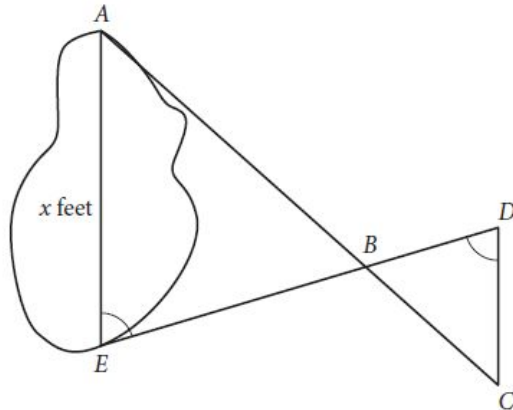


Geometry- Level 2

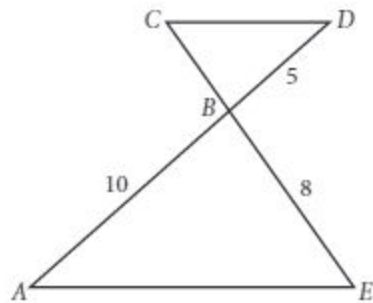
1



A summer camp counselor wants to find a length, x , in feet, across a lake as represented in the sketch above. The lengths represented by AB , EB , BD , and CD on the sketch were determined to be 1800 feet, 1400 feet, 700 feet, and 800 feet, respectively. Segments AC and DE intersect at B , and $\angle AEB$ and $\angle CDB$ have the same measure. What is the value of x ?

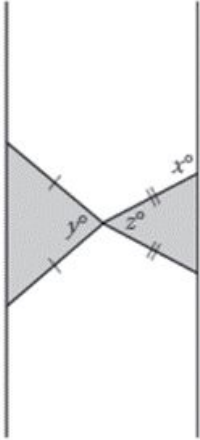
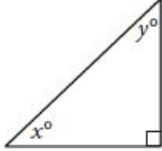
Triangles
No Calculator

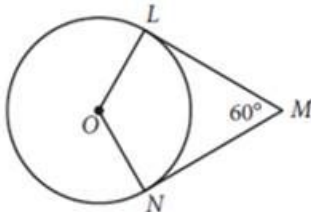
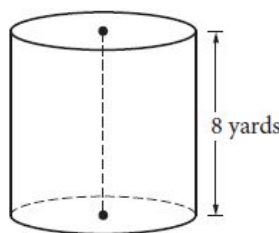
2



In the figure above, $\overline{AE} \parallel \overline{CD}$ and segment AD intersects segment CE at B . What is the length of segment CE ?

Triangles
No Calculator

3	 <p>Note: Figure not drawn to scale.</p> <p>Two isosceles triangles are shown above. If $180 - z = 2y$ and $y = 75$, what is the value of x ?</p>	Triangles No Calculator
4	 <p>In the triangle above, the sine of x° is 0.6. What is the cosine of y° ?</p>	Triangles No Calculator
5	<p>The graph of a line in the xy-plane has slope 2 and contains the point $(1, 8)$. The graph of a second line passes through the points $(1, 2)$ and $(2, 1)$. If the two lines intersect at the point (a, b), what is the value of $a + b$?</p> <p>A) 4 B) 3 C) -1 D) -4</p>	Lines No Calculator

6	<p>Which of the following equations represents a line that is parallel to the line with equation $y = -3x + 4$?</p> <p>A) $6x + 2y = 15$ B) $3x - y = 7$ C) $2x - 3y = 6$ D) $x + 3y = 1$</p>	Lines No Calculator
7	<p>In a circle with center O, central angle AOB has a measure of $\frac{5\pi}{4}$ radians. The area of the sector formed by central angle AOB is what fraction of the area of the circle?</p>	Circles With Calculator
8	 <p>In the figure above, point O is the center of the circle, line segments LM and MN are tangent to the circle at points L and N, respectively, and the segments intersect at point M as shown. If the circumference of the circle is 96, what is the length of minor arc \widehat{LN} ?</p>	Circles With Calculator
9	 <p>A dairy farmer uses a storage silo that is in the shape of the right circular cylinder above. If the volume of the silo is 72π cubic yards, what is the <u>diameter</u> of the base of the cylinder, in yards?</p>	3-Dimensional Objects With Calculator