

## Answer on Question #81360 – Math – Geometry

### Question

Find the coordinates of point P along directed line segment AB with A(-4,8) and B(16,-2), so that the ratio of AP to PB is 3 to 2.

### Solution

$$P_x = A_x + (B_x - A_x) \cdot \frac{3}{5}$$

$$P_y = B_y + (A_y - B_y) \cdot \frac{2}{5}$$

$$P_x = -4 + (16 - (-4)) \cdot \frac{3}{5} = 8$$

$$P_y = -2 + (8 - (-2)) \cdot \frac{2}{5} = 2$$

Answer:  $P(8; 2)$

