

QP9

A tetrahedron has its vertices located at four points A , B , C and D where the coordinates of these points are given by:

$$A = (0, 0, 0)$$

$$B = (1 \text{ cm}, 0, 0)$$

$$C = (0, 2 \text{ cm}, 0) \tag{1}$$

$$D = (0, 0, 3 \text{ cm}) \tag{2}$$

$$\tag{3}$$

- a) (1 point) It takes a fly 5 seconds to walk with constant speed along the edge from B to C . What are the velocity and speed of the fly?
- b) (1 point) Find the area of the side with vertices B , C and D .
- c) (2 points) If the bug then flies from point C with a constant speed of 3 cm/sec for 7 seconds along the direction that is perpendicular to face BCD , what is its final position?