , where l = slant height)

- A 40π sq in.
- B 445π sq in.
- C $5\pi\sqrt{39}$ sq in.
- D $5\pi\sqrt{89}$ sq in.

CSG00053

- 34** Figure $ABCD$ is a kite.



What is the area of figure $ABCD$, in square centimeters?

- A 120
- B 154
- C 168
- D 336

CSG20157

- 35** If a cylindrical barrel measures 22 inches in diameter, how many inches will it roll in 8 revolutions along a smooth surface?

- A 121π in.
- B 168π in.
- C 176π in.
- D 228π in.

CSG00564

Geometry

Released Test Questions

- 36** A sewing club is making a quilt consisting of 25 squares with each side of the square measuring 30 centimeters. If the quilt has five rows and five columns, what is the perimeter of the quilt?

- A 150 cm
- B 300 cm
- C 600 cm
- D 900 cm

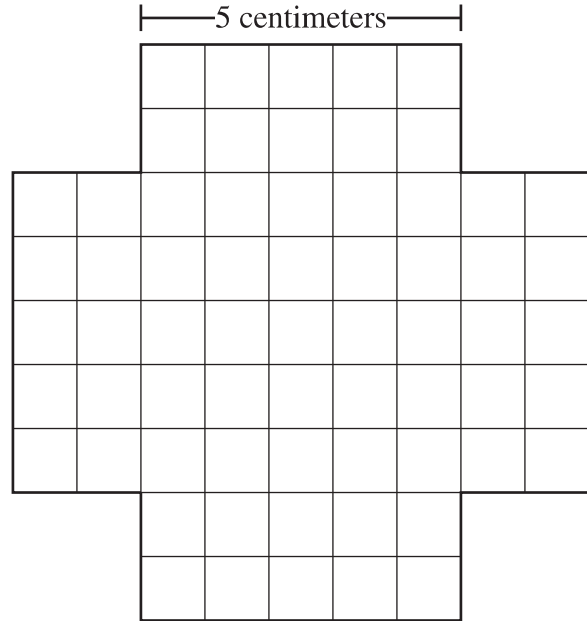
CSG20111

- 37** The minute hand of a clock is 5 inches long. What is the area of the circle, in square inches, created as the hand sweeps an hour?

- A 10π
- B 20π
- C 25π
- D 100π

CSG10223

- 38** The four sides of this figure will be folded up and taped to make an open box.



What will be the volume of the box?

- A 50 cm^3
- B 75 cm^3
- C 100 cm^3
- D 125 cm^3

CSG00299

Released Test Questions

Geometry

- 39 A classroom globe has a diameter of 18 inches.



Which of the following is the approximate surface area, in square inches, of the globe?
(Surface Area = $4\pi r^2$)

- A 113.0
- B 226.1
- C 254.3
- D 1017.4

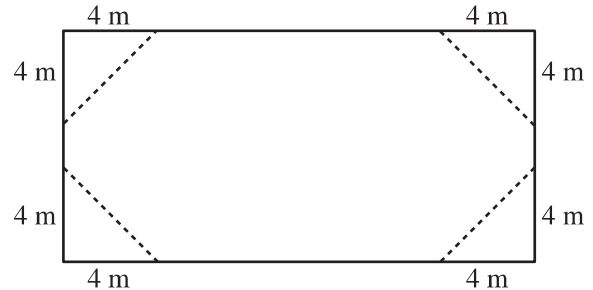
CSG20238

- 40 Vik is constructing a spherical model of Earth for his science fair project. His model has a radius of 24 inches. Since roughly 75% of Earth's surface is covered by water, he wanted to paint 75% of his model blue to illustrate this fact. Approximately how many square inches on his model will be painted blue?
(Surface Area = $4\pi r^2$)

- A 5426
- B 7235
- C 43,407
- D 57,877

CSG10086

- 41 The rectangle shown below has length 20 meters and width 10 meters.

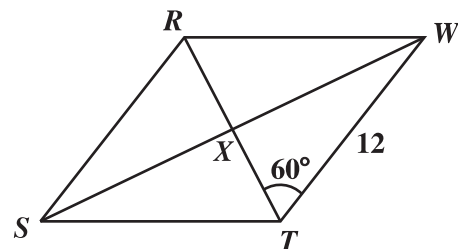


If four triangles are removed from the rectangle as shown, what will be the area of the remaining figure?

