

Appendix J.1 Hmwk - Vectors (Homework)

 INSTRUCTOR

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Past Due **Due Date: SUN, JAN 25, 2026 11:59 PM CST**

Current Score: 20 / 20 POINTS | 100.0 %

Due date has passed. No changes can be made without an approved extension request.
You may not be granted an extension if you have already viewed the answer key.

 **VIEW ANSWER KEY**

Scoring and Assignment Information ^

QUESTION	1	2	3	4	5	6	7
POINTS	4 / 4	4 / 4	2 / 2	2 / 2	2 / 2	2 / 2	4 / 4

Assignment Submission

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

Assignment Scoring

Your best submission for each question part is used for your score.

1. [4 / 4 Points]

DETAILS

MY NOTES

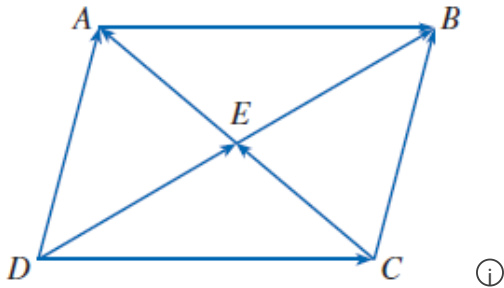
PREVIOUS ANSWERS

ASK YOUR TEACHER

PRACTICE ANOTHER

S_{Calc}ET9 12.2.003.

Name all the equal vectors in the parallelogram shown.



\vec{AB} is equal to what?

- \vec{DC}
 - \vec{CE}
 - \vec{EB}
 - \vec{CB}
- ✓

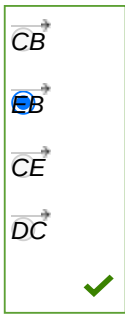
Exactly!

\vec{DA} is equal to what?

- \vec{CB}
 - \vec{EB}
 - \vec{CE}
 - \vec{DC}
- ✓

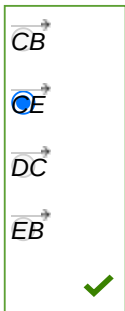
Great job!

\vec{DE} is equal to what?



Fantastic work!

→
EA is equal to what?



Amazing job.

Resources

[Read It Watch It](#)

2. [4 / 4 Points]

DETAILS

MY NOTES

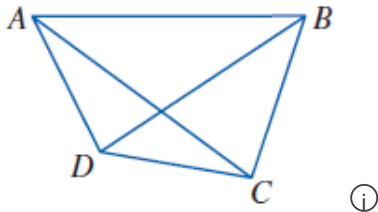
PREVIOUS ANSWERS

ASK YOUR TEACHER

PRACTICE ANOTHER

SCalcET9 12.2.004.

Using the vectors shown in the figure, write each sum or difference as a single vector.



(a) $\vec{AB} + \vec{BC}$

\$\$\$ $\rightarrow AC$

✓ Great work.

(b) $\vec{CD} + \vec{DB}$

\$\$\$ $\rightarrow CB$

✓ Very nice!

(c) $\vec{DB} - \vec{AB}$

\$\$\$ $\rightarrow DA$

✓ Very nice!

(d) $\vec{DC} + \vec{CA} + \vec{AB}$

\$\$\$ $\rightarrow DB$

✓ Great work.

Resources

[Read It](#)

3. [2 / 2 Points]

DETAILS

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PREVIOUS ANSWERS

ASK YOUR TEACHER

PRACTICE ANOTHER

SCalcET9 12.2.024.

Find a unit vector that has the same direction as the given vector.

$$-8\mathbf{i} + 3\mathbf{j} - \mathbf{k}$$

$$-8i\sqrt{74} + 3j\sqrt{74} - k\sqrt{74}$$

✓ Very nice!

Resources

[Read It](#)

4. [2 / 2 Points]

DETAILS

MY NOTES

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ASK YOUR TEACHER

PRACTICE ANOTHER

S_{Calc}ET9 12.2.015.

