Trig 8.2

Find ordered pairs that represent vectors
Add, subtract, multiply vectors
Find the magnitude of vectors

vector components

horizontal (cos) x

vertical (sin) y

resultant

magnitude

whiteboards

< > frackets…component form

Write the ordered pair that represents $\overrightarrow{MP}$. Then find the magnitude of $\overrightarrow{MP}$.

4. $M(2, -1), P(-3, 4)$ **5.** $M(5, 6), P(0, 5)$ **6.** $M(-19, 4), P(4, 0)$

What does it mean? (say it)

Find an ordered pair to represent $\vec{t}$ in each equation if $\vec{u} = \langle -1, 4 \rangle$ and $\vec{v} = \langle 3, -2 \rangle$.

9. $\vec{t} = 4\vec{u} + 6\vec{v}$

10. $\vec{t} = -8\vec{u}$

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

11. $\langle 8, -6 \rangle$

12. $\langle -7, -5 \rangle$

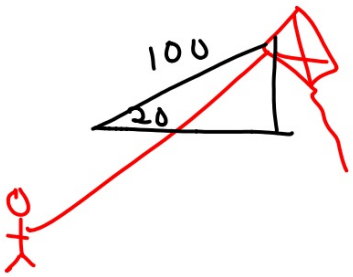
$8\hat{i} + -6\hat{j}$

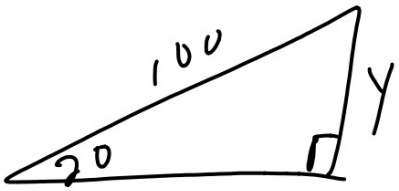
9 x 70
63 x 10

44. Recreation In the 12th Bristol International Kite Festival in September 1997 in England, Peter Lynn set a record for flying the world's biggest kite, which had a lifting surface area of 630 square meters. Suppose the wind is blowing against the kite with a force of 100 newtons at an angle 20° above the horizontal.

a. Draw a diagram representing the situation.

b. How much force is lifting the kite?



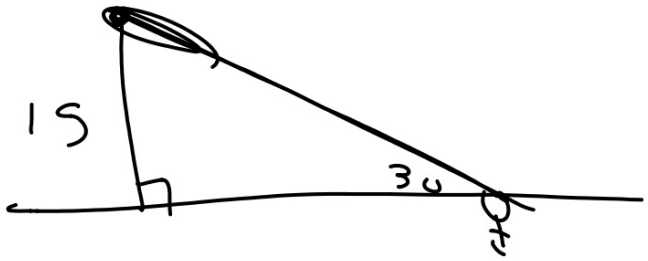


(vertical)

$\sin 20 = \frac{y}{100}$

$100 \sin 20 = y$

34N


15
30
WB
8.2