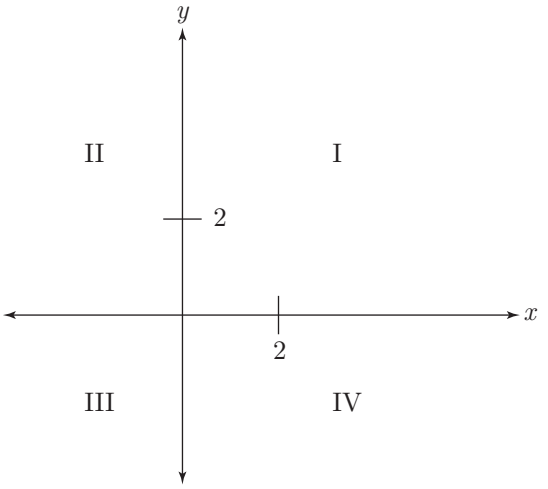
Geometry Drill

Question 1 of 14

Lines X, Y, and Z intersect to form a triangle. If line X is perpendicular to line Y and line X forms a 30-degree angle with line Z, which of the following is the degree measure of the angle formed by the intersection of lines Y and Z ?

- ○ 20°
- ○ 30°
- ○ 45°
- ○ 50°
- ○ 60°

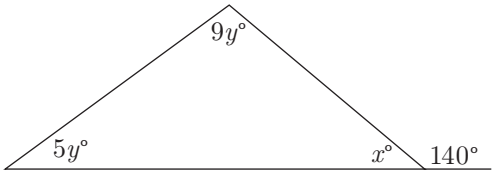
Question 2 of 14



Points $(x, 5)$ and $(-6, y)$, not shown in the figure above, are in Quadrants I and III, respectively. If $xy \neq 0$, in which quadrant is point (x, y)?

- ○ IV
- ○ III
- ○ II
- ○ I
- ○ It cannot be determined from the information given.

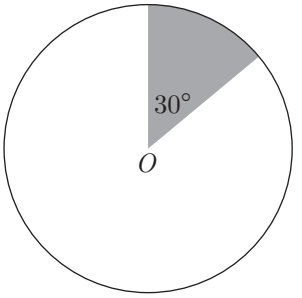
Question 3 of 14



In the triangle above, what is the degree measure of the smallest angle?

- ○ 10°
- ○ 40°
- ○ 45°
- ○ 50°
- ○ 60°

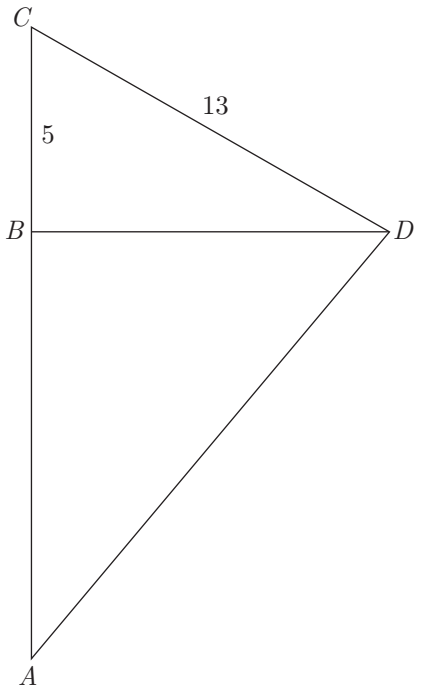
Question 4 of 14



The area of the shaded region is 3π. What is the radius of circle with center O ?

- ○ 3
- ○ 6
- ○ 9
- ○ 12
- ○ 36

Question 5 of 14



In the figure above, if BD is perpendicular to AC and $AC = 21$, then $AD =$

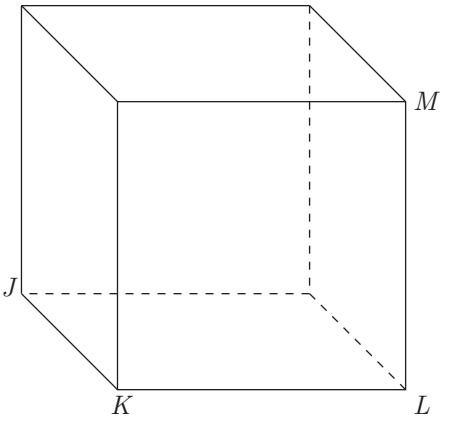
- ○ 12
- ○ 13
- ○ 20
- ○ 21
- ○ 25

Question 6 of 14

Which of the following expresses the area of a square region in terms of its perimeter p ?