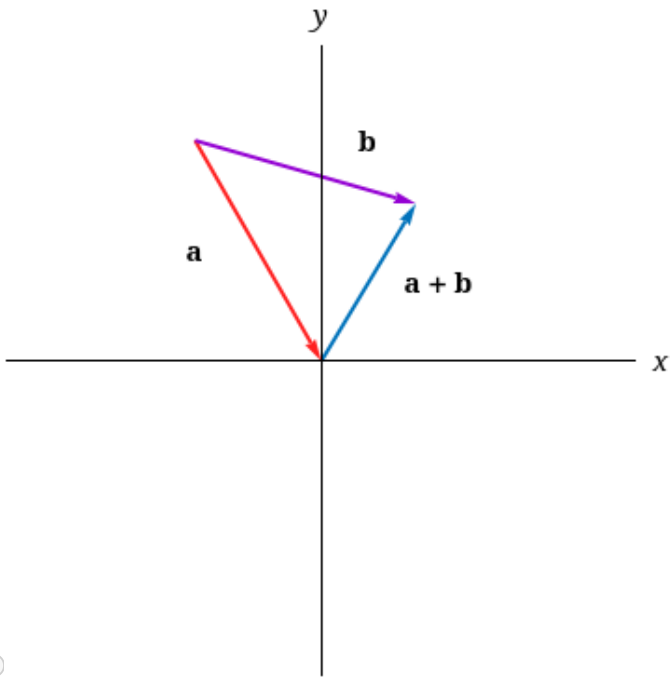
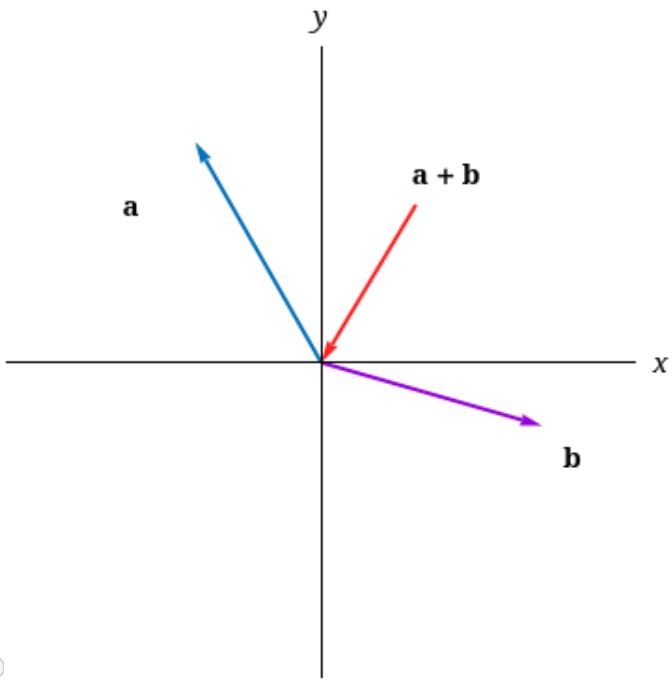
Find the sum of the given vectors.

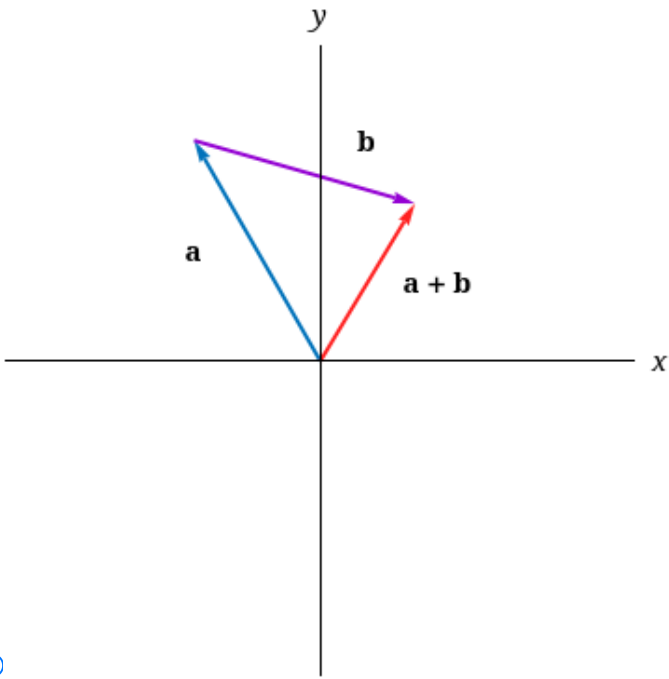
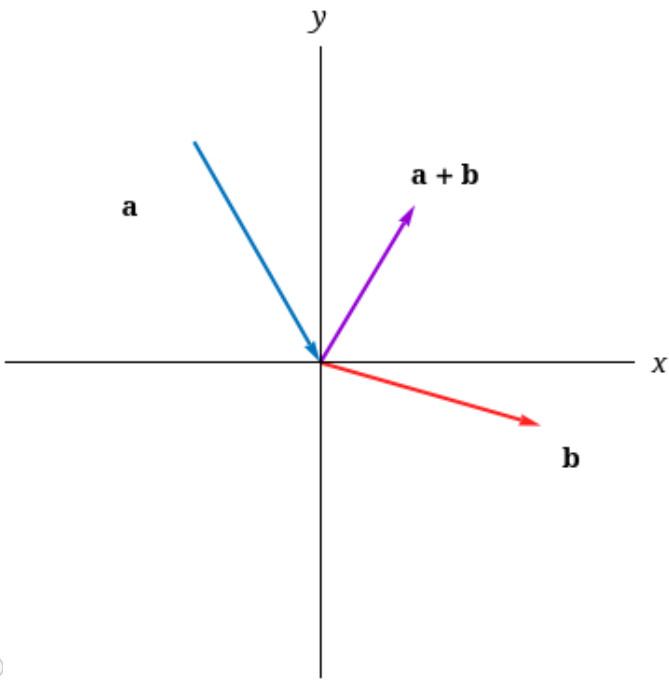
$$\mathbf{a} = \langle -4, 7 \rangle, \quad \mathbf{b} = \langle 7, -2 \rangle$$

