Question Bank

Math

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Circles

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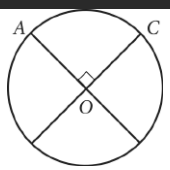
Question ID 23c5fcce

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■□□

ID: 23c5fcce



The circle above with center O has a circumference of 36.
What is the length of minor arc $\overset{\frown}{AC}$?

A. 9

B. 12

C. 18

D. 36

Question ID 8e7689e0

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■□

ID: 8e7689e0

The number of radians in a 720-degree angle can be written as $a\pi$, where *a* is a constant. What is the value of *a* ?

Question ID 74d8b897

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■□

ID: 74d8b897

An angle has a measure of $\frac{9\pi}{20}$ radians. What is the measure of the angle in degrees?

Question ID 856372ca

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■□

ID: 856372ca

In the *xy*-plane, a circle with radius 5 has center $(-8,6)$. Which of the following is an equation of the circle?

A. $(x-8)^2+(y+6)^2=25$

B. $(x+8)^2+(y-6)^2=25$

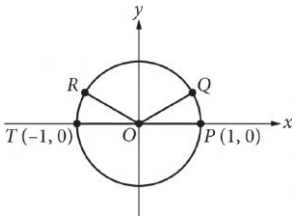
C. $(x-8)^2+(y+6)^2=5$

D. $(x+8)^2+(y-6)^2=5$

Question ID 95ba2d09

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■□

ID: 95ba2d09



In the *xy*-plane above, points *P*, *Q*, *R*, and *T* lie on the circle with center *O*. The degree measures of angles POQ and ROT are each 30°. What is the radian measure of angle QOR ?

A. $\frac{5}{6}\pi$

B. $\frac{3}{4}\pi$

C. $\frac{2}{3}\pi$

D. $\frac{1}{3}\pi$

Question ID 82c8325f

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■□

ID: 82c8325f

A circle in the *xy*-plane has its center at $(-4, 5)$ and the point $(-8, 8)$ lies on the circle. Which equation represents this circle?

A. $(x-4)^2+(y+5)^2=5$

B. $(x+4)^2+(y-5)^2=5$

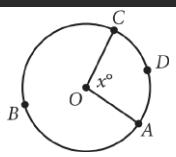
C. $(x-4)^2+(y+5)^2=25$

D. $(x+4)^2+(y-5)^2=25$

Question ID c8345903

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: c8345903



The circle above has center O, the length of arc $\overset{\frown}{ADC}$ is 5π, and $x = 100$. What is the length of arc $\overset{\frown}{ABC}$?

A. 9π

B. 13π

C. 18π

D. $\frac{13}{2}\pi$

Question ID 2266984b

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: 2266984b

$x^2+20x+y^2+16y=-20$

The equation above defines a circle in the *xy*-plane. What are the coordinates of the center of the circle?

A. $(-20,-16)$

B. $(-10,-8)$

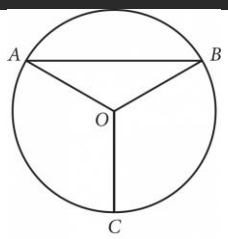
C. $(10,8)$

D. $(20,16)$

Question ID 69b0d79d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: 69b0d79d



Point O is the center of the circle above, and the measure of $\angle OAB$ is $30°$.

If the length of $\overline{OC}$ is 18, what is the length of arc $\overset{\frown}{AB}$?

A. 9π

B. 12π

C. 15π

D. 18π

Question ID ab176ad6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: ab176ad6

The equation $(x+6)^2+(y+3)^2=121$ defines a circle in the *xy*-plane. What is the radius of the circle?

Question ID 3e577e4a

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: 3e577e4a

A circle in the *xy*-plane has its center at $(-4, -6)$. Line k is tangent to this circle at the point $(-7, -7)$. What is the slope of line k?

A. -3

B. $-\frac{1}{3}$

C. $\frac{1}{3}$

D. 3

Question ID 9e44284b

Assessment	Test	Domain	Skill	Difficulty
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ID: 9e44284b

In the *xy*-plane, the graph of $2x^2-6x+2y^2+2y=45$ is a circle. What is the radius of the circle?

A. 5

B. 6.5

C. $\sqrt{40}$

D. $\sqrt{50}$

Question ID ca2235f6

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: ca2235f6

A circle has center O, and points A and B lie on the circle. The measure of arc AB is $45°$ and the length of arc AB is 3 inches. What is the circumference, in inches, of the circle?

A. 3

B. 6

C. 9

D. 24

Question ID 981275d2

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: 981275d2

$(x-6)^2+(y+5)^2=16$

In the *xy*-plane, the graph of the equation above is a circle. Point *P* is on the circle and has coordinates $(10,-5)$. If $\overline{PQ}$ is a diameter of the circle, what are the coordinates of point *Q* ?

A. $(2,-5)$

B. $(6,-1)$

C. $(6,-5)$

D. $(6,-9)$

Question ID 89661424

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: 89661424

A circle in the *xy*-plane has its center at $(-5, 2)$ and has a radius of 9. An equation of this circle is $x^2 + y^2 + ax + by + c = 0$, where a, b, and c are constants. What is the value of c?

Question ID fb58c0db

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: fb58c0db

Points *A* and *B* lie on a circle with radius 1, and arc $\overset{\frown}{AB}$ has length $\frac{\pi}{3}$.

What fraction of the circumference of the circle is the length of arc $\overset{\frown}{AB}$?

Question ID acd30391

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Geometry and Trigonometry	Circles	■■■

ID: acd30391

A circle in the *xy*-plane has equation $(x+3)^2+(y-1)^2=25$. Which of the following points does NOT lie in the interior of the circle?

A. $(-7, 3)$

B. $(-3, 1)$

C. $(0, 0)$

D. $(3, 2)$