

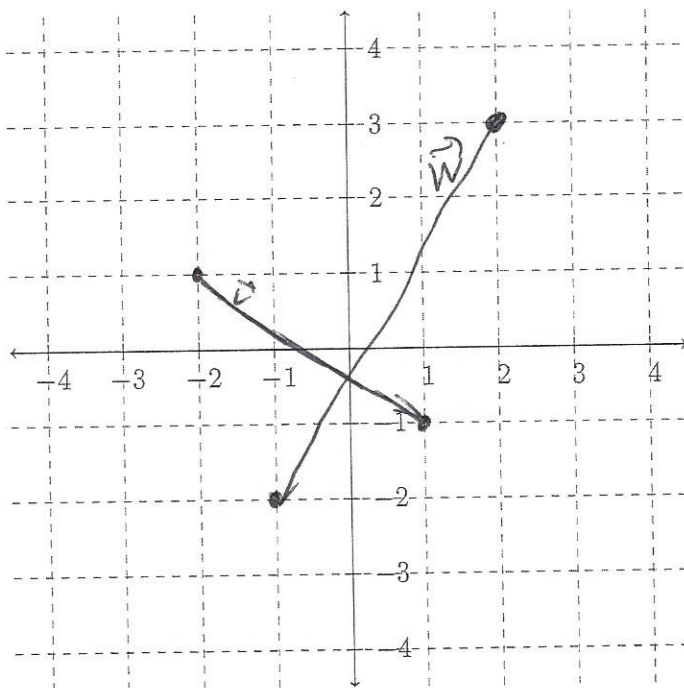
MATH 251: Practice 1

May 26, 2015

Name: Solutions

1. Draw and label the vectors $\vec{v} = \vec{PQ}$ and $\vec{w} = \vec{RS}$ on the axes below. Are they equivalent?

$$P = (-2, 1) \quad Q = (1, -1) \quad R = (2, 3) \quad S = (-1, -2)$$



No.

2. Let $\vec{v} = \langle 2, -3 \rangle$ and $\vec{w} = \langle 1, 4 \rangle$. Calculate

(a) $3\vec{v} + 2\vec{w}$

(b) $\vec{v} - 4\vec{w}$

$$3\langle 2, -3 \rangle + 2\langle 1, 4 \rangle = \langle 6, -9 \rangle + \langle 2, 8 \rangle$$

$$= \underline{\underline{\langle 8, -1 \rangle}}$$

$$\langle 2, -3 \rangle - 4\langle 1, 4 \rangle = \langle 2, -3 \rangle + \langle -4, -16 \rangle = \underline{\underline{\langle -2, -19 \rangle}}$$