$\langle 3, 5 \rangle$

✓ Outstanding!

Illustrate geometrically.





✓ Nice work!

Resources

[Read It Watch It](#)

5. [2 / 2 Points]

DETAILS

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PREVIOUS ANSWERS

ASK YOUR TEACHER

PRACTICE ANOTHER

SCalcET9 12.2.009.

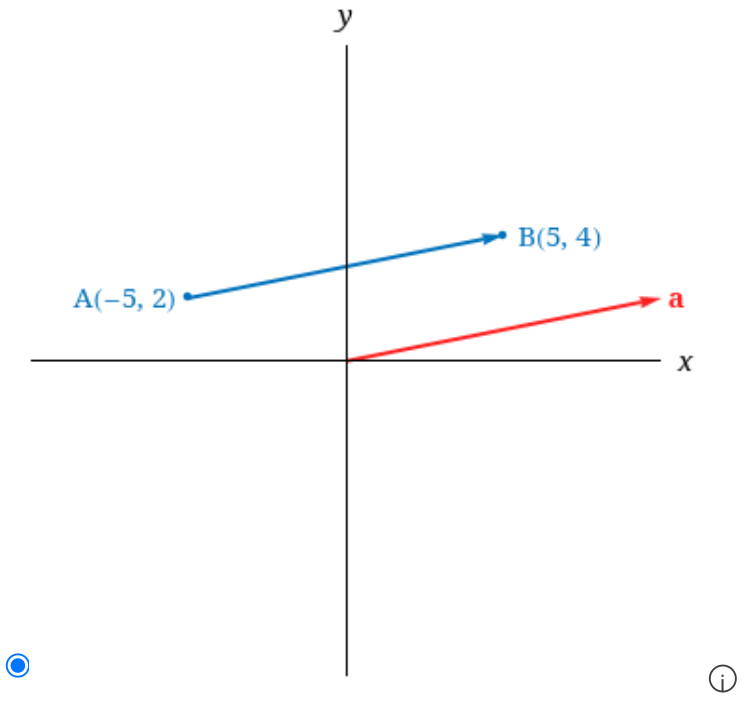
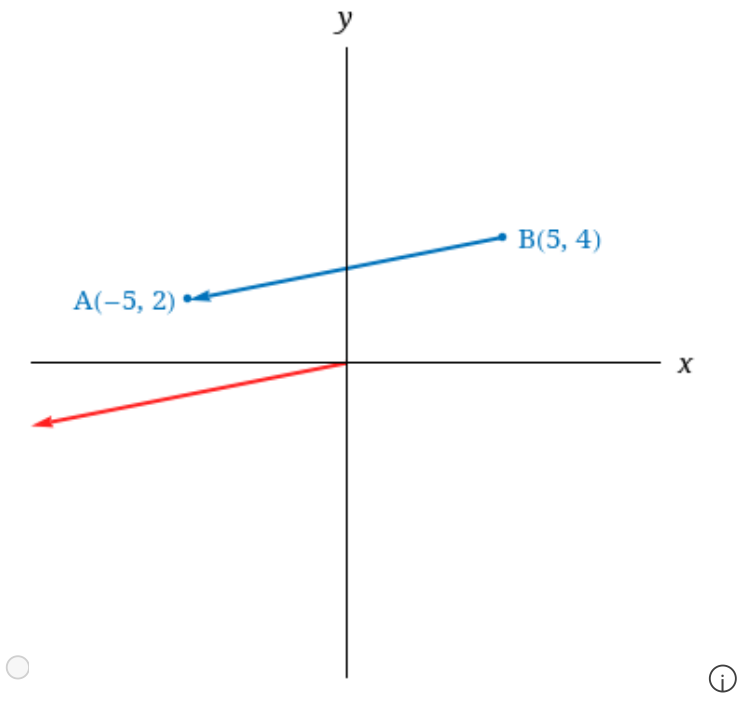
Find a vector \mathbf{a} with representation given by the directed line segment \overrightarrow{AB} .

