

<u>Help</u>

sandipan_dey ~

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* Course / Review / Practice exam (untimed, with solutions).



You are taking "Exam (Timed, No Correctness Feedback)" as a timed exam. Show more



21:37:38





5(a)

1.0/1 point (ungraded)

Let $ec{v}$ be the vector (3,4) and $ec{w}$ be the vector (2,-1). Let heta be the angle between $ec{v}$ and $ec{w}$. Find $\cos heta$.

2/(5*sqrt(5))

✓ Answer: 2/(5*sqrt(5))

? INPUT HELP

Solution:

We know that

$$ec{v} \cdot ec{w} = |ec{v}| |ec{w}| \cos heta = (3,4) \cdot (2,-1) = 6-4 = 2$$

We compute the magnitude of each vector and find:

$$|(3,4)| = 5|(2,-1)| = \sqrt{5}$$
 (7.1)

Therefore

$$\cos{(heta)} = rac{2}{5\sqrt{5}}$$

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1 Answers are displayed within the problem

5(b)

1/1 point (ungraded)

As above, let $ec{v}$ be the vector (3,4) and $ec{w}$ be the vector (2,-1). Let heta be the angle between $ec{v}$ and $ec{w}$.

The angle $oldsymbol{ heta}$ is



acute







Solution:

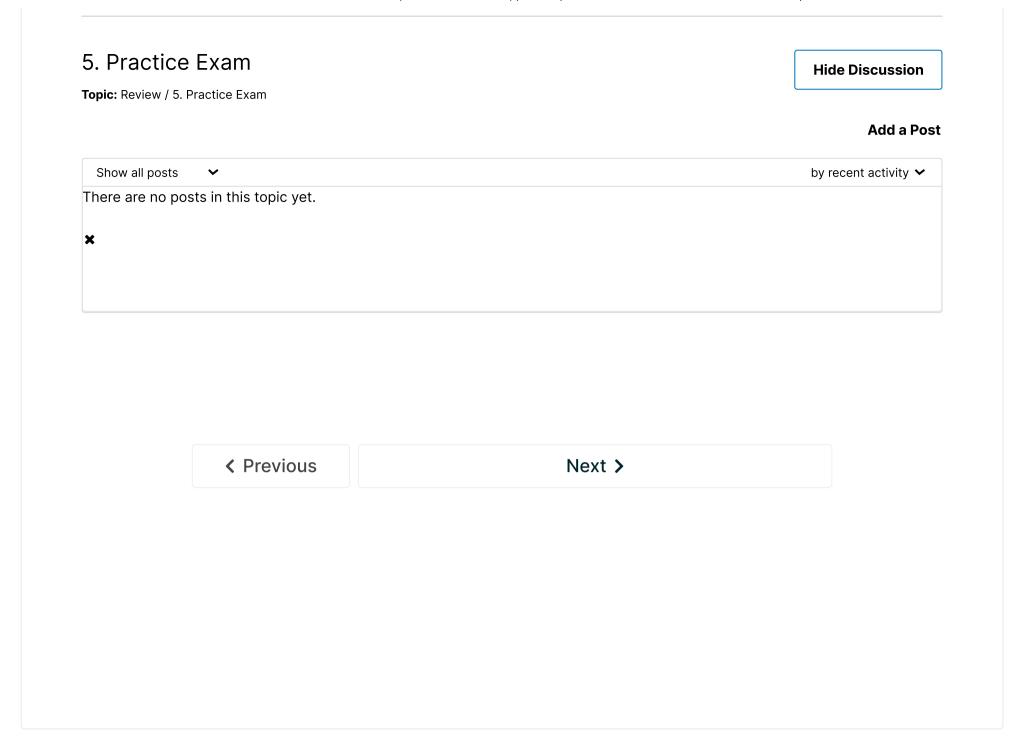
Since $ec v\cdotec w=(3,4)\cdot(2,-1)=6-4=2>0$, we know that $\cos heta>0$. Therefore heta must be $\overline{
m acute}$.

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1 Answers are displayed within the problem

⊞ Calculator

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