

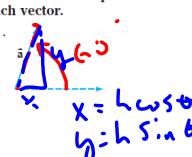
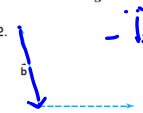
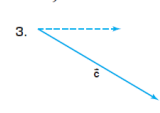
Trig 8.4  
Review Ch. 8.1-8.4

Quiz tomorrow 8.3-8.4  
whiteboards

1. No FMC, will have exit ticket instead  
Add to HW paper (top?)
2. Homework: class.name.date  
Shared folder by class time tomorrow

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**Lesson 8-1** (Pages 485-492)  
Use a ruler and a protractor to determine the magnitude (in centimeters) and direction of each vector.

1. 
2. 
3. 

Find the magnitude of the horizontal and vertical components of each vector shown for Exercises 1-3.

10.  $\vec{a}$       11.  $\vec{b}$       12.  $\vec{c}$

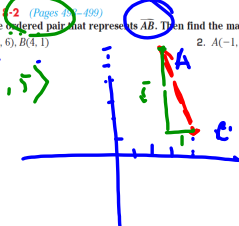
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**Lesson 4-2** (Pages 485-499)  
Find the ordered pair that represents  $\vec{AB}$ . Then find the magnitude of  $\vec{AB}$ .

1.  $A(3, 6), B(4, 1)$
2.  $A(-1, 3), B(-2, 2)$

frackets

$\langle 1, 5 \rangle$



$1^2 + 5^2 = h^2$   
 $1 + 25 = h^2$   
 $\sqrt{26} = h$   
 $\approx 5.1$

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Find the magnitude of each vector and write each vector as the sum of unit vectors.

7.  $\langle 5, 6 \rangle$
8.  $\langle -2, 4 \rangle$
9.  $\langle 5, 6 \rangle$

$\tan^{-1}\left(\frac{6}{5}\right) \theta = 50.2^\circ \approx 16^\circ E$

$5^2 + 6^2 = h^2$   
 $25 + 36 = h^2$   
 $h = \sqrt{61}$

$5\vec{i} + 6\vec{j}$

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**Lesson 8-3** (Pages 500-504)

Find an ordered triple to represent  $\vec{p}$  in each equation if  $\vec{q} = \langle 1, 2, -1 \rangle$ ,  $\vec{r} = \langle -2, 2, 4 \rangle$ , and  $\vec{s} = \langle -4, -3, 0 \rangle$ .

1.  $\vec{p} = 2\vec{q} + 3\vec{s}$
2.  $\vec{p} = \vec{q} - \frac{1}{2}\vec{r} + \vec{s}$

$\langle 2, 4, -2 \rangle + \langle -4, -3, 0 \rangle$   
 $\langle -2, -1, -2 \rangle$   
 $-10\vec{j} - 5\vec{k}$   
 $-10\vec{j} - 5\vec{k} - 2\vec{k}$

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5. **Physics** If vectors working on an object are in equilibrium, then their resultant is zero. Two forces on an object are represented by  $\langle 2, -4, 1 \rangle$  and  $\langle 5, 4, 3 \rangle$ . Find a third vector that will place the object in equilibrium.

$\vec{a} + \vec{b} + \vec{c} = 0$

$\langle 2, -4, 1 \rangle + \langle 5, 4, 3 \rangle + \langle ? ? ? \rangle = 0$   
 $\langle -7, 0, -4 \rangle$

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**Lesson 8-4** (Pages 505-511) *dot*

Find each inner product and state whether the vectors are perpendicular. Write yes or no.

1.  $(3, 4) \cdot (2, 5)$   
 2.  $(-3, 2) \cdot (4, 6)$   
 3.  $(-5, 3) \cdot (2, -3)$   
 4.  $(8, 6) \cdot (-2, -3)$   
 5.  $(3, 4, 0) \cdot (4, -3, 6)$   
 6.  $(4, 5, 1) \cdot (-1, -2, 3)$

6 + 20 = 24  $\neq 0$   
 12 + -12 + 6 = 6  $\neq 0$   
 -12 + 12 = 0  $\Rightarrow$  yes  
 12 + -12 + 6 = 6  $\Rightarrow$  yes  
 -12 + 12 = 0  $\Rightarrow$  yes  
 12 + -10 + 3 = 5  $\neq 0$   
 16 + -10 + 3 = 9  $\neq 0$

*Handwritten notes:*  
 -  $A = 40$   
 -  $A = 41$   
 -  $W = 1.30$

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Find each cross product. Then verify that the resulting vector is perpendicular to the given vectors.

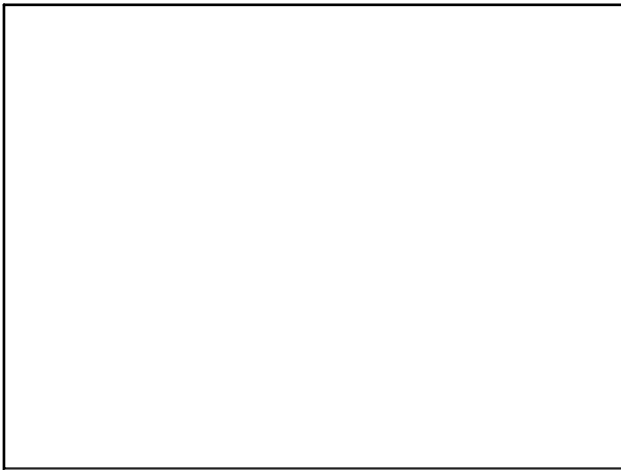
7.  $(1, 0, 3) \times (1, 1, 2)$  *each*  
 8.  $(3, 0, 4) \times (-1, 5, 2)$

*Handwritten work for problem 7:*

+	-	+	i	j	k
			1	0	3
			1	1	2

$-3\hat{i} + \hat{j} + \hat{k}$   
 $-3\hat{i} + \hat{j} + \hat{k}$

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