

Check your understanding

16. In the plane a line can be written in the form

$$ax + by + c = 0.$$

What is the relation between the vector $\langle a, b \rangle$ and a tangent vector to the line?

- (a) They are parallel.
- (b) They are perpendicular.
- (c) Neither.

Answer: (b)

Explanation: The line has slope $-a/b$, and a tangent vector to the line is $\langle b, -a \rangle$, which is perpendicular to $\langle a, b \rangle$.