- ○ $\frac{p}{4}$
- ○ $\frac{p^2}{4}$
- ○ $\frac{p}{16}$
- ○ $\frac{p^2}{16}$
- ○ $\left(\frac{4p}{p}\right)^2$

Question 7 of 14



The figure above is a rectangular solid in which $JK = 2$, $KL = 9$, and $LM = 9$. What is the total surface area of the rectangular solid?

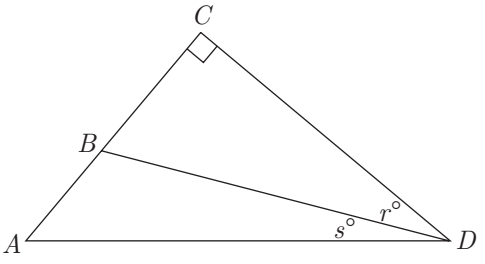
- ○ 234
- ○ 162
- ○ 134
- ○ 117
- ○ 20

Question 8 of 14

The four corners of the face of a cube have coordinates (a, b), (a, d), (c, b) and (c, d). If $a = 2$ and c is an even number between 6 and 11, which of the following could be the surface area of the cube?

- ◯ 96
- ◯ 150
- ◯ 294
- ◯ 384
- ◯ 600

Question 9 of 14



In the figure above, if $AC = CD$, then $r =$

- ◯ $45 - s$
- ◯ $90 - s$
- ◯ s
- ◯ $45 + s$
- ◯ $60 + s$

Question 10 of 14

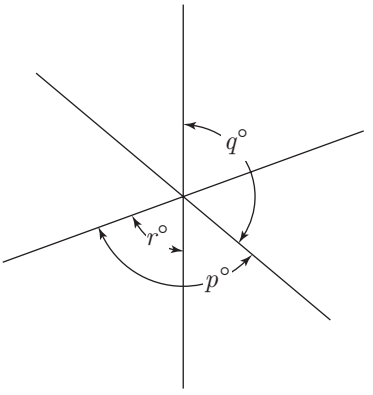
Triangle ABC is an isosceles right triangle. If $AB = AC$, then the area of a square with a side length equal to twice the length of BC is how many times the area of triangle ABC ?

Question 11 of 14

Which of the following has the greatest value?

- ◯ The area of a rectangle with length 11 and height 6.
- ◯ The area of a right triangle with base length 10 and height 10.
- ◯ The area of a square with diagonal $8\sqrt{2}$.
- ◯ The area of a circle with a radius of 5.
- ◯ The area of an equilateral triangle with a side of 12.

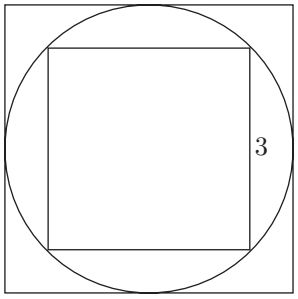
Question 12 of 14



In the figure above, if $q = 130$ and $p = 120$, then $r =$

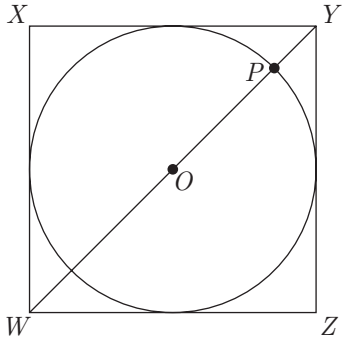
- ◯ 20°
- ◯ 60°
- ◯ 70°
- ◯ 80°
- ◯ 90°

Question 13 of 14



In the figure above, a square with side of length 3 is inscribed in a circle that is inscribed in a square. What is the area of the larger square?

Question 14 of 14



In the figure above, a circle with center O is inscribed in square $WXYZ$. If the circle has radius 3, then $PZ =$

- ○ 6
- ○ $3\sqrt{2}$
- ○ $6 + \sqrt{2}$
- ○ $3 + \sqrt{3}$
- ○ $3 + 3\sqrt{2}$