

## Answer on Question #34567 – Math – Analytic Geometry

### Question

M (-4, 8) is the midpoint of line segment DE. D has coordinates (6,1). Find the coordinates of E.

### Solution

Suppose that E has coordinates  $(x, y)$ . Because M is the midpoint of the segment DE then

$$\begin{cases} -4 = \frac{6+x}{2}, \\ 8 = \frac{1+y}{2}, \end{cases} \Rightarrow \begin{cases} -8 = 6+x, \\ 16 = 1+y, \end{cases} \Rightarrow \begin{cases} x = -14, \\ y = 15. \end{cases}$$

### Answer:

E has coordinates  $(-14, 15)$ .