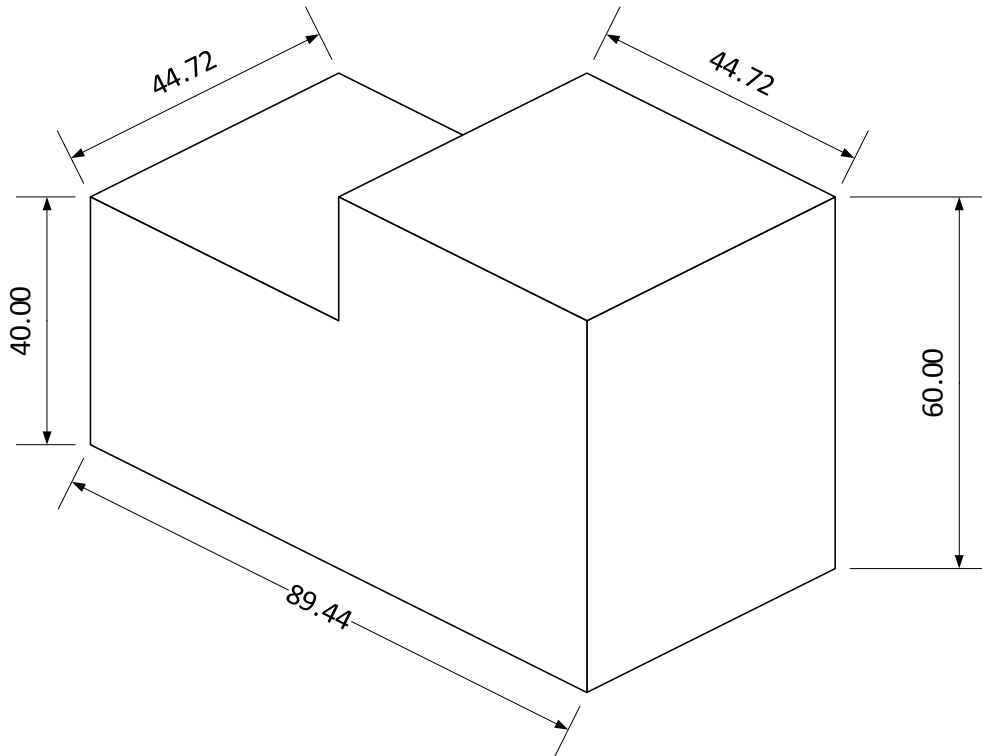


Homework

1. In the 3D shape below, all angles are right angles.



Calculate:

- The length of the edges;
 - The volume of the shape;
 - The surface area of the shape.
2. At three o'clock, Jim notices that the hands of the clock are perpendicular to each other. At what time, following the seven o'clock chimes, does the clock next have hands that are perpendicular to one another?
3. If $x=4$ and $x^n=64$, what is the value of nx^{n-1} ?
4. Factorise each of the following terms to its simplest form:

- $p^7q^3st^8 + p^4q^4s^2$
- $3j^4k^3k^{-2} + 9jk^6$
- $45j^3y^3 + 18ky^5$