Homework #82   **Answers**

From Houghton-Mifflin Precalculus 3rd Edition

p453:

3) $v = \langle 4 - 0, \, 3 - 0 \rangle = \langle 4, \, 3 \rangle$
   $\|v\| = \sqrt{16 + 9} = 5$

4) $v = \langle 4 - 0, \, -2 - 0 \rangle = \langle 4, \, -2 \rangle$
   $\|v\| = \sqrt{16 + 4} = 2\sqrt{5}$

5) $v = \langle -1 - 2, \, 4 - 2 \rangle = \langle -3, \, 2 \rangle$
   $\|v\| = \sqrt{9 + 4} = \sqrt{13}$

6) $v = \langle 3 - -1, \, 5 - -1 \rangle = \langle 4, \, 6 \rangle$
   $\|v\| = \sqrt{16 + 36} = 2\sqrt{13}$

7) $v = \langle 3 - 3, \, 3 - -2 \rangle = \langle 0, \, 5 \rangle$
   $\|v\| = \sqrt{0 + 25} = 5$

8) $v = \langle 3 - -4, \, -1 - -1 \rangle = \langle 7, \, 0 \rangle$
   $\|v\| = \sqrt{49 + 0} = 7$

9) $v = \langle -2 - 5/2, \, -3/2 - 1 \rangle = \langle -9/2, \, -5/2 \rangle$
   $\|v\| = \sqrt{81/4 + 25/4} = \sqrt{106}/2$

10) $v = \langle 0 - 3.4, \, 5.8 - 0 \rangle = \langle -3.4, \, 5.8 \rangle$
    $\|v\| = \sqrt{11.56 + 33.64} = 2\sqrt{11.3}$

11) $v = \langle 5 - -3, \, 1 - -5 \rangle = \langle 8, \, 6 \rangle$
    $\|v\| = \sqrt{64 + 36} = 10$

12) $v = \langle 9 - -3, \, 40 - 11 \rangle = \langle 12, \, 29 \rangle$
    $\|v\| = \sqrt{144 + 841} = \sqrt{985}$