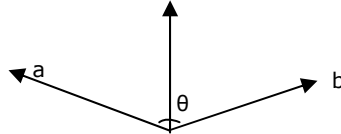


Magnitudes of Scalar Multiples - Matching Worksheet

Write the letter of the answer that matches the problem.

_____ 1. If $a = 4i + 3j$, $b = 3i + 9j$ and $c = i + j$, the angle between a and b is 140° , and it is given that c bisects a and b then find the following to two decimal places:

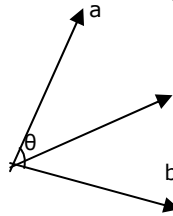
- (a) $a \cdot b$
 (b) $a \cdot c$
 (c) $b \cdot c$



- a. $a \cdot b = 0$,
 $a \cdot c = 10$,
 $b \cdot c = 2$

_____ 2. If $a = 3i + 4j$, $b = 5i + 7j$ and $c = i + j$, the angle between a and b is 80° , and it is given that c bisects a and b , find the following to two decimal places:

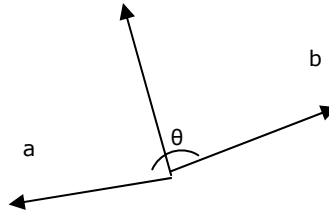
- (a) $a \cdot b$
 (b) $a \cdot c$
 (c) $b \cdot c$



- b. $a \cdot b = -52.13$,
 $a \cdot c = 5.14$, $b \cdot c = 5.64$

_____ 3. If $a = 12i + 8j$, $b = 10i + 18j$ and $c = i + j$, the angle between a and b is 170° , and it is given that c bisects a and b then find the following to two decimal places:

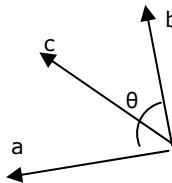
- (a) $a \cdot b$
 (b) $a \cdot c$
 (c) $b \cdot c$



- c. $a \cdot b = 7.47$,
 $a \cdot c = 5.42$, $b \cdot c = 9.32$

_____ 4. If $a = 10i$, $b = 2j$ and $c = i + j$, the angle between a and b is 90° , and it is given that c bisects a and b then find the following to two decimal places:

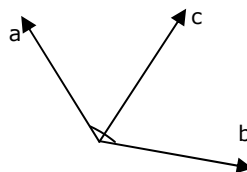
- (a) $a \cdot b$
 (b) $a \cdot c$
 (c) $b \cdot c$



- d. $a \cdot b = -36.35$,
 $a \cdot c = 2.42$, $b \cdot c = 4.59$

_____ 5. If $a = 7i + 5j$, $b = 8i + 5j$ and $c = i + j$, the angle between a and b is 130° , and it is given that c bisects a and b then find the following to two decimal places:

- (a) $a \cdot b$
 (b) $a \cdot c$
 (c) $b \cdot c$



- e. $a \cdot b = -292.39$,
 $a \cdot c = 1.78$, $b \cdot c = 2.54$