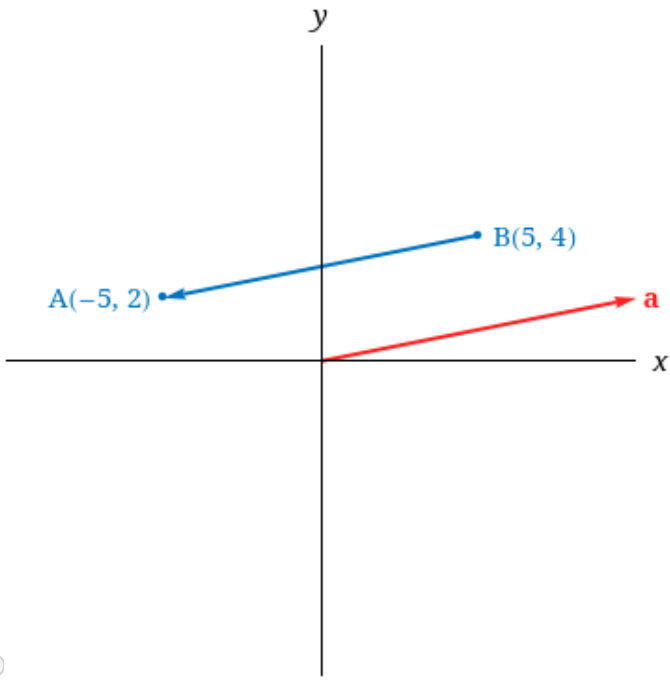
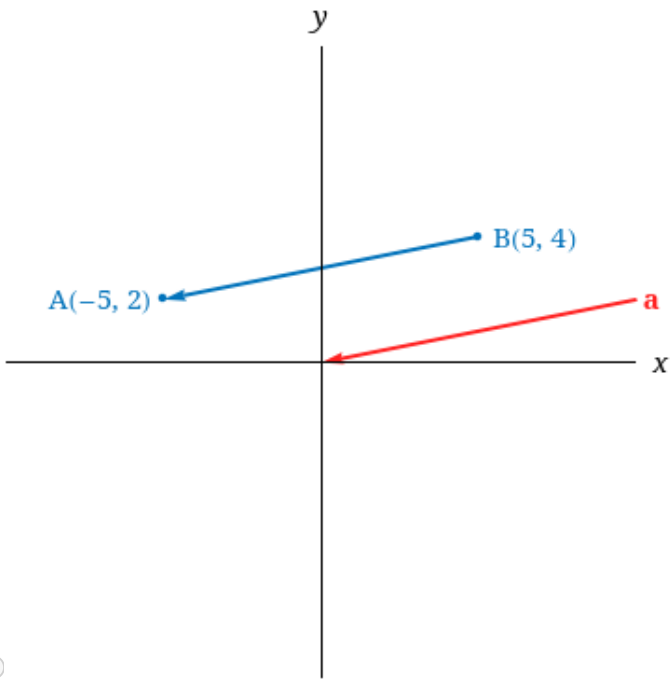
$A(-5, 2), B(5, 4)$

$\langle 10, 2 \rangle$

✓ Fantastic work!

Draw \overrightarrow{AB} and the equivalent representation starting at the origin.





✓ Fantastic job!

Resources

[Read It Watch It](#)

6. [2 / 2 Points]

DETAILS

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ASK YOUR TEACHER

PRACTICE ANOTHER

SCalcET9 12.2.026.

Find the vector that has the same direction as $\langle 6, 9, -2 \rangle$ but has length 2.

\$(1211, 1811, -411)\$

✓ Very nice!

Resources

[Read It](#)

7. [4 / 4 Points]

DETAILS

MY NOTES

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ASK YOUR TEACHER

PRACTICE ANOTHER

S CalcET9 12.2.022.

Find $\mathbf{a} + \mathbf{b}$, $4\mathbf{a} + 2\mathbf{b}$, $|\mathbf{a}|$, and $|\mathbf{a} - \mathbf{b}|$. (Simplify your vectors completely.)

$$\mathbf{a} = \langle 2, 1, -2 \rangle, \quad \mathbf{b} = \langle 4, -2, 1 \rangle$$

$$\mathbf{a} + \mathbf{b} = \langle 6, -1, -1 \rangle$$

✓ Nice work!

$$4\mathbf{a} + 2\mathbf{b} = \langle 16, 0, -6 \rangle$$

✓ Nice work!

$$|\mathbf{a}| = 3$$

✓ Fantastic job!

$$|\mathbf{a} - \mathbf{b}| = \sqrt{22}$$

✓ Good work!

Resources

[Read It](#)

[Home](#) [My Assignments](#)