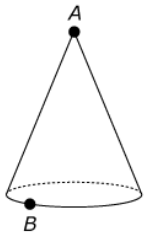
A right circular cone is shown in the figure. Point A is the vertex of the cone and point B lies on the circumference of the base of the cone.



The cone has a height of 24 units and a diameter of 20 units. What is the distance from point A to point B?

[ ] units

Click on the answer box and type in a number. Backspace to erase.

Grade 8	Length of the Segment $\overline{AB}$
Item Type	Type I – 1 point
Evidence Statement	**8.G.7-2:** Apply the Pythagorean Theorem in a simple three-dimensional case. Clarifications for 8.G.7-2: i) Tasks have “thin context” or no context. ii) Tasks require students to find one side of a right triangle in three dimensions, given information on a diagram that straightforwardly determines the other two sides. iii) In 50% of tasks, the answer is a whole number and is to be given as a whole number. iv) In 50% of tasks, the answer is irrational and is to be given approximately to three decimal places. v) The testing interface can provide students with a calculation aid of the specified kind for these tasks.
Most Relevant Standards for Mathematical	**8.G.7:** Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Content	This standard is major content in the grade based on the PARCC Model Content Frameworks.
Most Relevant Standards for Mathematical Practice	Students use the Pythagorean Theorem strategically to solve this application problem (MP.5). Students need to take the mathematical situation and reason quantitatively (MP.2).
Item Description and Assessment Qualities	This application task illustrates how the Pythagorean Theorem can be used to solve mathematical problems in three dimensions. Students must analyze the situation and use the Pythagorean Theorem as a tool to find a solution to the problem. These tasks will reflect a balance of whole number and irrational answers to attend to the rigor expected at Grade 8. Using a fill-in response allows for quick scoring of student responses while reducing the chance that students guess correctly or get a hint from answer choices to use the Pythagorean Theorem.
Scoring Information	Correct response: 26