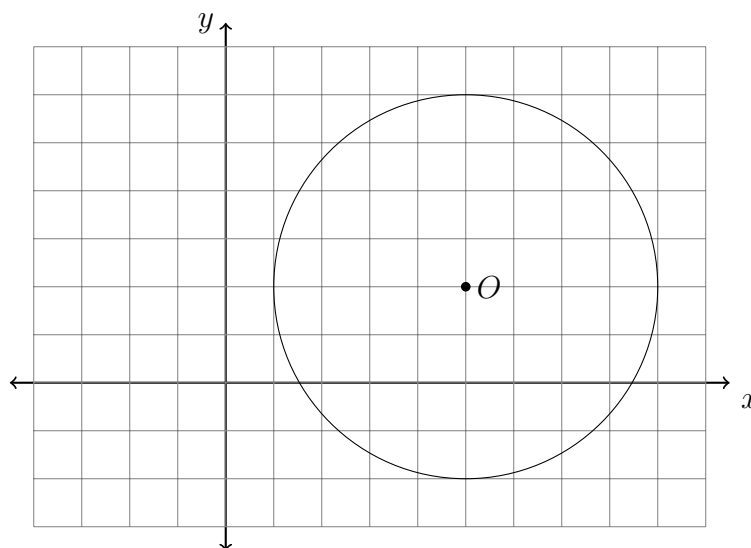


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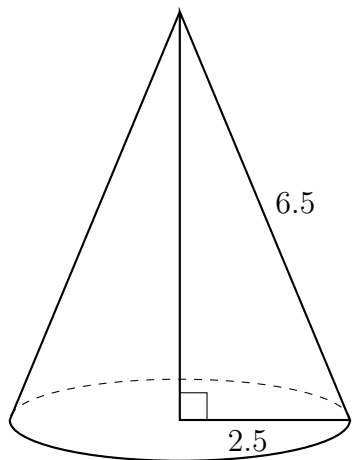
11.4 Regents: Equation of a circle**HSG.GPE.A.1**

- What is the equation of a circle with center $(5, 7)$ and radius $r = 3$?
- What are the coordinates of the center and the length of the radius of the circle whose equation is $(x - 3)^2 + y^2 = 16$?
- What is the equation of a circle with center $(-3, 7)$ and radius $r = 4$?
- The equation of a circle is $x^2 + 8x + y^2 - 12y = 144$. What are the coordinates of the center and the length of the radius of the circle?
 - center $(4, -6)$ and radius 12
 - center $(-4, 6)$ and radius 12
 - center $(4, -6)$ and radius 14
 - center $(-4, 6)$ and radius 14
- What is an equation of circle O shown in the graph below?



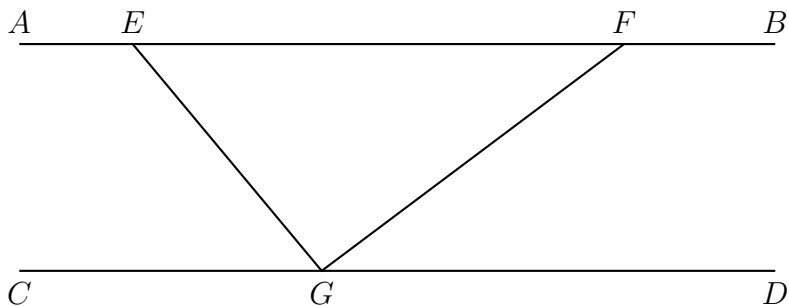
- | | |
|----------------------------------|----------------------------------|
| (a) $x^2 + 10x + y^2 + 4y = -13$ | (c) $x^2 + 10x + y^2 + 4y = -25$ |
| (b) $x^2 - 10x + y^2 - 4y = -13$ | (d) $x^2 - 10x + y^2 - 4y = -25$ |

26. As shown in the diagram below, the radius of a cone is 2.5 cm and its slant height is 6.5 cm.



How many cubic centimeters are in the volume of the cone? Express your answer in terms of π .

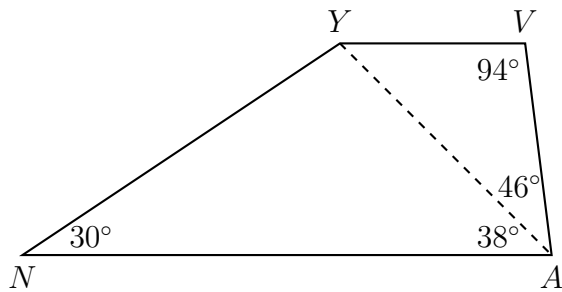
27. In the diagram below, $\overline{AEFB} \parallel \overline{CGD}$, and \overline{GE} and \overline{GF} are drawn.



If $m\angle EFG = 32^\circ$ and $m\angle AEG = 137^\circ$, what is $m\angle EGF$?

- | | |
|----------------|-----------------|
| (a) 11° | (c) 75° |
| (b) 43° | (d) 105° |

24. In diagram of quadrilateral $NAVY$, $m\angle YNA = 30^\circ$, $m\angle YAN = 38^\circ$, $m\angle AVY = 94^\circ$, and $m\angle VAY = 46^\circ$.



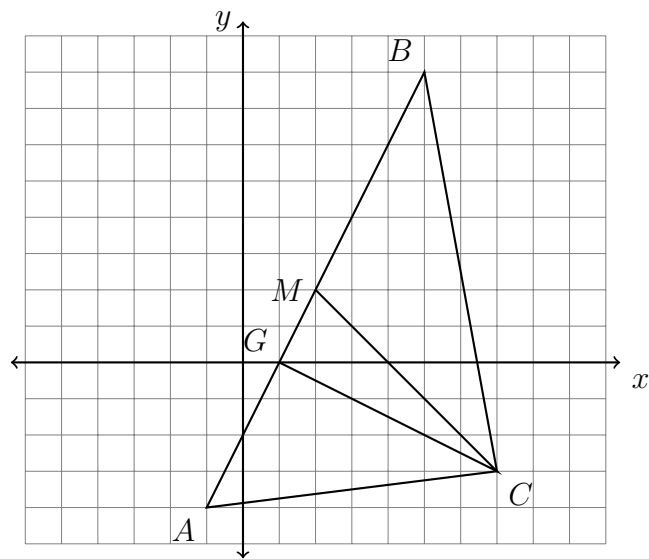
Which segment has the shortest length?

- (a) \overline{AY}

(b) \overline{NY}
- (c) \overline{VA}

(d) \overline{VY}

25. In the diagram below, $\triangle ABC$, altitude \overline{CG} , and median \overline{CM} are drawn.



Which expression represents the area of $\triangle ABC$?

- (a) $\frac{(BC)(AC)}{2}$

(b) $\frac{(GC)(BC)}{2}$
- (c) $\frac{(CM)(AB)}{2}$

(d) $\frac{(GC)(AB)}{2}$