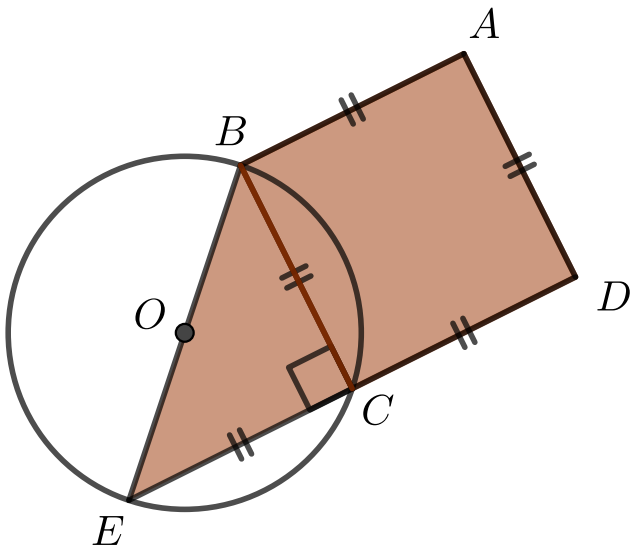
Problem of the Week

Problem C

A Circle and Other Shapes

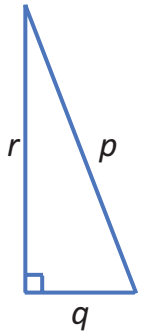
Quadrilateral $ABED$ is made up of square $ABCD$ and right isosceles $\triangle BCE$. BE is a diameter of the circle with centre O. Point C is also on the circle.

If the area of $ABED$ is 24 cm^2, what is the length of BE?



The *Pythagorean Theorem* states, "In a right triangle, the square of the length of hypotenuse (the side opposite the right angle) equals the sum of the squares of the lengths of the other two sides".

In the following right triangle, $p^2 = r^2 + q^2$.



Strands Geometry and Spatial Sense, Measurement