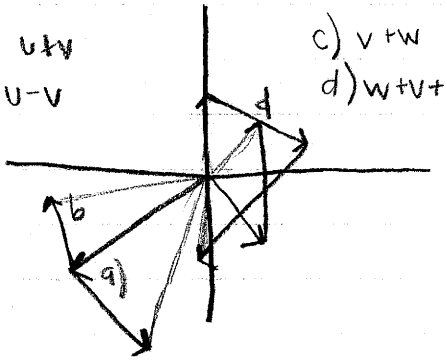
Allison Wren
Kristen
Ben
Andrew

Pg. 805 5, 11, 19, 21, 23, 25

5)

a) u+w
b) u−v
c) v+w
d) w+v+u



23) $\langle 9, -5 \rangle$

$\sqrt{81+25}$

$= \sqrt{106}$

$= \left\langle \frac{9}{\sqrt{106}}, -\frac{5}{\sqrt{106}} \right\rangle$

25.) $\frac{8i - j + 4k}{\sqrt{64+1+16}}$

$= \sqrt{81} = 9$

$= \frac{8}{9}i - \frac{1}{9}j + \frac{4}{9}k$

11) A(0,3,1), B(2,3,−1)

$\langle 2, 0, -2 \rangle$

19) $a = \langle 6, 2, 3 \rangle$ $b = \langle -1, 5, -2 \rangle$

$|a| = \sqrt{36+4+9}$

$= 7$

$a+b = \langle 6+-1, 2+5, 3-2 \rangle$

$\langle 5, 7, 1 \rangle$

$a-b = \langle 6--1, 2-5, 3--2 \rangle$

$= \langle 7, -3, 5 \rangle$

$2a = 2\langle 6, 2, 3 \rangle$

$= \langle 12, 4, 6 \rangle$

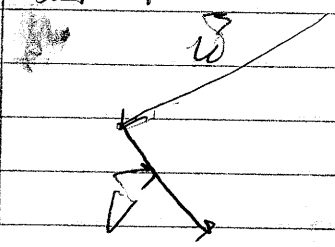
$3a+4b = 3\langle 6, 2, 3 \rangle + 4\langle -1, 5, -2 \rangle$

$= \langle 18, 6, 9 \rangle + \langle -4, 20, -8 \rangle$

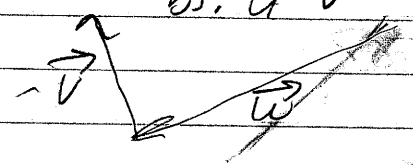
$= \langle 14, 26, 1 \rangle$

Thomas S. Adams
with R
Vectors
8.5
5, 11, 19, 21, 23

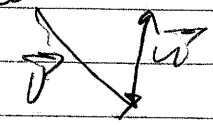
5. a. $u+v$



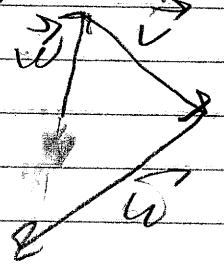
b. $u-v$



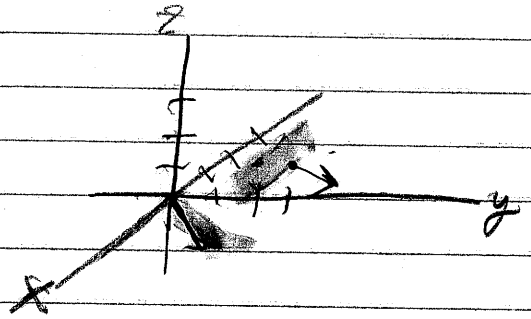
c. $v+w$

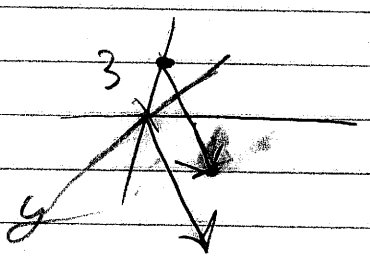


d. $u+v+w$



11. A(0, 3, 1) B(2, 3, -1)





19. $a = \langle 6, 2, 3 \rangle$ $b = \langle -1, 5, -2 \rangle$

$|a| = 7$

$\langle 5, 7, 1 \rangle = a+b$

$\langle 7, -3, 5 \rangle = a-b$

$\langle 12, 4, 6 \rangle = 2a$

$3a+4b = \langle 18, 6, 9 \rangle$ $4\langle -4, 2, -8 \rangle = \langle 14, 26, 1 \rangle$

21. $a = i - 2j + k$ $b = j + 2k$

$|a| = \sqrt{6}$ $2a = 2i - 4j + 2k$

$a+b = i - j + 3k$ $3a+4b = 3i - 2j + 11k$

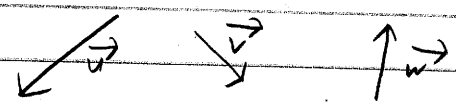
$a-b = i - 3j - k$

Group Work 4-23

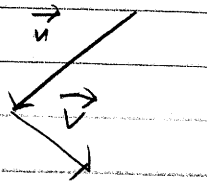
Andy Chleborad
Tanner Burt
Justin Asuler

pg. 805 5, 11, 19, 21, 23, 25

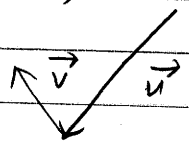
5.



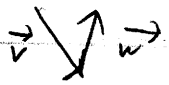
(a) u+v



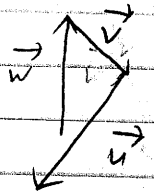
(b) u−v



(c) v+w



(d) w+v+u



19. $a\langle 6,2,3\rangle \quad b\langle -1,5,-2\rangle$

$|a|$

$\sqrt{6^2+2^2+3^2} = d$

$\sqrt{36+4+9} = d$

$\sqrt{49} = d$

$\boxed{d = 7}$

$a+b$

$\langle 5,7,1\rangle$

$a-b$

$\langle 7,-3,5\rangle$

$2a$

$\langle 12,4,6\rangle$

$3a+4b$

$\langle 18,6,9\rangle + \langle -4,20,-8\rangle$

$\langle 14,26,1\rangle$