

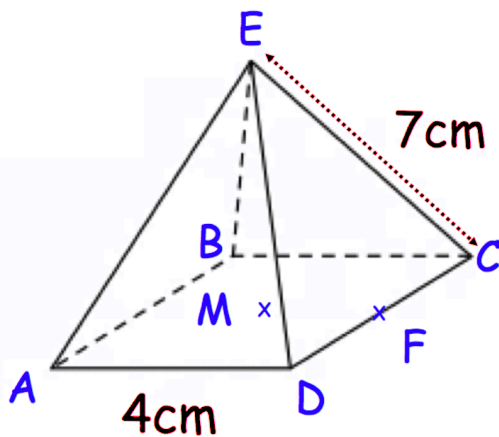


Estimate

$$50^{-\frac{3}{2}}$$

The first 5 terms of a quadratic sequence are: 4, 10, 18, 28, 40

Work out the difference between the 10th and 20th terms.



Work out the length of EM

Work out the angle between the line EF and plane ABCD

Shown is the square based pyramid ABCDE.

F is the midpoint of CD.

M is the point on the base directly below the vertex E.

Find where the tangent to the circle $x^2 + y^2 = 160$ at the point $(4, -12)$ meets the x-axis.