- A 136 m^2
- B 144 m^2
- C 168 m^2
- D 184 m^2

CSG00012

- 42 If $RSTW$ is a rhombus, what is the area of $\triangle WXT$?



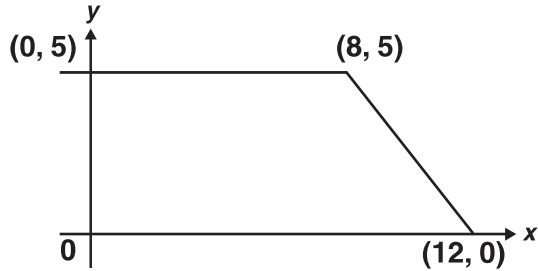
- A $18\sqrt{3}$
- B $36\sqrt{3}$
- C 36
- D 48

CSG00227

Geometry

Released Test Questions

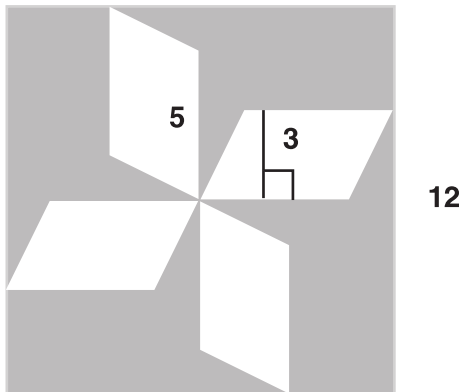
- 43** What is the area, in square units, of the trapezoid shown below?



- A 37.5
- B 42.5
- C 50
- D 100

CSG20226

- 44** The figure below is a square with four congruent parallelograms inside.

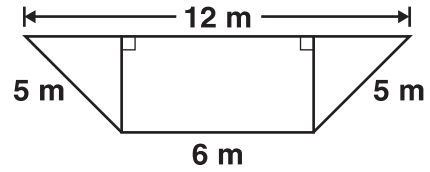


What is the area, in square units, of the shaded portion?

- A 60
- B 84
- C 114
- D 129

CSG20225

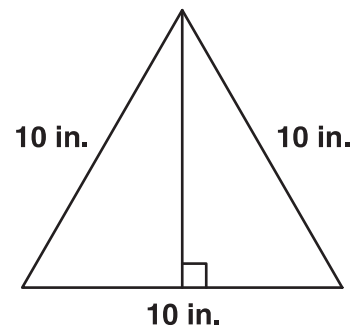
- 45** What is the area, in square meters (m), of the trapezoid shown below?



- A 28
- B 36
- C 48
- D 72

CSG10047

- 46** What is the area, in square inches (in.), of the triangle below?



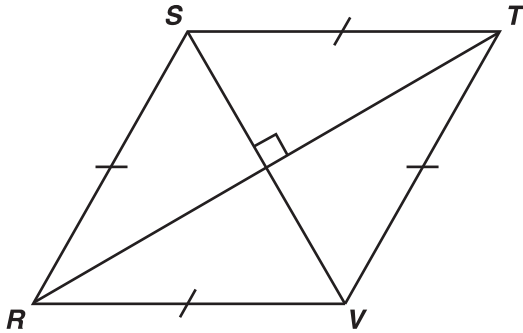
- A 25
- B $25\sqrt{3}$
- C 50
- D $50\sqrt{3}$

CSG10048

Released Test Questions

Geometry

- 47 What is the area, in square centimeters, of rhombus $RSTV$ if $RT = 16$ cm and $SV = 12$ cm?



- A 40
B 48
C 96
D 192

CSG20144

- 48 The perimeters of two squares are in a ratio of 4 to 9. What is the ratio between the areas of the two squares?

- A 2 to 3
B 4 to 9
C 16 to 27
D 16 to 81

CSG00013

- 49 Lea made two candles in the shape of right rectangular prisms. The first candle is 15 cm high, 8 cm long, and 8 cm wide. The second candle is 5 cm higher but has the same length and width. How much additional wax was needed to make the taller candle?

- A 320 cm^3
B 640 cm^3
C 960 cm^3
D 1280 cm^3

CSG20116

- 50 Two angles of a triangle have measures of 55° and 65° . Which of the following could *not* be a measure of an exterior angle of the triangle?

- A 115°
B 120°
C 125°
D 130°

CSG00571

- 51 The sum of the interior angles of a polygon is the same as the sum of its exterior angles. What type of polygon is it?

- A quadrilateral
B hexagon
C octagon
D decagon

CSG00305